Calendar Year		die.	LUI	6 8	199	_й па)9	nus	-on	ıra	ពេយ	5	UIS	atc.		F S/E 200		ЩС	/P	i rai	ining		001
Technology Transfer Item					100		999)				T			200	<u>U</u>	2	000	<u> </u>			<u>UU</u>
	4	5	6	7	8				12	1	2	3	4	5	6 7	7	<u>8 [</u>	<u> </u>	01	1 12	1	2
T	-		Si	gn	ing	of	th	e l	<u> 7/</u> [\Box	\exists		CC		I		<u>JC</u>		\Box	\Box
Term of Technical Cooperation PO 2-2 Implement Technology Transfer to the C/P	-	├	├	1	,	<u> </u> _	-		300000	38333	****	*****	333	38883	V	83 BS	832 833			/ 80888		2002.0
2 2 majoranone recliniology Transfer to the C/1	_	├-	H	┢	┢╾	┝	┢	83333	1	8888			::::::::::::::::::::::::::::::::::::::	9898	*******		200					
0 Fundamentals (common items)	_	\vdash	H	-	┢	┢	┢	\vdash		\dashv	\dashv	┽	+	╁	+	+	- -	╁	+	+	├─┤	+
0.1 Precondition for mold technology	\top	厂			Ι.	-		\vdash	Н	\exists	+	+	+	+	十	╁	+	十	╁	+	H	\dashv
(1) General engineering drawings			_		Г	_	\vdash	┢	Н	T	7	†	╅	+	+	╁	十	十	+-	╁	$\vdash \vdash$	+
a Design standards.				 							十	+	Ť	╁	+	╁	╁	十	t	+-	H	\pm
b Method of section			<u> </u>		П	_		-				†	+-	╁	╈	╁	十	\dagger	+-	+	\vdash	+
(2) Properties of plastic								_	H		*****	Ť	+	+	+	╁	十	+	╫	H	一	十
a Types and characteristics			-		П		П		Н				+	†	┿	✝	十	十	╁	Н	\dashv	
b Forming methods.									H				┪	t	十	╁	十	H	╁	Н	十	╁
(3) Fundamentals of steel for mold					П					Ť			十	╁	\top	╁╌	+	t	╆	\vdash	\dashv	+
a General steel					П				\Box				8	†	╁	t	+-	╆	†	H	\top	+
b Special steel									\dashv	7	-			Ť	十	╁	\top	H	 	H	十	十
(4) Fundamentals of metal processing		T			П					T	Ī			T	1	T	T	⇈	\vdash	H	_	\top
a Fundamentals of cutting								٦		1	7				╁	T	T	T	一	H	十	十
b Fundamentals of EDM processing		\neg			\sqcap	\neg			\neg		╗			-	1	T	1	┢	Г	П	十	+
c Functions of processing equipment						\neg		\neg	T		\top				丁		1	Г		H	寸	十
(5) Fundamentals of plastic injection							Ì	٦	丁	7	T	T	T	1	十	T	T	П	Г		十	十
a Outline of injection molding machine												T		T	1		T		П	П	1	1
(a)Mold clamping mechanism		\Box										\mathbf{I}	Τ			Γ		П	П	П	丁	丁
(b)Injection mechanism		┙			$oldsymbol{\perp}$												П		П	П	丁	\top
b Injection molding process for thermoplastics	Ш	Ц	_	_	\perp	_															\perp	\top
		_	4		4	4	_	\bot	_	_ _		┸	╽	L		L,						\perp
0.2 Principles of injection mold	\blacksquare	_	4	_	4	4	4	_		4	4	L	$oldsymbol{\perp}$	L					Ц	\perp	\perp	\perp
(1) Primary injection mold	-	4	-	_	4	4	4		4	4	┵	1	_	L	Ш		Ш	Ц			丄	丄
(what is mold?. industrial standard etc.)	-	4	4	4	4	\downarrow	4	_		200		╀	╀	L	Ш		_	ᆜ	Ц	\dashv		上
a what is a mold		_	4	4	4	4	4	4			_	╀	╀	L	\perp				_	_		\bot
b Industrial standard	+	+	+	\dashv	+	-	4	4	₩		₩	╄	╀	L			Н	4	_	\dashv	+	╀
(2) Name and function of components (guide pin,locate ring etc.)		+	+	4	-	+	\dashv	+	+	+	_	-	╀	<u> </u>	\square		\square		ᆛ	4	+	┿
a Components of the two plate mold	-	+	+	-	+	+	-	+	+	-			╄	_				\dashv	\dashv	\dashv	+	+-
b Components of the three plate mold		+	-		+	+	+	+	╬	_		_	╂━	_	\vdash		Н	\dashv	\dashv		+	╀
(3) Name and function of mold elements	+	+	+	+	+	┰┼	+	+		+		-	╀		╀		$\vdash \vdash$	\dashv	\dashv		+	╀
(runner, gate etc.)	╂┈┼	+	+	╁	+	╅	+	╅	+	┿	╁	╁	\vdash	<u> </u>	╁┼		\vdash	\dashv	+	+	+	╀
a Runner-basic configuration	1	+	+	+	+	+	+	╅	╅	+	╬			-	┥		H	\dashv	-	+	+	╀
b Gate-basic configuration, advantages	╂╼┼	+	+	十	+	+	十	- -	╅	+	┿			_	╂╼╂	-	\vdash	+	\dashv		+	+
and disadvantages	╂╾┼	\dagger	+	╅	+	$^{+}$	+	╅	╁	┿	╬	2000	Н	-	╂╾╂		H	+	ᆉ	-	十	╀
	╂═┼	\dagger	\dagger	╅	╁	+	\dagger	+	+	┿	╁	╁	Н		╂╾┼		\dashv	\dashv	十	-	+	╁
0.3 Mold design Standard		\dagger	\dagger	╅	+	\dagger	\dagger	╅	十	+	╁	╁	Н		╂	-	\dashv	+	┽		+	╁
(1) Name and function of molded products	1	\dagger	\dagger		\dagger	+	\top		+	\dagger	╫	┢	Н	_	-	\dashv	\dashv	+	+	+	+-	+
a Boss ejector system and mold design	- - - -	$^{+}$	\dagger	+	╁	\dagger	†	+	- -			╁╴	Н		H	-	\dashv	+	+	+	╁	╁┤
b Rib ejector system and mold design	1	\dagger	+	\dagger	+	╁	+	\dagger	-	-	-		\vdash	_	H	┪	-+	+	+	+	+	\vdash
(2) Determination of injection condition	1	\dagger	\top	†	+	\dagger	+	†	+	1888	1	1	H		\vdash	┥	\dashv	+	+	+	+	\forall
a Calculation of injection volume(weight)	1	†	†	+	\dagger	Ť	†	7	T	十			H		\vdash	7	十	\dagger	十	十	+	$\dagger \exists$
into designed mold	1	1	\top	1	十	1	十	\top	十	†		Т	П	_	$ \uparrow $	7	\dashv	十	十	+	\dagger	H
b Calculation of clamping force for design mold		1	丁	1	\top	十	1	1	\dagger	\top		Г	H		1	7	\top	十	十	+	t	\sqcap
c Design mold dimensions and injection		\top	T	7	┪	\top	十	1	\top	\top			\exists			7	\forall	\dagger	\top	+	+	H
molding machine specifications			1			T		1		T	Ī	<u> </u>			\dashv	7	十	十	\top	十	1	П
(3) Process from product model to mold design				1		T	\top	7	1	Τ	T		7	\dashv	\dashv	7	\top	\dagger	十	\top	\top	П
a Methods of product model design						Ţ				Ι				_	7	7	寸	十	\top	\top	1	П
b Reflecting study in mold design		Ι	$oxed{\int}$	$oxed{\int}$	\prod	Ι	I	T	\prod	Ι					丁]	_	┰		\top		П
(4) Layout of basic mold														٦	\top	T	T	T	Τ	T		\prod

(1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design	Annex 14 Progress of Annual 7																		7[1					
Technology Transfer Item / Januese Piscal Year / 15 is 17 is 9 in/11/11/2 is 14 is 16/17 is 9 in/11/2 is 12 is 14 is 16/17 is 9 in/11/2 is 12 is 16/17 is 9 in/11/2 is 16/17 is		mplemented	₩	lec	tur	es		hai	nds	-on	Trai	ning	1)ispa	itch				∥c	/P	Trai	ning		
4 5 6 7 8 9 9 10 10 10 10 10 10			╀				199		00					1		2	00	0		~~			2	<u>200</u>
Term of Technical Cooperation PO 2-2 Implement Technoloxy Transfer to the C/P a General design b Special design b Special design Glundercux A Madded product design Glundercux G		Fiscal Year	4	5	6	7	8	<u>18</u>	10	11	12	1	2 4	3 /	1 5	Te	· I -	7 2	ا <u>2</u> و ا د	<u> </u>	<u>)</u> 11-	112	1	T 5
Term of Technical Cooperation 8 Septiment Technology Transfer to the C/P 9 General design 15 Special design 15 Design of molded product 1 Molded product design 2 Molded product design 3 Molded product design 4 Molded product design 4 Molded product design 4 Molded product design 5 Selection and design of standard parts 5 Selection and design of standard parts 6 Selection of undercut method 6 Pundamental design using target product—(figen tray) 5 Required function of the product 5 Specification mold design 6 Mold processing methods 6 Mold processing conditions 6 Piradamentals of molding 1 Mold processing methods 1 Mold processing methods 2 Mold processing methods 3 Molded processing methods 4 Mold processing conditions 6 Mold processing conditions 6 Molding machine 6 Molding machine 6 Molding machine 6 Molded product 9 Piradamentals of molding 1 Tendamentals of computer 1 Computer operation 1 Computer operation 1 Piradamentals of mold design 2 Molded product 2 Molded product 2 Molded product 3 Molded product 4 Piradamentals of mold design 5 Piradamentals of molded design 7 Piradamentals of molded design		=	Ħ	Ť	Si	gni	ng	of	th	e R	7D	'	+	艼				T	+				屵	屵
a General design 5 Special design (5) Design of molded product a Molded product design (a)Underecut (b)Draft engle b Quality of manufactured goods (a)Dimensional tolerance (b)PL code c Mold shrinkage (Thickness of forming material and molded product) d Plastics flow (Plud ratio [Length/thickness] at injection pressure P) (6) Design of mold standard parts b Selection and design of standard parts c Standard part b Selection and design of standard parts c Standard part b Selection fundercut method c Plud ratio [Length/thickness] at injection pressure P) (6) Design of mold standard parts c Standard part b Selection and design of standard parts c Standard part b Selection and design of standard parts c Standard part b Selection fundercut method c Pludamental design using target product-I(pen tray) a Required function of the product b Specification mold design c.4 Pundamentals of mold processing and plastic injection molding 1) Mold processing anathods b Mold processing anathods b Mold processing anathods b Mold processing anathods b Mold processing enathods c Molderial resin b Three principles of molding (a) Molding machine (b) Prosaure (c) Cycle (c) Operation of CAD, CAM and CAD/CAM Injection mold design ' I Fundamentals of mold design I Fundamentals of mold design 1. Fundamentals of mold design 2. How to design target product-I (Fen Tray) a, Molded product						V	7				Ĩ	_	\dagger	Ť	 -	Ĭ	7	†-	\dagger	Ť	ĬĬ	, —	一	╁┈
b Specified design (5) Design of molded product a Molded product design (c)Underecut (c)Underecut (c)Underecut (c)Underecut (c)Underecut (c)Underecut (c)Underecut (c)Underecut (c)Underecut (c)ULL code (c)ULL code (c)ULL code (c)ULL code (c)ULL code (c)ULS design (Thickness of forming material and molded product d Plastics flow (Fluid ratio [Losgith/thickness] at injection pressure?) (G) Design of mold standard parts a Standard parts b Selection and design of standard parts (T) Underecut a Types of underecut method b Selection of undercut method b Selection of undercut method (S) Fundamental design using target product—1(pen tray) a Required function of the product b Specification molding (I) Mod processing a Mold processing methods b Mold processing methods b Mold processing methods b Mold processing methods c) Mold processing methods b Mold processing methods c) Mold processing methods b Mold processing on fellons b Three principles of molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle (c)Cycle (c) Operation of CAD, CAM and CAD/CAM Injection mold design ' Injection mold design ' Injection mold design traget product—1 (Pen Tray) a, Molded product (C) How to design target product—1 (Pen Tray) a, Molded product		r to the C/P	Ш																					
(5) Design of molded product a Molded product design (N)Undereut (U)Draft angle b Quality of manufactured goods (A)Dimensional tolerance (B)PL code c Mold shrinkage (Thickness of forming material and molded product) d Plastics flow (Fluid ratio (Length/thickness) at injection pressure P) (6) Design of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method (8) Fundamental design using target product—(Spen tray) a Required function of the product b Specification mold design (1) Mold processing methods b Mold processing methods b Mold processing methods b Mold processing methods b Mold processing methods c Mold processing methods b Mold processing methods b Mold processing conditions (2) Plastic injection molding (a) Mold processing conditions (2) Plastic injection molding (a) Three principles of inolding (b) Molding machine (c) Material resin b Three principles of inolding (a) Temperature (b) Pressure (c) Cycyle (c) Corputer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design 1. Fundamentals of mold design 1. Fundamentals of mold design 1. Fundamentals of mold design 1. Pundamentals of mold design 2. How to design target product—1 (Pen Tray) 4. A Molded product																			Γ	T	Т	П		
a. Molded product design (alUndercut (b)Prart angle b. Quality of manifectured goods (a)Diamstonal tolerance (b)P-L. code c. Mold shrinkage (Thickness of forming material and molded product) d. Plastice flow (Fluid ratio [Length/thickness] at injection pressure P) (6) Design of mold standard parts a. Standard parts b. Selection and design of standard parts (7) Undercut a. Types of undercut method b. Solection of undercut method (8) Fundamental design using target product-Lipen tray) a. Required function of the product b. Specification mold design 0.4 Fundamental of mold processing and plastic injection molding (1) Mold processing a. Mold processing conditions (2) Plastic injection molding (1) Mold processing conditions (2) Plastic injection molding (3) Fundamentals of computer (b)Pressure (c)Cycle (c)Cycle (c)Derstion of CAD, CAM and CAD/CAM (b) Longmentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM (c) How to design target product-1 (fen Tray) (a. Molded prochect (b) Losego for deal design (c) How to design target product-1 (fen Tray) (a. Molded product											Ï	Т	Т	\top				T	Т	Τ	T		$\overline{}$	Г
(a)Draft angle b Quality of manufactured goods (a)Dimensional tolerance (b)PL code (c)U.L code c Mold shrinkage c Thickness of forming material and molded product) d Plastics flow (Fluid ratio [Length/thickness] at injection pressure P) (6) Design of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method b Selection for Modercut method c Selection of undercut method b Selection for Modercut method c Selection for Modercut method c Selection for Modercut method b Selection for Modercut method c Selection for	(5) Design of molded product												T		T			1	1	T	†	⇈	Г	П
(b)Draft angle b Quality of manufactured goods (a)Dimensional tolerance (b)P.L. code c (bU.L. code c Mold shrinkage (Thickness of forming material and molede product) d Plastics flow (fluid ratio [Length/thickness] at injection pressure P) (6) Design of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method (8) Fundamental design using target product—(Ipon tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing methods (2) Plastic injection molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Mold (b)Molding machine (c)Material resin (c)Cycle (c)Cycle (c)Cycle (c)Cycle (c) Operation of CAD, CAM and CAD/CAM (injection mold design (i) Usage of the applications for Mold layout (2) How to design target product—(Pen Tray) a, Molded product (2) How to design target product—(Pen Tray) a, Molded product (2) How to design target product—(Pen Tray) a, Molded product	a Molded product design		П				Г			\Box	7	\top	\top	1	1	T	1	T	T	1	\top	\Box		П
b Quality of manufactured goods (a)Dimensional tolerance (b)PL code (c)UL code c Mold shrinkage (Thickness of forming material and molded product) d Plastics flow (Flid ratio [Length/thickness] at injection pressure P) (6) Dassign of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method (8) Fundamental design using target product-Tyen tray) a Required function of the product b Specification mold design (1) Mold processing endotds b Mold processing endotds b Mold processing endotds c) Molding mechine (c)Material resin b Three principles of molding (a) Molding mechine (c) Material resin b Three principles of molding (a) Temperature (b) Pressure (c)Cycle (c) Operation of CAD, CAM and CAD/CAM Injection mold design ' Infection mold design terget product-I (Pen Tray) a, Molded product	(a)Undercut		П		Г						_	十	十	1	T	T				十	T	\vdash		H
(a)Dimensional tolerance (b)P.L code (c)U.L code (d)U.L code c. Mold shrinkage (Thickness of forming material and molded product) d Plastics flow (Fluid ratio [Length/thickness] at injection pressure P) (6) Design of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method (8) Fundamental design using target product—(Jenn tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing methods b Mold processing methods a Mold processing methods b Mold processing methods c) Plastic Injection molding (a) Mold processing methods b Mold processing conditions (2) Plastic Injection molding (a) Mold processing conditions (2) Plastic Injection molding (a) Mold processing conditions (2) Plastic Injection molding (a) Mold (b) Molding machine (c) Material resin b Three principles of molding (a) Mold (b) Monding machine (c) Material resin (c) Cycle (c) C	(b)Draft angle		П						┪	\neg	7	\top	1	1	T	T				†-	+	H		Н
(b)P.L code (c)U.L code (c) Mod Shrinkage (Thickness of forming material and molded product) d Plasticis flow (Fluid ratio [Length/thickness] at injection pressure P) (6) Design of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method g) Fundamental design using target product—I(pen tray) a Required function of the product b Specification mold design (1) Mold processing a Mold processing methods b Mold processing methods b Mold processing methods c) Mold processing methods b Mold processing methods b Mold processing methods b Mold processing onditions (2) Plastic injection molding a Three factor of molding (m)Moldi (m)Molding machine (m)Molding machine (m)Molding machine (m)Molding machine (m)Pressure (m)Pres	b Quality of manufactured goods				П				┪	一	T	┪	\top	T	T	T	20000	*******	1	t	十	H		H
(c)U.L. code c Mold shrinkage c Mold shrinkage d Thickness of forming material and molded product) d Plastics flow (Fluid ratio [Length/thickness] at injection pressure P) (6) Design of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method (8) Fundamental design using target product—(Ipen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing conditions (2) Plastic injection molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) 1, Molded product	(a)Dimensional tolerance		П		П				\neg	\dashv	_	+	十	1	t	\vdash				十	十	H		\vdash
C Mold shrinkage (Thickness of forming material and molded product) d Plastics flow (Fluid ratio [Length/thickness] at injection pressure P) d Selection and design of standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Solection of undercut method 6) Fundamental design using target product—I(pen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing conditions (2) Plastic injection molding a Three factor of molding (a) Mold processing conditions (b) Molding machine (c) Molding machine (c) More and the principles of molding (a) Three principles of molding (b) Three principles of molding (a) Three principles of molding (b) Three principles of molding (a) Three principles of molding (b) Three principles of molding (c) Pundamentals of computer (c) Cycle (c) Fundamentals of computer (d) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Fen Tray) 1, Molded product	(b)P.L code		М					T	7	寸	十	╁	t	╁	╁	t			-	${\dagger}$	十	Н	\dashv	
(Thickness of forming material and molded product) d Plastics flow (Fluid ratio [Length/thickness] at injection pressure P) (6) Design of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method b Selection of undercut method (8) Fundamental design using target product—I Pen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing conditions (2) Plastic injection molding (3) Three factor of molding (4) Mold processing conditions (5) Plastic injection molding (6) Molding machine (6) Material resin b Three principles of molding (6) Pressure (6) Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—I (Pen Tray) 1, M, Molded product	(c)U.L code		П		\exists				┪	_	十	\top	┰	\top	\vdash	┪			-	╆	十	┝┈┤	\dashv	H
(Thickness of forming material and molded product) d Plastics flow (Fluid ratio [Length/thickness] at injection pressure P) (6) Design of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method b Selection of undercut method (8) Fundamental design using target product—I Pen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing conditions (2) Plastic injection molding (3) Three factor of molding (4) Mold processing conditions (5) Plastic injection molding (6) Molding machine (6) Material resin b Three principles of molding (6) Pressure (6) Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—I (Pen Tray) 1, M, Molded product	c Mold shrinkage		П		7			7	7	十	+	\top	╁	十	t	┢	************************************	0.008	┡	╁	\vdash	H	-	\dashv
molded product) d Plastics flow (Fluid ratio (Length/thickness) at injection pressure P) (6) Design of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method b Selection of undercut method (8) Fundamental design using target product—I(pen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing methode b Mold processing methode b Mold processing methode c) Molding machine (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Tomporature (b)Pressure (c)Cycle 1.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) 1. Ma, Molded product			Н	┪		٦	\exists	7	\dashv	+		+	╁	╁╴	┢	┢	┝		┢	┢	╁╌	\vdash	\dashv	
d Plastics flow (Fluid ratio [Length/thickness] at injection pressure P) (6) Design of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method (8) Fundamental design using target product—1 (pen tray) a Required function of the product b Specification mold design (1) Mold processing and plastic injection molding a Three factor of molding (2) Plastic injection molding (a) Mold processing methods b Mold processing conditions (2) Plastic injection molding (a) Mold machine (c) Material resin b Three principles of molding (a) Three principles of molding (a) Three principles of molding (a) Tomperature (b) Pressure (c) Cycle (c) Cycle (c) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) 1, a, Molded product			H	┪	寸		\dashv	┪	ᆉ	\dashv	╅	+	+	╁	╁	\vdash	┝	****	┡	\vdash	╁	\vdash	\dashv	\dashv
(Fluid ratio [Length/thickness] at injection pressure P) (6) Design of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method (8) Fundamental design using target product—lipen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing methods b Mold processing conditions (2) Plastic injection molding (a) Mold (b) Molding machine (c) Material resin b Three factor of molding (a) Mold (b) Pressure (c) Cycle (c) Cycle (c) Cycle 1.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) At a, Molded product			H	┪		ㅓ	+	╅	\dashv	\dashv	\dashv	╁	╁	╀	╁	H	┝	╀	┝	├	╂┷┤	\vdash	\dashv	\dashv
(6) Design of mold standard parts a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method (8) Fundamental design using target product—1(pen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing methods b Mold processing methods b Mold processing methods b Mold processing conditions (2) Plastic injection molding (a) Three factor of molding (b) Molding machine (c) Material resin b Three principles of molding (a) Plastic injection molding (b) Plastic injection molding (c) Plastic injection molding (a) Mold (b) Molding machine (c) Material resin b Three principles of molding (a) Preperature (b) Pressure (c) Cycle (c) Cycle (c) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) A, Molded product	·	ijection pressure P	, 	\dashv	┪	-	┥	\dashv	┪	+	+	- -	+	╀	┝	⊢	⊢			\vdash	$\vdash\vdash$	┝╌┼	\dashv	\dashv
a Standard parts b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method (8) Fundamental design using target product—(Ipen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing methods b Mold processing methods b Mold processing conditions (2) Plastic injection molding (a) Mold (b) Molding machine (c) Material resin b Three principles of molding (a) Temperature (b) Pressure (c) Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection unold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) 1, Molded product		Jeotion pressure 1	\vdash	ᅱ	┪	\dashv	┪	-+	\dashv	┰	+	╁	╫	╂	┢	\vdash				-	$\vdash\vdash$	\dashv	\dashv	-
b Selection and design of standard parts (7) Undercut a Types of undercut method b Selection of undercut method (8) Fundamental design using target product—I (pen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing methods b Mold processing conditions (2) Plastic injection molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Penseure (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—I (Pen Tray) 1, a Molded product			\vdash	┪	\dashv	{	┥	\dashv	┰	+	+	-	╀	╁	-	\vdash	\vdash	├			Н	\dashv	\dashv	一
a Types of undercut method b Selection of undercut method (8) Fundamental design using target product—I(pen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing methods b Mold processing methods b Mold processing conditions (2) Plastic injection molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 1.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design 1.1 Fundamentals of mold design (1) Usage of the applications for Mold layout (2) How to design target product—I (Pen Tray) 1.1 A Molded product		ert e	\dashv	┪	+	\dashv	\dashv	-	+	╬	+	╁	╀	├-	H	H	<u> </u>	<u> </u>			\vdash	\dashv	4	4
a Types of undercut method b Selection of undercut method (8) Fundamental design using target product—I(pen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing conditions (2) Plastic injection molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—I (Pen Tray) At a Molded product		11 15	\dashv	\dashv	\dashv	-	\dashv	\dashv	-	+	+	+	╀	╀	<u> </u>	\vdash	_	L			H	-	-	ᆛ
b Selection of undercut method (8) Fundamental design using target product—1(pen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing enthods b Mold processing conditions (2) Plastic injection molding (a)Mold (b)Molding machine (c)Material resin b Three factor of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design 1 Follow-up (2) Operation of CAD, CAM and CAD/CAM Injection inold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) 1 Molded product			╼┼	-	+	\dashv	┪	+	+	-	+	╁	╀	┼		H		H		 	200000		\dashv	4
(8) Fundamental design using target product—I/pen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding a Mold processing a Mold processing methods b Mold processing methods b Mold processing conditions (2) Plastic Injection molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design 1. Fundamentals of mold design (1) Usage of the applications for Mold layout (2) How to design target product—I (Pen Tray) 1. A Molded product			\dashv	+	\dashv	+	\dashv	+	+	+	- -	+	╀	├_	Н	Н	_	_	Ц	Н		₩-	\dashv	\dashv
product—1(pen tray) a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing conditions (2) Plastic injection molding (a) Mold (b) Molding machine (c) Material resin b Three principles of molding (a) Temperature (b) Pressure (c) Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design 1.1 Fundamentals of mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) 1. Molded product			+	\dashv	-	4	\dashv	+	-	+	+		╀	⊢	H							*	4	4
a Required function of the product b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing methods b Mold processing conditions (2) Plastic injection molding (a) Mold (b) Molding machine (c) Material resin b Three principles of molding (a) Temperature (b) Pressure (c) Cycle (c) Cycle (c) Cycle (c) Operation of CAD, CAM and CAD/CAM Injection mold design 1 Follow-up (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) 1 Molded product			+	\dashv	+	\dashv	4	+	+	+	- -	+	╀	├-	Н		_	_	Н	Н	${oxdot}$	-	\downarrow	4
b Specification mold design 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing methods b Mold processing conditions (2) Plastic injection molding (a) Mold (b) Molding machine (c) Material resin b Three principles of molding (a) Temperature (b) Pressure (c) Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design 1 Follow-up (2) Operation of CAD, CAM and CAD/CAM Injection mold design 1 Follow-up (2) How to design target product-1 (Pen Tray) 1 Molded product			+	+	\dashv	-	\dashv	+	-	+	+	4	╂—	H	Ц		_				\square			<u></u>
0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing methods b Mold processing conditions (2) Plastic injection molding a Three factor of molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) A Molded product			- - -	+	+	+	-	+	+	+	+	╀	\vdash	-	\dashv	-	_		\dashv	\dashv	\dashv			#
plastic injection molding (1) Mold processing a Mold processing methods b Mold processing conditions (2) Plastic injection molding a Three factor of molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle (c)Cycle (2) Spundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) A Molded product	b Specification mold design		\dashv	+	+	+	+	+		4	+	┿-	⊬	Н					\sqcup	_	\dashv	_#		4
plastic injection molding (1) Mold processing a Mold processing methods b Mold processing conditions (2) Plastic injection molding a Three factor of molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle (c)Cycle (2) Spundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) A Molded product	0.4 Francisco	- 3	+	-		+	+	-	+	+	- -	+	-	Н	-4	_			_	\dashv	\dashv	-	4	\downarrow
(1) Mold processing a Mold processing methods b Mold processing conditions (2) Plastic injection molding a Three factor of molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) A Molded product		1d	+	+	- -	4	+	+	4	+	+	+-	 _	Н		_	_	4	\dashv	4	_	4	\downarrow	\downarrow
a Mold processing methods b Mold processing conditions (2) Plastic injection molding a Three factor of molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) A Molded product			4	+	4	4	-	+	4	+	4	\perp		<u> </u>	_	4	4	_	_	4	4	4	4	1
b Mold processing conditions (2) Plastic injection molding a Three factor of molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) A Molded product			-	4	+	+	+	_	4	_	4	- -	$oxed{oxed}$	Ц	_	000000	00000		4	_	_	4	\downarrow	\downarrow
(2) Plastic injection molding a Three factor of molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) M a Molded product			\dashv	4	4	_	4	4	4	\bot	4	ļ.,	<u> </u>	Ш	_			_		⅃	4		4	\downarrow
a Three factor of molding (a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) A Molded product			_	4	4	4	_ _	4	1	4	- -	┷	Ш		_				$ \bot $	_	\dashv	\bot	\perp	\perp
(a)Mold (b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) A Molded product			- -	_	4	4	\downarrow		_	1	\perp	<u> </u>	L.,			_	↲			\dashv			\perp	\downarrow
(b)Molding machine (c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—I (Pen Tray) A Molded product			4	4	4	_	4	4	\downarrow		┸	\perp	Ļ			_				_	\perp	\perp	┵	1
(c)Material resin b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) a Molded product			_	4	4	4	_	4	1		1		Ш	Ц	_	_		Ц	_	┙		\perp	⊥	\perp
b Three principles of molding (a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design 1.1 Fundamentals of mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) A Molded product			\perp	┸	_ _	1	┵	1	1	_	┸	L	Ц						_	\perp	\perp	\bot	\perp	\perp
(a)Temperature (b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product—1 (Pen Tray) A Molded product	· · · · · · · · · · · · · · · · · · ·		\perp	4	\downarrow	1	_	\perp	1	↓	<u> _ </u>	_	Ш	_	4				\perp	╛		\perp	\perp	\perp
(b)Pressure (c)Cycle 0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) A Molded product					┸			_ _	\perp	\perp	┸	L			┙					\perp	\perp	丄	╧	\perp
(c)Cycle D.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design 1 Fundamentals of mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) A Molded product				⊥	╧	_	╧		\perp		┸			$oldsymbol{\perp}$		_				$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}}}}}$	\perp	止	1	\perp
0.5 Fundamentals of computer (1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) A Molded product	(b)Pressure					1		\perp								00000					\Box		floor	\perp
(1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design 1.1 Fundamentals of mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) At a Molded product	(c)Cycle															20000				Τ		Ţ	Т	Τ
(1) Computer operation (2) Operation of CAD, CAM and CAD/CAM Injection mold design 1.1 Fundamentals of mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) At a Molded product				\int		\int	\int	Γ		Γ		\prod			Ţ	J	Ţ		Ī	J	f	T	T	Τ
(2) Operation of CAD, CAM and CAD/CAM Injection mold design I Fundamentals of mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) AM Molded product	0.5 Fundamentals of computer								Γ					\neg		T	Т	T		П	T	T	T	Τ
Injection mold design I fundamentals of mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) Ath a Molded product	(1) Computer operation		$oldsymbol{oldsymbol{oldsymbol{oldsymbol{\Box}}}$	\int	$oxed{\Box}$	\int			\prod	Γ	\prod									▦	Fo	11o	w-	up
.1 Fundamentals of mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) Ath a Molded product	(2) Operation of CAD, CAM and CAD	/CAM	\perp																		▦			▦
.1 Fundamentals of mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) Ath a Molded product		•							L		Ι.					T	T	Т		Ţ	T	Т	Τ	T
.1 Fundamentals of mold design (1) Usage of the applications for Mold layout (2) How to design target product-1 (Pen Tray) Ath a Molded product	1 Injection mold design			Ţ		floor					Ī	,	_T	T		T	T	T					T	T
(2) How to design target product-1 (Pen Tray)	1.1 Fundamentals of mold design		\prod	\int	\prod	Τ	\int	T	Γ	Τ	Γ	П	丁	1	\top	T	T	\top	Ţ	T	1	\top	T	丁
(2) How to design target product-1 (Pen Tray)		layout	T	T	T	T	T	T	Τ			П	7	\forall	十	\dagger	1	1	+	十	\top	\top	T	T
(Pen Tray)			\top	7	\top	\top	T	T	1	1		П	\exists	+	十	T	十	1	1	十	+	十	T	\top
a Molded product			7	T	\top	†	\top	\top	Τ	T	1	\Box	\dashv	十	\top	+	十	十	+	\dagger	+	1	+	\top
7100 Z		<u> </u>	1	1	T	1	+	╁	T	T			\dashv	\top	\dagger	十	+	+	+	+	十	+	T	†
	AR		-			_		1		<u> </u>	rassis	Possess						_1_				47		10

	implemented		lec	ctur	es		ha	nds	-on	Tra	inin		Dis	patc					J/P	Tra	ining	in v	Ja
Calendar Year					•	199	9									200							20
Technology Transfer Item	ese Fiscal Year	-		l e	7	Το		999		140	T.,		ᅱ		-1	٠.		2	200	0			
/ Japan	ese i iscai i cai	++	1 9 T	Si	ign	ing	nf	†h		7/E	 	2	<u> </u>	41		CC FI		8		<u> </u>	1 12	<u>! 1</u>	누
erm of Technical Cooperation			T	T	V	<u>'''5</u>	T	<u> </u>	1	Ï	Ĺ	\dashv	\dashv	┪	ٵ	<u> </u>	+	-	十	7	/	╁	+
O 2-2 Implement Technology Tran	sfer to the C/P					ı																	ø
b Specification of mold design												 		П	Ţ			T	Т				Ť
(3) How to design target product-	2			Γ	Γ								7	寸	T	7	T	\neg	_	Ť	T		T
(Front Case for Alarm Clock)			Ī					Г					\neg	T	Ţ	1	T		_	\top	T		†
a Molded product			Γ		Γ			Γ	П	İΠ	\Box			十	T		十	T	1	\top	T		T
b Specification of mold design				Γ		Ī	Г								Ť	\top	7	T	十	1	1	T	t
(4) Common use of parts and stand	dardization			Г	Τ			_		П				_	T	\top	+	\top	十	十	1		t
of common parts	•				Γ	П						T	7	7	7	1	Ţ	- -	十	T	╁		t
a Objectives		1		Γ				_		П				₩-	+	Ť	十	_	十	T	 		t
b Specification		T			Г					\Box					Ţ	†	+	\top	十	十	1		H
(5) Mold design based on predictio	n								П		┪		290093		Ť	╅	十	十	+	╁	十	Н	┝
a Predicted product defects		17				П				-	十	1	┪				+	\pm	十	╁╴	1	Н	H
b Countermeasures for predicted	product defects			_	Н	П		_		+	-	\dashv	\dagger	-			+	┰	+	+	+	\dashv	H
.2 Mold design by CAD/CAM		 -1	Н				\dashv			-	┪	╅	╁		88888	-	+	+	+-	╁	\vdash	\vdash	H
(1) Techniques of CAD, CAM and	CAD/CAM	\top		_	┝	H	П		\dashv	\dashv	-	╅	\dagger	十	+	+	+	╁	╁	╀	\vdash		H
a CAD		1	_	_	Н	Н	-	\dashv	\vdash	-	-												
b CAM		┪			Н	Н	,	┪		\dashv	-												▦
c Linking between CAD and CAM	· · · · · ·	1			Н	\dashv	ᅱ	┪		十	-		⊗										
(2) Guidance by each CAD/CAM s		\blacksquare	\dashv		H	\exists	┪	┪	-	\dashv	╬	<u> </u>					#		#				▦
makers for mold making	JOIC WALL C	┨┤	\dashv	\dashv	-	\dashv	\dashv	\dashv	\dashv	+	+	-	+	▐	╄	+	╁	╞	╃		\vdash	-	Ξ
(3) Exchange of CAD/CAM network	rk data	┪	+	┥		\dashv	\dashv	\dashv	-	+	+		***	88	╬				<u></u>	<u>L</u>		l	
(4) Computer programming	ix uata	╂╌┤	_	┥		\dashv	\dashv	\dashv	-	+	+	_	**************************************				1111	IC HUH	110	OW-	up		ш
(5) CAD/CAM operation and mold	docien	╂╼┼	\dashv	ᆛ	-	\dashv	\dashv	+	\dashv		+	+	-88		##		#						▦
(2-dimension/2.5D/3D)	design	╂┤	4	-	\dashv	\dashv	\dashv	-	-	+	+		+	+	╀	-	╀	+	╀	⊢	-	4	_
a Specification of CAD/CAM oper	action.	┨┈┤	\dashv	┥	\dashv	+		\dashv	\dashv	+	-	╬											₩
b Specification of CAD/CAM oper		╂┤	\dashv	\dashv	{	-	\dashv	+		-	+	+	-8						▦				
	ation in	╂┵	+	\dashv	\dashv	-		\dashv	+	+	-	┿				Ш			₩				Ш
mold design (6) Design of target product-1 by (7.4.7	╂┼	4	\dashv		\dashv	\dashv	+	-	+	┿	┿	+	+	╀	╄	╀	-	╄	H	\sqcup	-	
	JAD	╀┤	-	4	\dashv	+	4		\dashv	+	+	- -	+	+	╀	╄	╄	╀	⊬	Щ	\sqcup	4	_
(Pen Tray)		+	+	_		\dashv	+	+	-	+	+	+	4-		╀	<u> </u>	<u> </u>	-	₩	Ш		8888 I	m
a Molded product		╂┵┼	\dashv	\dashv	\dashv		4	+	\dashv	_	+	+	+	 	╀	┡	┡	\bot	 				#
b Specification of mold design	245	╂╌┼	4	4	4	\dashv	4	4	-	+	-	- -	1	1	╀	Ļ	╄	1	Ш	Ц			▦
(7) Design of target product-2 by (JAD	+	\dashv	-	4	4	4	4	- -	4	+	4	_	<u>↓</u>	╀	┡	Ļ	 	Ш		4	4	_
(Front Case for Alarm Clock)	****		+	4	4	_	4	4	+	+	_ _	\bot	╀	╄	┖	<u> </u>	L	_	Ш		_	_	
a Molded product	· · · · · · · · · · · · · · · · · · ·	\bot	4	4	\dashv	4	\downarrow	4		_	4	4	Ļ	4_	L	╙		<u> </u>			\perp	4	
b Specification of mold design		$oldsymbol{\sqcup}$	4	4	4	- -	4	4	\downarrow		- -	╀	\downarrow	┸	L	_	Ļ	上	Ш	\Box		_	_
(8) Design of target product-3 by (1	4	_	4	4	_	4	4	┸	1		\perp	<u> </u>	L		L	L	Ш		_		
(Front Panel for Personal Comp	uter)	1	4	4	4	4	4	4	_ _	ᆚ	╧	丄	L	<u> </u>	L		L	$oxed{oxed}$			4	╧	
a Molded product		!	4	4	4	4	_	4	4	1	\downarrow	1	L	$oldsymbol{\perp}$	L	L	L	_			\perp	_	
b Specification of mold design		\sqcup	4	4	\downarrow	\bot		4	\perp	_	1	┸	L		L	L		L	Ш		\perp	┙	
9) Design of target product-4 by C	AD		1	1				\perp	\perp	_		_	<u> </u>			L		Ш	Ш				
(Upper Case for Telephone)		Ш	\perp	_	\downarrow	_ _			_	ᆚ	\perp	丄	L	<u> </u>				Ш					
a Molded product			4	_		\perp	⊥		1	ᆚ	_ _						L	Ш	Ш			┸	
b Specification of mold design			┵	_	\perp	_		1	_	\perp		丄	L										
10) Design of target product-5 by C	CAD	Ш		┙	_				\perp		\perp							Ш					
(Camera Body)			\perp		1	\perp	\perp	\perp						$oxedsymbol{oxed}$									
a Molded product		Ш		\int	\int							Ĺ	L						\Box			\int	
b Specification of mold design	•	\prod		\int	\int	\perp	\perp												$oxed{\int}$	\int		\prod	
				\int					\int			Ĺ	Ĺ			$\lfloor \rceil$					\Box	\prod	_[
· · · · · · · · · · · · · · · · · · ·				Т	Т	Т	Т	Т	\top	7	\top	T	1					1	\neg	\neg	\neg	\top	7
B Design of prototyping molds (for									_[_	╛							_		_ [_	i	- 1	,
3 Design of prototyping molds (for requirements of model companies	etc.)		+	\dagger	\dagger	+	+	+	╁	+		+	-	H		\dashv	\dashv	H	\dashv	+	+	\dagger	7

AHY

implemented	·	_				_		-										llc/	'P 1	Train	ning	in .	lan:	an
Calendar Year	7	-			199					T		<u> </u>	<u> </u>			000		Ψ,	-		711-25		200	
Technology Transfer Item						19	99						Τ					20	000)			.00	<u>.</u>
	4	5									2	3	4	5	6	<u></u>	8	9	10	11	12	1	2] ;
D (D) 1 1 1 0	4	╄	<u> S</u>	ign	ing	옏	<u>f th</u>	า <u>e</u>	<u>R/</u>	D	\perp	igspace	<u> </u>	Ļ	JC	<u>C</u>	_	L	L	<u> jc</u>	<u>C</u>		匚	F
Term of Technical Cooperation PO 2-2 Implement Technology Transfer to the C/P		-	╬	1	<u> </u>	╀	╀			***		(SEC.003	2000			<i>r</i> 88888	38333	30000	20000		7 300000	****		
(Problems and solution of injection	╁	十	┿	┿	╁	╁	+	8838	80 ESS	88	30 3333		8 8888	88888	8880	88888		348883		***		****		
molding assembly)	╫	╁	╆	╁	╁	╁	╀	+	┿	╁	╁	╁	╀	┝	┝	╁	╁	╁	├	├-	\vdash	Н	⊢	⊬
(1) Comparing molded product dimensions with	┿	╁	╁	╁	+-	╂	╁	+	+	╀	+-	╁	├	⊢	 	┿	╁	-	H	┝	 	$\vdash\vdash$	\vdash	┝
design dimensions	╫	+	╀	╁	┼	╀	╀	╁	╁	+-	╁	╁	╁	⊢	┢	┼-	\vdash	⊢	H	╀	╁━┤	\vdash	\vdash	┞
(2) Comparing design dimensions with	╫	╁	╀	╁	┼	╀	╁	╁	╁	╁	+-	╁	⊢	├	H	┿	╀	<u> </u>	\vdash	├-	╀	H	H	⊢
mold component dimension	╀	╁	╁	╀	╁	╁	╄	+	+	╀	- -	┢	⊢	╀	┝	╀	╀	┝	H	├-	H	Н	Н	\vdash
mold component amension	╁	╁	╀	┼	╁	╁	╀	+	╀	╀	+	┝	┞	┞	-	⊬	╀	-	-	┞	\vdash	Щ	Щ	L
	╀	╀	┢	╀	┼	╀	╀	╀	╁	╀┈	╀	⊬	+	┞	-	⊬	╀	⊢	_	┡	Щ	\square	Щ	H
	╂	┢	╀	╀	┝	╀┈	╁	╀	╀	╀	┿	-	├-	⊢	⊢	⊬	╀	L		┡	\vdash	├	$ \bot $	⊢
	╁		╁╌	-	├	┝	╀	╀	╂-	╬	╀	-	-	<u> </u>	_	╄	┢	<u> </u>	<u> </u>	_	\sqcup	⊣	\dashv	L
2 Injection mold processing	+	\vdash	+	\vdash	├	╀─	<u> </u>	╀	+	+	+	-	-	\vdash	\vdash	\vdash	 	\vdash	\vdash	\vdash				-
2 Injection mold processing	╀	\vdash	\vdash	\vdash	\vdash	_		4	-	+	+	\vdash		\vdash	_	\vdash	-	Щ	L.	\vdash	${oxdot}$	_	4	-
2.1 Fundamentals of processing	-		┼	\vdash	├	\vdash	\vdash	-	-	1	╀	\vdash	<u> </u>	<u> </u>	<u> </u>	\vdash	\vdash	Н	H	ļ	\sqcup	\dashv	ᅴ	_
(1) Cutting theory	+	-	1	-	\vdash	-	\vdash	3333	3 (1777)		1				<u> </u>	 	<u> </u>	Н	Щ	H	$\vdash \dashv$	_	_	<u> </u>
a Milling	+	\vdash	\vdash	⊣	├-	-	-				 		<u> </u>	_	\vdash	\vdash	 _	Ц	Щ	\vdash	${oxdot}$	\dashv	4	
b Lathe	╀	\vdash	\vdash	┡	├-	 -	-					L	<u> </u>	ļ	ldash	\vdash	<u> </u>		Щ		Ш	\dashv	4	_
c Grinding	- -	<u> </u>	_	L	L		┞				L			_		L	L				\square	_	_	_
(2) EDM Processing theory	┸	L	<u> </u>	ļ	_	L	L	╀	L	╀	ļ	_				<u> </u>	L	Ц	_		\square	_	_	
(Edit of CAD/CAM/CNC data)	┦	_	<u> </u>	L	L		L	L	ļ_	ļ	00000	COOR		17.00	_								\bot	_
a Deisinking electric discharge machine	╄	L	L	L	<u> </u>	L	L	╙	L	╀						_		Fo.						
b Wirecut electric discharge machine		L				L	_	<u> </u>	L	<u> </u>								Fo.						
c Small hole EDM machine	_	_	L	L	L		L	L	Ļ.	_	<u> </u>						F	ol]	ow	-u	<u>р</u>			
(3) Inspection and measurement	╄			L	L	_	L	L	Ļ	L	300000	00000	-			Ш					Щ			
a 3D measurement data	╄	_		_	$oxed{oxed}$			<u> </u>	L	L								Fo]			_			
b General measurement data	1			<u> </u>		_	L							Щ				Fo]	llo	w-	up			
2.2 Operation and function of processing	╀			L	Ц	Ŀ	_	Ŀ	L	L			_	_	_	Ш	Ц	_	_	_	ightharpoonup	\dashv	ightharpoonup	
machinery	1_	_				L	Ļ		30800			71111								- {			\bot	
(1) Operation and function of conventional	L		L					┖									Fo]	llο	W-1	цр			_	
machinery	1_		_		Ц			L	<u> </u>	L	_	20000				\Box					丄	丄	丄	
(2) Operation and function of MC	Ц						_			L	Ш							Fo	11	OW.	-up)		
machinery	1	_			\Box			L	L		Ш	88000					Ц	_			丄	丄	丄	
(3) Operation and function of CNC	Ш							_		_	Ш									Po]	llοι	v-u	ıp	_
machinery (EDM, WEDM etc.)	\perp			Щ				Ĺ	L	L	Ш						\Box		_l		丄	丄	丄	_
(4) CAM operation and programming	\bot										Щ	_									w-u			
(5) CAM/CNC operation and programming	Ш			_					$ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ld}}}}}}$		Ц	_			Щ	Щ	_	F	lo?	<u>lo</u>	w-u	ıp		_
(6) Mold production technology						_					Ц			_		Ц				_	_		\perp	_
(Processing and tooling)	Ш						_		L	L	Ц			_	_	outou								
a Planning of processing process	Ш										Ц	\perp		4	_								▦	
b Tooling	Ц	_		_	\dashv		_				Ш	_	Ц	_	_	_	_						▓	
c Processing conditions	Ш										Ш					╛	_				▦	▦	▦	
(7) Processing of Provided mold parts	Ц					\Box							\perp	┙		\sqcup	\perp		_			\perp	\perp	
(Provided mold)	Ц			_	_						Ш			\perp	_[\perp			╛	_	\perp	⊥	
a Cavity making of target product-1		_	Ц	ļ				Ш			Ц						∭		∭_					
b Undercut pin fabrication for target	Ш		Ш	[_	\Box	_]				Ш	\perp	\perp	_[\perp				▦	▦	▦	#
product-2 and the others core pins						\perp													\perp			$oxed{\Box}$	$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}}}}}$	
				╝	_	ot										\Box				$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}}$	$oldsymbol{\perp}$	\int	$oldsymbol{\perp}$	
2.3 Processing of target products														\prod		$oxed{\int}$	I	\int					\int	
(1) Processing process planning	\square								\prod									\int	\int	\int	\int	$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}} $	$oldsymbol{\mathbb{I}}$	\int
a Planning of processing process of	\prod	\prod									\int	\int	$oldsymbol{\mathbb{J}}$		$ \rfloor $						▦		▦	#
designing data							_]							J	J	J	_T	Ţ	Ţ	Ţ		\prod	Ţ	
b Quality control									\Box			T	J	J	J								₩	Ø
No Production control													J									▦	▓	
(1) 12						_					_			_	_		_			_		_	_	_

implemented Calendar Year		le	ctur	es		har	nds	-on	Tra	ainin	8	Dis	oato					C/P	Tra	inin		
*,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-				199					L_		-			200	00			_		12	200
Technology Transfer Item / Japanese Fiscal Year	1	T 5	6	7	۵	19 Га	99	111	112	1	9	2	<u> </u>	<u> </u>	ام	7 1	<u> </u>	200 9 1	0	414		т.
7 3000000 1 15000 1 CH	一干	Ť			ing	of	th	e F	1/2	+		<u>의</u>	7		CC		윽	╬		C	누	뜯
Term of Technical Cooperation		\top	Ť	V	7	Ň	<u> </u>	Ť	Ť	Ī		\dashv	7	Ť	T		\neg	十	ŤŦ	/	十	╁
PO 2-2 Implement Technology Transfer to the C/P																				<u>*</u>	巘	
(2) Processing of target product-1																	П	Т	Т			Γ
a Preparations / setup		Π	Γ	Γ						П		コ			1		$\exists t$	十	十	1	\top	Τ
b Action confirmation based on NC data bus		Ì									\neg	7			Ť			十	╁	Ť	+-	✝
c Machine processing	\neg		 	Г		П		Г		П	┪	十	十	7	1		#		十	+-	${}^{+}$	H
d Inspection	\top	T	Ι	_						Н	7	寸	+	7	-#		▓		╓	╁	╁	H
(3) Processing of target product-2			T	┢	H	\dashv	Н	_		H	┪	-	$^{+}$	\dashv	┪	7	-	#	╇╴	+	┼	┢
a Preparations / setup	$\neg \vdash$	\vdash	H	\vdash		\dashv						\dashv	十	+	+	┪	-	⊯	十	╁	╫	┢
b Action confirmation based on NC data bus	+	-	┞	H	Н	\dashv			H	H	+	+	+		╅	+	-		╅	┪┈	├	⊢
c Machine processing	+	H	 	\vdash	Н	\dashv		-	\vdash	Н	-	十	+	+		+	-8					┢
d Inspection						┪	-		-	H	-	\dashv	╁	\pm	+	╁	-#	₩	#		▦	▦
(4) Processing of target product-3	╌┼╌	_	_	_	H	\dashv	\dashv			\dashv	-	+	+	╬	+	+	┦	##	#	Щ		₩
a Preparations / setup	-	-	\vdash	H	Н	-	-		Н	\dashv	+	+	+	4	+	+	+	- -	+	11111		
		H	Н	H	⊢		\dashv	_	Н	\dashv	+	+	- -	+	+	+	-	4	+	≠	柙	▦
b Action confirmation based on NC data bus	-	\vdash	Н	<u> </u>	\dashv		\dashv			\dashv	4	_	- -	+	+	4	4	+	\bot	-	Щ	▦
c Machine processing		Н	Н	Щ	\sqcup		4	_			4	+	4	4	4	4	\downarrow	4	\bot	$oldsymbol{\perp}$	Ш	Ш
d Inspection	-		Ы	_	Ц	_	4	_[_	4	\bot	4	_ _	4	4	1	4	\bot	\perp	:	Ш	Ц
(5) Processing of target product-4			Щ		_		4	_	4	_	-	4	\downarrow	4	_	4	\bot	<u> </u>	丄	丄	Ш	Ш
a Preparations / setup					_	4	_	_	\dashv	_	4	_ _	_	1	_	1	_	上	\perp	<u> </u>	Ш	Ш
b Action confirmation based on NC data bus			Ц	_		4	_			_	_		\perp		\perp	1	\perp		丄	上		
c Machine processing				_		_			\sqcup	\perp			⊥	\perp	1		上		\perp	上		
d inspection							_			\perp	╧							L	\perp			
(6) Processing of target product-5	$oldsymbol{\perp}$																	T	Т			П
a Preparations / setup													Γ			T	Т	Т	Т	П	П	
b Action confirmation based on NC data bus										T			T		Τ	1	T	T			П	T
c Machine processing						Т	T	\neg		П	Т	Т				Ţ	\top	T	Π	П		\neg
d inspection						T	T	T				Ţ	ı	┪	T	T	T	1	1		\Box	コ
			T	T	T	T	7		\exists	\top	T	7	1	T	T	Ť	1	1	T	П	寸	7
2.4 Processing of prototyping molds	T					1	1	7	T	7	1	Ť	Ť	┪	┪	T	十	T	1	H	寸	ヿ
	一门	\exists	\exists	┪	T	Ť	┪		7	寸	Ť	╁	†	†	\top	T	十	†	⇈	Н	ヿ	寸
2.5 Regular check and maintenance of machines	\blacksquare			┪	_	7	7	7	7	十	┪	_	╈	t	\dagger	十	┰	十	t	П	十	\dashv
(1) Daily inspection			寸	┪	\dashv	+	7	┪	\dashv	十			┢	_		_	LL Fo	llov	 ∵-1⊺	בי		
(2) Periodic inspection	\dashv	寸	1	┪	十	十	+	┪	1	+			-					llo		_		_
	\dashv		\dashv	┪	十	+	_	+	\forall	十	┪,	S (1)	╄~	Τ	Т	Т	Ť	Ť	Г	ĹТ	Т	Т
.6 Solving problems in processing and	- -	┪	+	+	+	\dagger	+	-	+	十	\dagger	+	$^{+}$	┿	╁	╁	+	+	-	-	+	\pm
mold repair	\dashv	7	┪	+	\dashv	\dagger	\dagger	+	+	┿	╁	╁	+	+	╁	╁	╁	十	\vdash	Н	\dashv	+
(1) Investigation causes	\dashv	+	+	+	╅	+	┿	+	\pm	+	+	┿	╁	╁	╁	╁	-			011		<u>_</u>
(2) Countermeasures	╂┼	╅	+	+	+	+	+	+	+		╬	╁	╁	+	╁	╁	-		#	ol1		
(3) Corrective processing	\dashv	\dashv	\dashv	\dashv	+	╁	╬	┿	+	+	+	╁	╁	┿	╁	+	-		-	ol1		
(4) Inspection	+	+	+	+	+	+	╬	-	+	+	╀	+	╁	╁	┪~	╂	-					
(4) inspection	+	+	+	+	+	+	- -		+	+	+	+	╁	╀	╂╼	╬	_	##	F	011	OW-	-ur
	┵	+	-	-	╬	+	+	+	+	+	┿	+-	+	+	+	╀	╄	⊬		\dashv	+	+
	$\dashv \downarrow$	\dashv	+	4	+	+	+	4	_ .	- -	\bot	+	\perp	+	+	\vdash	4-	4	Ш	\sqcup	\bot	\bot
A ()	_ _	.	_	4	4			4	\perp	\downarrow	- -	-	1	1	\perp	_	\bot	\vdash	\sqcup	4	\downarrow	4
Mold assembling, maintenance and	$+\!\!\!\!+$	4	\downarrow	4	\downarrow		Щ.	4.	4	4	\downarrow	\bot	1	\perp	4_	_	\perp	\perp	Ц	\Box	4	4
trial shot of injection molding		4	4	4	\bot	\perp	\downarrow	\bot	\bot	\perp	_	4	1_	\perp	\perp	L	丰	<u> </u>	Ш	4	\downarrow	1
1 Fundamentals of finishing		\downarrow	4	4		Д.	\perp	4	\downarrow	\downarrow	\perp	\perp	L	1	20000	L	\perp	\sqcup	Ц	_	4	\downarrow
(1) Lapping process		\perp	\perp	4	\bot	1	\perp	_	4		\bot	\perp	╙	丄			\perp		Ш		\perp	丄
(2) Lapping standard of cavity side		_	_	_ _	\perp	\perp	\perp	ᆚ	\perp	_[`	\perp	\perp		\perp		∰	_	F	<u>011</u>	OW-	-up	
(3) Lapping standard of core side		\perp	1	\perp	\perp	\perp	\perp		_L		L		L	L		▦	L	F	oll	.ow-	up	
	$\bot\!\!\!\!\bot$	⊥	\perp				\perp					Ĺ	L	L	L	Ĺ	Ĺ	\Box				
2 Fundamentals of mold assembly						$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}}}}$	\prod						L						$_{-}T$	T	T	T
(1) Mold assembling		_T	$ \top $	T	_ _	Ţ	\Box	Τ	Τ	Τ	Γ	Γ	Γ	Γ	Γ		Γ	П	\top	\top	\top	T
a Comparison of mold base with mold	\top	T	T	T	T	\top	T		T		T							Fo]	llo	w-u	_ <u>-</u> _	
												•	_						_	\mathcal{Q}	,	eli

implemented Colondon Voor		le	ctu				nds	-01	n Tr	aini	Ē	Dis	pato)/P	Trai	ning	in Ja	
Calendar Year Technology Transfer Item					199		001	`		Ц.					200	10					20	001
/ Japanese Fiscal Year		T 5	6	1 7	l a		999		1 1 1	2 1	2	2	А	5	اء	7 T		2000		1110	_1	٦.
7 Vapanese i isea i egi	艹	屵					f th				⊬	13	4				쒸				쓔	끅
Term of Technical Cooperation		T	Ť	Ī	7	٣	T	Ť	Ť	Ť-	T	П	7	Ť	¥	+	十	+-	14	,		\dagger
PO 2-2 Implement Technology Transfer to the C/P		$oxed{\Box}$			Τ																	
assembling drawing		L	L	L										Ţ		T	Т	1	Т	Τ	П	T
b Checking of standard parts and	L															▓		Fo	511	ow-	up	_
assembling components										П		П	٦	丁	T	ī	T	Т	T	T	\Box	Т
(2) Trial shot process		\Box					Τ	Γ		П			T	\exists	1	Т	7	\top	T		П	T
a Mold fitting procedure														7	7	T	7	\top	T		一	7
(a)Toggle mold clamp		L			Г					Π	П	П				█		Fo	<u>11</u>	ow-	up	_
(b)Direct pressure mold clamp			_				Π		Т							░				OW-	_	
b Material replacement procedure		Γ							Γ			\neg	7			▮				ow-	_	
c Material drying conditions			Γ		Γ				Т	1	П	\neg				▮				ow-	<u> </u>	******
(temperature, time)	\Box	Г					Г				П	丁		T	T	Τ	T	T	Т	П	Ť	Т
d Conversion of molding conditions			Π						Γ	Г		寸	丁			▮		Fc	$\overline{11}$	ow-	_ up	
(shot volume, injection pressure)	\Box													Ī	T	T	Τ	T	Τ	П	$\overline{}$	Т
e Setting mold temperature by type of		Γ									\sqcap	\exists	7				_	Fc	110	ow-	—- up	
resin and cooling circuit														Ī	T	T	\top	Ť	Ī	П	T	Т
(3) Process of disassembling and			Γ						Γ			\Box	\top	\top		#		F	ίοΙ	low	լ –up	
assembling of standard parts										П			T		Ť	T	7	Т	П		Ť	T
(4) Trial assembling		П			Γ	Г	П		Γ	П		\neg	\top	T		勿		F	·01	low	<u>—</u> -up	
	П		Г	Г			П					┪	1	T	T	7	1	Т			Ť	Т
3.3 Trial shot of mold	\Box						П					\dashv		7	\top	†	au	十	\Box	H	十	†
(1) Preparation and check of mold specification	\blacksquare		П				П				寸	寸	7		T	十	1	十	П		\top	十
(Comparison of mold dimensions		П								П		十	Ť			_		Fo	<u>11c</u>	— Ծ₩—1	ענ מנ	
with molding machine specification)	\Box	_	П							П	寸	\top	\top		7	Т	Т	T		П	Ť	Т
(2) Setting conditions according	\blacksquare	П	П				П			П		丁				T	十	\Box		\top	十	十
to sample data											7	\top	\top		1	Τ	Т		П	一		十
(3) Moving check on mold	П											丁	Ī	1	T	Γ	1	П	П	\exists	┰	T
attached to injection machine	П									\Box	Ţ	\neg		T	Τ	Γ	\top	П	П	\neg	十	T
a Setting of mold open stroke												T	T			_		Fo	110	w-u	<u></u>	
b Setting of ejector stroke						7	П			\Box	\Box		7					Fo.	$\overline{110}$	w-u	p	_
c Confirmation of slide core action	7					Ī	\neg			╗		Т	1				~			w-u		
(4) Assembling and trial shot of target	$oldsymbol{\Pi}$								\sqcap	Ī		T	T	1	T	Г	Т		\Box	T	T	Τ
product-1 and 2 (Provided mold)										丁			Т	Τ		Г	Π	П		T	T	†
a Sample molding	Π						\neg			T			T			Г	\Box	П	T	\top	十	T
b Rust prevention						\neg	T					T	T			Г		П	T			T
c Mold inspection	$oxed{\Box}$											Т	Τ			▥		П		丁	T	T
(5) Assembling and trial shot of target	\prod		\neg	T			Т	\exists	\neg	П	丁		Ţ	П			П	П	\neg	\top	\top	Т
product-3 (Provided mold)		\Box								Ţ					Π		П	П	T	丁	Τ	Τ
a Sample molding	\coprod									П		Т	Τ			Π		П	ヿ	Т	\top	Г
b Rust prevention	\mathbf{I}					Ţ				T	T	T				Π			ヿ	T	\top	
c Mold inspection		\exists		\exists	Ì	T	Т			7	T	T	Т			Π			\neg	丁	T	Π
(6) Assembling and trial shot of target							\Box					\top	T	T			П		寸	T	T	Г
product-4 (Provided mold)	\prod	Т	T	╗		T	T	П		\neg	T	Τ	Τ	Т	Γ		П	П	丁	╗	1	
a Sample molding		I					Ţ						Γ							\top	T	Г
b Rust prevention						1	\int	T		Ţ	T	Τ	Ι							丁	\top	
c Mold inspection		I		T			J		Ţ	T	\prod		Ι						▦	\top	T	
(7) Assembling and trial shot of target		J		J		\int	floor		\prod	Ţ	T	Γ								\top	T	
product-5 (Provided mold)		T	T	T	\Box	T	T		T	1				Γ		\neg	П		十	\top		Г
a Sample molding	\prod	T	T		T	T				7	\top		Τ			\neg	\sqcap		▆	十	\Box	Г
b Rust prevention		J	T	T	T	Ţ	T	Ţ	\Box					▦		乛	\sqcap		▦	█	\prod	
b Mold inspection		T	T	T		T	T	T	Ţ	7	1	\top				\exists	\dashv	丁		#	\prod	П
(8) Mold evaluation	\Box	T	\top	\top	\top	\top	\top	十	丁	\top	1	\top	Τ			\neg	\top	十				
(9) Product evaluation	T^{\dagger}	Т	\top	7	T	T	十	┰	丁	1	1	1				┪	十	十	7	~	7	

implemented		led	ctur				nds	-on	Tra	inin,	<u> </u>	Disp	atc)/P	Tra	iinin			-
Calendar Year				_	199					<u></u>				2	200	00					\mathbb{Z}	200	<u>) I</u>
Technology Transfer Item	┢	-	ΙΛ	15	10	15	999) .T.:	4.0		_		41		- 1		2	00	0		_		_
/ Japanese Fiscal Year	- 14	1 5	0 0	17	18	1 9	110	<u> </u>	112 7/I	1	2	3	4				8	9 1				<u>112</u>	<u></u>
Term of Technical Cooperation	- -	-	3		_	T	L	le i	T/1	一		+	-+	7	<u> </u>	+	\dashv	+	꾸	<u> </u>	+	┿	+
PO 2-2 Implement Technology Transfer to the C/P	_	<u> </u>	╁	۲	Τ	十														▼			
a Appearance (visual check)	十	T		T	T		Т				207772			******	223020	80280	20000100	20:333	***	****	****		
b Dimension measurement of molded product	十	T	\vdash	†	\vdash	t	\vdash	 	\vdash	H	_	\dashv	+		+	+	-	+	╫	+	+	-	雛
c Weight measurement of molded product	-	┝	╁	\vdash	t	<u> </u>	 -	H		┝╌┤		\dashv		+	╁	+	+	╁	+	+	+-	-	
o morale measurement of moraeu product	+	┢	\vdash	┢	H	+-	┝	┝	├	├┤	\dashv	╌┼	╫	+		+	+	+	+	+-	+	_	4
3.4 Assembling and trial shot of target	- -	-	╁	├	┝	-		⊢	├	\vdash	\dashv	 -	+	+	+	+		-	+		+	+	╀
	╢	H	-	⊢	├	-	┝	┝		$\vdash \vdash$	\dashv	4	+	- -	+	4	-	4	- -	+	 	₋	Ļ
product manufactured under the project	╬	\vdash	H	⊢	_	⊢	H	<u> </u>		Н	_	4	4	- -	4	4	1	\downarrow	4	丰	╄	丄	Ļ
(1) Assembling and trial shot of target	╀	_	┝	┞	ļ			<u> </u>		H	_	4	4	_	4	4		ļ.	\perp	丄	\perp	1_	Ļ
product-1	_ _	_	<u> </u>	┖	L	<u> </u>		<u> </u>	<u> </u>	Ц	_	_	_	Ц.	\perp	⊥	\perp		1	丄		<u> </u>	L
(Evaluation of mold and Products)	_ _	_			L				L				┸										
(2) Assembling and trial shot of target				L	L								_[-		Τ	Τ	П	\Box	Γ
product-2		L		Ĺ	Ĺ						_T	$_{ extsf{I}}$		Τ	Τ	T	T	T	T	T	Τ	T	Γ
(Evaluation of mold and Products)											1	T	T	T		T	1	\top	丁	7	\top	T	T
(3) Assembling and trial shot of target	П				Γ		乛			\Box	T	_	十	十	1	T	┪	\top	Ť	†	⇈	T	T
product-3	\top									\dashv	7	7	十	十	T	\dagger	+-	╁	t	╁╌	+	\vdash	H
(Evaluation of mold and Products)	\top			Н		П	┪	_		十	十	+	+	╅╴	╁	+		╁	+	╁─	╀	\vdash	┝
(4) Assembling and trial shot of target	11				H	-	ᅥ			+	+	╌	-	╅	┿	╁	┿	╁	╁	╁	╁─	H	H
product-4	╂┈	-	-	Н	Н	-		\dashv	\dashv	- -	+	+	╁	╌┼╌	+	╬	╁	╀	╁	╀	⊢	╀┦	┝
(Evaluation of mold and Products)	╂┤	\dashv	\vdash		Н		+	\dashv	-	+	+	-	╁	╁	╬	┿	+	+-	+	╄	├ ─-	\dashv	⊢
(5) Assembling and trial shot of target	+	\dashv	\dashv	\dashv	Н	\dashv	\dashv		\dashv	\dashv	┽.	-	+	╬	+	╀	- -	╀	╄	┼	 _	\sqcup	_
	-[\dashv	\dashv				4	_		4	+	- -	╀	+	4-	+	╄.	╄	丄	igspace	\sqcup	L
product-5	+	4		_	_	4	4	4	_	4	4	- -	_	╀	\downarrow	Ļ	4	Ļ	╙	↓_	Ш	Щ	L
(Evaluation of mold and Products)	┹	_	_		4		_	4	_	4	4	\perp	╀-	┸	╄	1	\bot		L	丄	Ш	Ш	_
	┷	4	_	_	4		4	_	.	4	_ _	_	┷	1		퇶		L	L	<u> </u>	Ш	Ц	
3.5 Assembling and trial shot of	44	4	Ц	_	\Box	_	_	_	_	\perp				上	\perp	L	L	<u> </u>		L	$oxed{igsquare}$	Ш	Ш
prototyping molds	Ш				\Box									<u> </u>									
(1) Mold and product evaluation	\square	\perp	_	4		4	4	4	_	\bot	4	_		\perp	L	L	\perp	L	L	\Box		П	_
3.6 Regular check and maintenance of	H	1	-		\dashv	┪	\dashv	\dashv	+	+	+	+	╬	╀	\vdash	╁	╁	H	-	╀	Н	\vdash	_
machinery	\top	7	_	7	\neg	寸	寸	┪	7	\top	┪	十	+	十	╁	T	╁╌	┢	H	1	\vdash	H	_
(1) Inspection of machinery startup	\Box	寸	┪	┪	┪	7	7	1	寸	+	Ť	十	╁					Fο	11/	-WC		للب	
(2) Monthly regular inspections	$\dagger \dagger$	+	┪	┪	\dashv	\dashv	\dagger	╅	7	\pm	+	┪	+	100000						low	<u> </u>		_
(3) Annual inspections	11	+	┰┼	┪	┪	+	十	┪	+	+	╁	╁	╁	╁	1			1		11c			_
(a) I amade mopositorio	#	\dashv	\dashv	+	┪	-+	+	\dashv		+	+	┿	╅╌	╁	╁			H	ro		יייאנ דדו	up T	_
3.7 Solving problems in molding	+-+	十	+	\dashv	+	\dashv	+	+	+	- -	┿	+	╀	┼╌	┝	┢	╂	┝	H	\vdash	\dashv	\dashv	
(1) Problems stemming from the mold	╂┼	+	+	\dashv	┥		+	+	+		╀	+	┿	╀	├	 	╢	L	<u> </u>	Н	\dashv	-	_
	╂┼	+	\dashv	+	\dashv	-+	+	+	+		+	+	╁	╁—	┝	┝	⊹ -	L	L	\vdash	\dashv	\dashv	_
a Investigation causes	₩	+	4	+	\dashv	4	+	+	ļ	- -	╀	+	╄	-	L	_	 	_	_	\vdash	4	4	_
b Countermeasures	- -	4	-	\dashv	4	4	4	4	4	_	-	\perp	╄	┡	_	_	丄		Ш	Ш	_	_	
c Prototype confirmation	+	4	_	_	4	4	_ _	4	_	1	퇶	_			L	L	L			Ш	_		_
(2) Problems stemming from molding	\bot	4	4	\perp	4	4	1	1	_			┸		L		L					_1	\perp	
conditions							j	_ .							L								
a Investigation causes																					П	\top	
b Countermeasures	$oldsymbol{L}$		\int	\int		$ \rfloor $	\int				Ţ		Γ		Γ		П	П		\exists	\top	\top	٦
c Prototype confirmation	I	T	T	T	T	T	T	T	T		T	T					\Box		\neg	寸	\top	十	٦
	П	1	\downarrow]	ļ	\downarrow		1	\downarrow			L									士	士	
4 Monitoring and necessary feedback	\dashv	+	+	+	+	4	+	+	+	- -	\perp	-	L		L			_	_[\dashv	\perp	\downarrow	_
r wronttoring and necessary reedback	4—	Ц.		4	4	4			\perp				L				ı	- 1			\perp	\perp	
(Supplementary Technology Transfer)	1 1	,	ı	J	,		- 1	- 1	- 1	$\neg r$	Т-		$\overline{}$				-			$\overline{}$			



implemented lectures hands-on Training Dispatch of S/E C/P Training in Japan Calendar Year 2000 2001 2002 Technology Transfer Item 2000 2001 4 5 6 7 8 9 10 11 12 1 2 3 / Japanese Fiscal Year 7 8 9 10 11 12 1 2 Term of Technical Cooperation 2-2 Implement Technology Transfer to the C/P 0 Fundamentals (common items) 0.1 Precondition for mold technology (1) General engineering drawings a Design standards. FINISHED b Method of section **FINISHED** (2) Properties of plastic a Types and characteristics **FINISHED** b Forming methods. **FINISHED** Fundamentals of steel for mold a General steel **FINISHED** b Special steel **FINISHED** Fundamentals of metal processing a Fundamentals of cutting **FINISHED** b Fundamentals of EDM processing F **FINISHED** c Functions of processing equipment F FINISHED Fundamentals of plastic injection a Outline of injection molding machine (a)Mold clamping mechanism **FINISHED** (b)Injection mechanism **FINISHED** b Injection molding process for thermoplastics **FINISHED** 0.2 Principles of injection mold Primary injection mold (what is mold?. industrial standard etc.) a what is a mold FINISHED b Industrial standard **FINISHED** (2) Name and function of components (guide pin, locate ring etc.) a Components of the two plate mold **FINISHED** b Components of the three plate mold **FINISHED** Name and function of mold elements (runner, gate etc.) a Runner-basic configuration **FINISHED** b Gate-basic configuration, advantages **FINISHED** and disadvantages 0.3 Mold design Standard (1) Name and function of molded products a Boss ejector system and mold design **FINISHED** b Rib ejector system and mold design **FINISHED** (2) Determination of injection condition a Calculation of injection volume(weight) **FINISHED** into designed mold **FINISHED** b Calculation of clamping force for design mold **FINISHED** c Design mold dimensions and injection **FINISHED** molding machine specifications **FINISHED** Process from product model to mold design a Methods of product model design FINISHED gamel

implemented lectures hands-on Training Dispatch of S/E C/P Training in Japan Calendar Year 2000 2001 2002 Technology Transfer Item 2000 2001 4 5 6 7 8 9 10 11 12 1 2 3 Japanese Fiscal Year 7 8 9 10 11 12 1 2 3 b Reflecting study in mold design FINISHED Layout of basic mold a General design F **FINISHED** b Special design FINISHED (5) Design of molded product a Molded product design (a)Undercut **FINISHED** (b)Draft angle **FINISHED** b Quality of manufactured goods (a)Dimensional tolerance **FINISHED** (b)P.L code F **FINISHED** (c)U.L code **FINISHED** c Mold shrinkage (Thickness of forming material and F **FINISHED** molded product) d Plastics flow (Fluid ratio [Length/thickness] at injection pressure P) F **FINISHED** (6) Design of mold standard parts a Standard parts F **FINISHED** b Selection and design of standard parts F **FINISHED** (7) Undercut a Types of undercut method **FINISHED** b Selection of undercut method **FINISHED** (8) Fundamental design using target product-1(pen tray) a Required function of the product **FINISHED** b Specification mold design FINISHED 0.4 Fundamentals of mold processing and plastic injection molding (1) Mold processing a Mold processing methods FINISHED b Mold processing conditions **FINISHED** Plastic injection molding a Three factor of molding (a)Mold **FINISHED** (b)Molding machine **FINISHED** (c)Material resin **FINISHED** b Three principles of molding (a)Temperature **FINISHED** (b)Pressure **FINISHED** (c)Cycle **FINISHED** 0.5 Fundamentals of computer Computer operation **FINISHED** Operation of CAD, CAM and CAD/CAM **FINISHED** 1 Injection mold design **FINISHED** 1.1 Fundamentals of mold design (1) Usage of the applications for Mold layout How to design target product-1

implemented lectures hands-on Training Dispatch of S/E C/P Training in Japan Calendar Year 2000 2001 2002 Technology Transfer Item 2000 2001 / Japanese Fiscal Year 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 (Pen Tray) a Molded product b Specification of mold design (3) How to design target product-2 (Front Case for Alarm Clock) a Molded product b Specification of mold design (4) Common use of parts and standardization of common parts a Objectives **FINISHED** b Specification **FINISHED** (5) Mold design based on prediction a Predicted product defects **FINISHED** b Countermeasures for predicted product **FINISHED** defects 1.2 Mold design by CAD/CAM (1) Techniques of CAD, CAM and CAD/CAM a CAD Follow-up b CAM Follow-up c Linking between CAD and CAM Follow-up (2) Guidance by each CAD/CAM software makers for mold making (3) Exchange of CAD/CAM network data Follow-up (4) CAD/CAM operation and mold design (2-dimension/2.5D/3D) a Specification of CAD/CAM operation Follow-up b Specification of CAD/CAM operation in Follow-up mold design (5) Design of target product-1 by CAD (Pen Tray) a Molded product **FINISHED** b Specification of mold design **FINISHED** (6) Design of target product-2 by CAD (Front Case for Alarm Clock) a Molded product 8 b Specification of mold design (7) Design of target product-3 by CAD (Front Panel for Personal Computer) a Molded product b Specification of mold design (8) Design of target product-4 by CAD (Upper Case for Telephone) a Molded product b Specification of mold design (9) Design of target product-5 by CAD (Camera Body) a Molded product b Specification of mold design 3 Design of prototyping molds (for

implemented lectures hands-on Training Dispatch of S/E C/P Training in Japan 2000 Calendar Year 2001 2002 Technology Transfer Item 2000 2001 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 / Japanese Fiscal Year requirements of model companies etc.) 1.4 Solve problem after trial shot (Problems and solution of injection molding assembly) (1) Comparing molded product dimensions with F design dimensions (2) Comparing design dimensions with F mold component dimension 2 Injection mold processing 2.1 Fundamentals of processing (1) Cutting theory a Milling **FINISHED** b Lathe **FINISHED** c Grinding **FINISHED** (2) EDM Processing theory (Edit of CAD/CAM/CNC data) a Dei sinking electric discharge machine Follow-up b Wirecut electric discharge machine Follow-up c Small hole EDM machine Follow-up (3) Inspection and measurement a 3D measurement data Follow-up b General measurement data Follow-up 2.2 Operation and function of processing machinery (1) Operation and function of conventional Follow-up machinery (2) Operation and function of MC Follow-up machinery (3) Operation and function of CNC Follow-up machinery (EDM, W-EDM etc.) (4) CAM operation and programming Follow-up (5) CAM/CNC operation and programming Follow-up (6) Mold production technology (Processing and tooling) **FINISHED** a Planning of processing process b Tooling **FINISHED** c Processing conditions **FINISHED** (7) Processing of Provided mold parts (Provided mold) a Cavity making of target product-1 **FINISHED FINISHED** b Undercut pin fabrication for target product-2 and the others core pins 2.3 Processing of target products Processing process planning a Planning of processing process of designing data b Quality control

implemented lectures hands-on Training C/P Training in Japan Dispatch of S/E 2000 Calendar Year 2001 2002 2000 Technology Transfer Item 2001 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 / Japanese Fiscal Year c Production control (2) Processing of target product-1 a Preparations / setup **FINISHED** F b Action confirmation based on NC data bus **FINISHED** c Machine processing **FINISHED** d Inspection **FINISHED** (3) Processing of target product-2 a Preparations / setup **FINISHED** b Action confirmation based on NC data bus **FINISHED** c Machine processing d Inspection (4) Processing of target product-3 a Preparations / setup F b Action confirmation based on NC data bus c Machine processing F d Inspection (5) Processing of target product-4 a Preparations / setup b Action confirmation based on NC data bus c Machine processing d inspection Processing of target product-5 a Preparations / setup b Action confirmation based on NC data bus c Machine processing d inspection 2.4 Processing of prototyping molds 2.5 Regular check and maintenance of machines Follow-up Daily inspection Ш Follow-up Periodic inspection 2.6 Solving problems in processing and mold repair Follow-up (1) Investigation causes Follow-up (2) Countermeasures (3) Corrective processing Follow-up Follow-up (4) Inspection 3 Mold assembling, maintenance and trial shot of injection molding 3.1 Fundamentals of finishing F (1) Lapping process Follow-up (2) Lapping standard of cavity side Follow-up (3) Lapping standard of core side

implemented lectures hands-on Training Dispatch of S/E C/P Training in Japan Calendar Year 2000 2001 2002 Technology Transfer Item 2000 2001 9 10 11 12 5 / Japanese Fiscal Year 8 9 10 11 12 1 2 3 3.2 Fundamentals of mold assembly (1) Mold assembling a Comparison of mold base with mold Follow-up assembling drawing b Checking of standard parts and Follow-up assembling components (2) Trial shot process a Mold fitting procedure Follow-up (a)Toggle mold clamp Follow-up (b)Direct pressure mold clamp b Material replacement procedure Follow-up c Material drying conditions Follow-up (temperature, time) d Conversion of molding conditions Follow-up (shot volume, injection pressure) e Setting mold temperature by type of Follow-up resin and cooling circuit Process of disassembling and Follow-up assembling of standard parts Follow-up (4) Trial assembling 3.3 Trial shot of mold (1) Preparation and check of mold specification Follow-up (Comparison of mold dimensions with molding machine specification) Setting conditions according Follow-up to sample data (3) Moving check on mold attached to injection machine a Setting of mold open stroke Follow-up b Setting of ejector stroke Follow-up Follow-up c Confirmation of slide core action (4) Assembling and trial shot of target product-1 and 2 (Provided mold) F a Sample molding F b Rust prevention ₩ c Mold inspection (5) Assembling and trial shot of target product-3 (Provided mold) ЩF Follow up a Sample molding F Follow up b Rust prevention Follow up c Mold inspection (6) Assembling and trial shot of target product-4 (Provided mold) Follow up Follow up a Sample molding b Rust prevention Follow up c Mold inspection Assembling and trial shot of target product-5 (Provided mold) a Sample molding Follow up b Rust prevention Follow up Januhb Mold inspection Follow up

implemented lectures hands-on Training Dispatch of S/E C/P Training in Japan Calendar Year 2000 2001 2002 Technology Transfer Item 2000 2001 4 5 6 7 8 9 10 11 12 1 2 3 Japanese Fiscal Year 5 6 7 8 9 10 11 12 1 2 (8) Mold evaluation Follow-up (9) Product evaluation a Appearance (visual check) Follow-up b Dimension measurement of molded product Follow-up c Weight measurement of molded product Follow-up 3.4 Assembling and trial shot of target product manufactured under the project F (1) Assembling and trial shot of target product-1 (Evaluation of mold and Products) Assembling and trial shot of target product-2 (Evaluation of mold and Products) (3) Assembling and trial shot of target product-3 (Evaluation of mold and Products) (4) Assembling and trial shot of target product-4 (Evaluation of mold and Products) Assembling and trial shot of target product-5 (Evaluation of mold and Products) 3.5 Assembling and trial shot of prototyping molds (1) Mold and product evaluation Follow-up 3.6 Regular check and maintenance of machinery (1) Inspection of machinery startup Follow-up (2)Monthly regular inspections Follow-up (3) Annual inspections Follow-up 3.7 Solving problems in molding (1) Problems stemming from the mold Follow-up a investigation causes b Countermeasures c Prototype confirmation (2) Problems stemming from molding Follow-up conditions a Investigation causes b Countermeasures c Prototype confirmation 4 Monitoring and necessary feedback (Supplementary Technology Transfer)



South

Implemented Hands-on Training Dispatching a S/E C/P Training in Japan Advisory service Training curse Calendar Year Technology Transfer Item 2002 2003 4 5 6 7 8 9 10 11 12 1 2 3 Japanese Fiscal Year 4 5 6 7 8 9 10 11 12 1 2 3 Term of Technical Cooperation 2-2 Implement Technology Transfer to the C/P Fundamentals (common items) 0.1 Precondition for mold technology General engineering drawings a Design standards. **FINISHED** b Method of section **FINISHED** (2) Properties of plastic Types and characteristics FINISHED b Forming methods. **FINISHED** (3) Fundamentals of steel for mold a General steel FINISHED b Special steel **FINISHED** (4) Fundamentals of metal processing FINISHED a Fundamentals of cutting b Fundamentals of EDM processing **FINISHED** c Functions of processing equipment **FINISHED** (5) Fundamentals of plastic injection a Outline of injection molding machine (a)Mold clamping mechanism FINISHED (b)Injection mechanism FINISHED b Injection molding process for thermoplastics FINISHED Principles of injection mold Primary injection mold (what is mold?. industrial standard etc.) a what is a mold **FINISHED** b Industrial standard **FINISHED** (2)Name and function of components (guide pin, locate ring etc.) a Components of the two plate mold FINISHED b Components of the three plate mold FINISHED Name and function of mold elements (runner, gate etc.) a Runner-basic configuration FINISHED b Gate-basic configuration, advantages FINISHED and disadvantages Mold design Standard Name and function of molded products FINISHED a Boss ejector system and mold design b Rib ejector system and mold design FINISHED (2) Determination of injection condition a Calculation of injection volume(weight) FINISHED into designed mold FINISHED b Calculation of clamping force for design mold **FINISHED** c Design mold dimensions and injection FINISHED molding machine specifications **FINISHED** Process from product model to mold design a Methods of product model design **FINISHED** b Reflecting study in mold design **FINISHED** Layout of basic mold a General design FINISHED b Special design **FINISHED** Design of molded product a Molded product design (a)Undercut **FINISHED**



Sarreh

Calendar Year Technology Transfer Item			_			21	00:	.		_		Т		2	200	3	2.0	00:	3		<u> 2</u>	00
/ Japanese Fiscal Year	4	5	6	7	8				12	1	2	3	4	5	6	7 [8				12	1	2
	FII	ΝI	SI	ΗE	D	Т	T	T			П	T		7	7	T	T	T	Ī			Γ
b Quality of manufactured goods	\Box						I						\Box			T						Γ
(a)Dimensional tolerance	FII					Τ	Т	Π	Π			Т				Т	Т	Π	П			Γ
(b)P.L code	FII	NI	SI	ΗË	D				Г	Г				T	\top	1	Τ	П	П			Γ
(c)U.L code	FII	ΝI	SI	HE	D	Γ	Τ		Г						Т		Т					\Box
c Mold shrinkage	П					Π	Ι.				П	П	П	Т	Т	Т	Т		Г			Γ
(Thickness of forming material and	FII	ΝI	SI	HE	D	Τ			П					T	T		Τ					Г
molded product)	Т			Π	Τ	Т	Т		П		П	7	7	Т	7	_	Τ	Τ	T			Γ
d Plastics flow	\Box				Γ	Π	Ι	П	П	Г	П		T	T	\top	Τ	Τ	Т	Π	П		Γ
	FII	NI	SI	HE	D	Τ	Τ	T	Τ	Г	П	T	1	T	丁	1	Т	T		П		Γ
(6) Design of mold standard parts	П			Π					П	П	П			Т	Т	T	Т	Т		П		Γ
a Standard parts	FII	ΝI	SI	HE	D				Г		П			T	7	┱	T	1	T	П		
	FI					1	Τ	1	\vdash	Г	П	1	T	\top	十	\top	\top	Т	T			Г
(7) Undercut	T			Ī	Ť	T	T	Т	Т	Г	П	╗	7	7	\top	_	1	1	1		٦	Г
	FII	NI	SI	ΗE	D	Т	Τ		 	_		7		7	1	十	T	Τ		П		_
	FII					T	1		┞			7	\top	Ť	┪	T	T			П	П	Г
(8) Fundamental design using target	丁	-		Ī	Ť	Τ	Τ		Γ		一	7	7	T	十	Ť	T	Τ		П		Γ
product-1(pen tray)	ヿ			Τ	Τ	Τ	Τ	Т	Т	П	\sqcap	7	十	\top	十	\top	T	Τ	Т	П	\dashv	Γ
a Required function of the product	Fil	N	SI	ijF	D		T	T	Τ	П	\sqcap	7	7	†	+	1	1	1	T	П	┪	Γ
	FII					Τ	T	T	Τ	П		+	十	十	+	T	1	1	1	Н	一	Γ
b opcomounted more decided	Ť	- 1	<u> </u>	Ϊ	Ť	T	t	T	T	П	$ \neg $	7	十	1	+	+	1	1	Τ	П		_
4 Fundamentals of mold processing and	†		Т	T	T	T	T	T	t	П	\sqcap	十	十	+	T	T	T	T	Τ	П	┪	_
plastic injection molding	ヿ		Т	Т	T	Т	T	T	Π	П	\sqcap	十	十	†	\dagger	\dagger	T	T	Т	П	┪	_
(1) Mold processing	寸		Т	T	T	T	T	T		П	\dashv	1	\top	†	十	十	T	T		П	┪	_
a Mold processing methods	Fİ	ΝĪ	์รเ	İF	ħ	✝	T	T	✝	Н	\dashv	+	\top	+	┪	十	✝	T	✝	H	_	
	FII					╁	1-	⇈	1	-	-+	_	+	+	+	1	t	╁	一	М	┪	Γ
(2) Plastic injection molding	Ϋ	<u> </u>	<u> </u>	İ	Ī	T	1	1	T	П	Ħ	1	✝	Ť	1	T	t	T	1	П	┪	Γ
a Three factor of molding	ヿ		Г	T	T	T	T		T	П	\Box	7	T	Ť	\top	十	T	T	t	П	ᅥ	_
(a)Mold	Fİ	ΝÏ	์รเ	ΪF	in	T	\top	T	⇈	П	\dashv	7	1	1	┪	┰	╈	T	*	П	┪	Τ
	FII					T	T	T	Т		\dashv	┱	╅	Ť	十	1	1	1	T	П	コ	Τ
	FII					† ~~	1	m			_	1	_	十	_	1	1	1	Г	П	┪	_
b Three principles of molding	Ť		<u> </u>	İ	Ī	1	1-	T		-	\neg	7	7	1	+	╈	╈	┢	\vdash		┪	_
(a)Temperature	Fİ	NI	้รเ	ÌĒ	D	T	✝	T		П	\dashv	┪	T	1	✝	十	T	T	ऻ		7	_
	FII					T	✝	T	Г	П	┪	✝	┰	1	╅	十	T	✝	Г		╗	_
	FII					Τ	T	T	П	П	┪	T	十	Ť	_	十	T	T	T	П	_	
(0,0)0.0	Ť		Ī	Ī	Ť	Τ	Т					1	T	T	1	Τ	T	厂	▎	П	_	
5 Fundamentals of computer	ヿ				T	Γ			П			T		1	7	1	Τ	T		П	T	_
	FII	ΝĪ	SI	ΉE	D	Τ	1	Г	\sqcap			7		1	1	\top	1	T	Ì	П	T	
	FII					Τ	Т		Π		Т	7	┰	T	T	Т	Τ	T		П	コ	_
(a) Operation of Orab) of the one of the	Ť		Ī	Ϊ	T	Τ	1		П	П	\neg	1	1	Ť	1	Τ	T			П	┪	_
	ヿ			Γ	T	Τ	T				\neg	1	T	T	┰	┪	Τ	Г		П	╗	_
Injection mold design	ヿ		Г	Т	T		T					1		Ť	1	7	Τ			П	T	_
1 Fundamentals of mold design	ヿ			Г	T	Τ	1					1	1	1	┪	┪	Τ	1		П		
(1) Usage of the applications for Mold layout	T		Г	Г	Т	Γ	1					7		Т	Τ	Τ	Т			П	ヿ	_
(2) How to design target product-1	寸		Г	Г	T	T	T			П	\neg	1	7	T	7	1	Τ	T		П	╛	_
(Pen Tray)	\neg		Г	Г	Т	Т	Т		П		\neg	7	7	T	╗	Т	Τ	П		П	П	_
a Molded product	FII	ΝI	SI	ΉE	D	Π	T				\neg	1		T	┰	Τ	Τ	Π		П	T	_
	FII					1	1	 	1			1			T	T	T	Π				
(3) How to design target product-2	Τ			Ī	Ī	T	1	Ì	T			1	_	T	7	Т	Т	П		Ŧ	╗	_
(Front Case for Alarm Clock)	寸		_	┢	\vdash	Τ	T		Т		\dashv	1	T	T	T	┰	1	1			\exists	_
a Molded product	FII	NI	SI	ΉE	D	1	T		1		\neg	7	T	Ť	T	Τ	Т	Т	1		\exists	_
	FII					T	T	Г	\vdash			1	╅	T	T	Τ	Т	Т	Г		7	_
(4) Common use of parts and standardization	Ϋ	7	<u> </u>	Γ	Ť	Т	T	T	Г	П		十	十	十	†	Τ	T	Г	П	П	7	
of common parts	寸	_		 	Τ	T	T	Г	Г	П	\dashv	十	1	十	1	十	1	Γ	Г	П	7	_
a Objectives	FII	ΝÏ	รเ	ĪF	D	T	T	T	Г	П		十	1	1	1	十	T	Г	П	\sqcap	1	_
	FII					T	T	T	Г		\dashv	+	十	\top	1	Τ	Τ	Г	Г		7	
(5) Mold design based on prediction	Ť			ľ	Ť	⇈	╁┈	1		П		┪	\top	T	T	\top	⇈	<u> </u>	Г	H	┪	_
a Predicted product defects	FII	ИĬ	ŠĪ	İF	D	T	†	 	m		十	†	\top	1	Ť	\dagger	十	1	П	П	┪	_
	FII					†	T	T		\dashv	十	十	\top	Ť	\dagger	\top	\dagger	1		П	┪	_
defects	T	1	<u> </u>	Ť	Ť	✝	1	✝		\dashv	_	†	1	T	\dagger	T	Τ	Π			7	_
ucicots	\dashv	ᅥ	1	Τ	✝	†	+	 	П	\dashv	_	+	+	T	╈	\top	T	Τ		\dashv	7	_
2 Mold design by 3D CAD/CAM	-			_	†	1	1	T	П			十			1		İM				1	
Z INIOIU UGAIGII DY OD OMO/OMINI	15		-	•	╂	+	+	1	 - 		-	+	-1=	7-	٦-	Unit	7	1	T	7	[_



Calendar Year	2003
Technology Transfer Item	2002 2003
/ Japanese Fiscal Year	4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1
a CAD	Follow-up
ь САМ	Follow-up
c Linking between CAD and CAM	Follow-up
(2) Guidance by each CAD/CAM software	
makers for mold making	
(3) Exchange of CAD/CAM network data	Follow-up
(4) CAD/CAM operation and mold design	
(2-dimension/2.5D/3D)	
a Specification of CAD/CAM operation	Follow-up
b Specification of CAD/CAM operation in	Follow-up
mold design	
(5) Design of target product-1 by CAD	
(Pen Tray)	
a Molded product	FINISHED
b Specification of mold design	FINISHED
(6) Design of target product-2 by CAD	
(Front Case for Alarm Clock)	
a Molded product	FINISHED
b Specification of mold design	FINISHED
(7) Design of target product-3 by CAD	
(Front Panel for Personal Computer)	
a Molded product	FINISHED
b Specification of mold design	FINISHED
(8) Design of target product-4 by CAD	
(Upper Case for Telephone)	
a Molded product	FIN
b Specification of mold design	FIN
(9) Design of target product-5 by CAD	
(Camera Body)	
a Molded product	
b Specification of mold design	
1.3 Design of semi prototyping molds	<u></u>
a prototyping mold A	FINISHED
(P.R. Gift : Business card Case)	
b prototyping mold B	FINISHED
(Soap Box)	
c prototyping mold C	FINISHED
(Medicine Box)	
d prototyping mold D	
(Multi usage Mold)	
f prototyping mold E	
(CD-ROM File/Cace)	
(CD-ROM File/Opener)	FINISI PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERT
(CD-ROM File/Holder)	
1.4 Solve problem after trial shot	
(Problems and solution of injection	
molding assembly)	
(1) Comparing molded product dimensions with	Follow-up
design dimensions	
(2) Comparing design dimensions with	Follow-up
mold component dimension	
	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s
2 Injection mold processing	A CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONT
2.1 Fundamentals of processing	
Fundamentals of processing Cutting theory	
Fundamentals of processing Cutting theory a Milling	FINISHED
2.1 Fundamentals of processing (1) Cutting theory a Milling b Lathe	FINISHED FINISHED
Fundamentals of processing Cutting theory a Milling	FINISHED



Calendar Year		2003 2004
Technology Transfer Item	2002	2003
/ Japanese Fiscal Year (Edit of CAD/CAM/CNC data)	4 . 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3
a Dei sinking electric discharge machine		┠╎┪┪┇╬╬╣┇ ┪┪┼
b Wirecut electric discharge machine	Follow-up Follow-up	FINISHED
c Small hole EDM machine	Follow-up	FINISHED
(3) Inspection and measurement	T Onow up	FINISHED
a 3D measurement data	Follow-up	<u> </u>
b General measurement data	Follow-up	
2.2 Operation and function of processing		
machinery		
(1) Operation and function of conventional	Follow-up	FINISHED
machinery		
(2) Operation and function of MC	Follow-up	FINISHED
machinery (C)		
(3) Operation and function of CNC machinery (EDM, W-EDM etc.)	Follow-up .	FINISHED
(4) CAM operation and programming	Follow-up	╶ ╫╫
(5) CAM/CNC operation and programming	Follow-up	FIN FIN
(6) Mold production technology	<u> </u>	FIN FIN
(Processing and tooling)	▔▐▔▎▔▍▔▍▔▍▔▍▔▍▔▍▔▍▔▍	╶╂╏╏╏
a Planning of processing process	FINISHED	
b Tooling	FINISHED	-
c Processing conditions	FINISHED	
(7) Processing of Provided mold parts		
(Provided mold)		
a Cavity making of target product-1	FINISHED	
b Undercut pin fabrication for target	FINISHED	
product-2 and the others core pins		
0.0 D	╶╏╎╎╎╎╎╎	
2.3 Processing of target products (1) Processing process planning	╶╏┈┊┼╎┼┼┼┼┼┼┼ ┼┼	
(1) Processing process planning a Planning of processing process of		
designing data		
b Quality control		
c Production control		
(2) Processing of target product-1		
a Preparations / setup	FINISHED	
b Action confirmation based on NC data bus	FINISHED	
c Machine processing	FINISHED	
d Inspection	FINISHED	
(3) Processing of target product-2		
a Preparations / setup	FINISHED	
b Action confirmation based on NC data bus	FINISHED	
c Machine processing d Inspection	FINISHED	·┼┼┼╍┼┼┼┼ ┩
(4) Processing of target product-3	FINISHED	┼┼╎┼┼┼┼┼ ┦
a Preparations / setup	FINISHED	┊╏╏
b Action confirmation based on NC data bus	FINISHED	┤╏╏╏╏╏╏╏╏╏╏╏╏
c Machine processing	FINISHED	┼╏┈╟╏╏
d Inspection	FINISHED	┍┋╸┋╒┋
(5) Processing of target product-4		
a Preparations / setup	FINISHED	
b Action confirmation based on NC data bus	FINISHED	
c Machine processing	FINIS	
d inspection	FINIS	HED
(6) Processing of target product-5		
a Preparations / setup	F	INISHED
b Action confirmation based on NC data bus	▐ ▐ ▋	FINISHED
c Machine processing	╂┼╎┊┆╎╎╎┼┞┞	
d inspection		FINISHED
d inspection	╺╏╼┞═┞═╂═╏┈╽═┋╌┩╸┞═╁═╁═┋ ═	THE THE TAXABLE DESCRIPTION OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF
d inspection Processing of semi prototyping molds		T A VICTOR



Table 1 . T. C. D.							_	_			L					20	<u> </u>	3					2	03
Technology Transfer Item	- 1	. Т		_ [<u>20</u>	02	? -			,	,		_				20	003	3			
/ Japanese Fiscal Yea (P.R. Gift: Business card Case)	ir ·	4	5	6	7	8	9	10	11	12	1	2	3	4	1 5	6	7	8	9	10	Ш	12	ı	Ŀ
b prototyping mold B		+	+	-	\dashv	_	-					\vdash	L.	Ļ	Ţ.	上	Ť	\bot	Ļ	L	Ц	_		L
(Soap Box)	 -	+		┪	+	\dashv	_		Ħ			Ú	Αſ	ΛĊ	<u>上</u>	ĻΕ	빋	╄	┺	Ļ	\square	\dashv	_	L
c prototyping mold C	-+	+	┿	+	+	\dashv	_	Н	H	_	H	-	Ļ	L	╀					Щ	ڸڸ	<u></u> [L
(Medicine Box)		╁	+	╅	+	-					-	┡	╄-	┞	╄	11550	ukare L	EN .	ᅡ	NI	SH	띧	24	L
d prototyping mold D	$\overline{}$	╁	+	+	ᅥ	-	\dashv	\dashv		_	-	├	├-	⊢	╄	╀	╀	DEADER.	olga	⊢	ᆜ		ᆜ	بِ
(Multi usage Mold)		+-	+	+	+	┪		\dashv	-	_	 -	┝	Н	┞	├	╂	╀	-	nua.		FI	\overline{M}	ᅪ	뱐
f prototyping mold E	 -	+	╅	十	\forall	-	┥	-	\dashv	-	_		-	┞	┝	╀	-	╁	┢	Н		┙		
(CD-ROM File)		十	+	+	\dashv	-	ᅱ	┪	\dashv	-	_	H	H	┝	├	⊢	╀	╁	-	Н	#	鞸		Щ
	$\neg +$	+	╈	+	+	┪	ᅦ	┪	ᅦ		_	┝	Н	-	H	╁─	┞	╂	\vdash	┌╌┤	\vdash	ᆉ	4	_
(3) Contracted prototyping works from the outside	5	100			24.2												_					╧	_	
		Ϊ	T	Ť		1 M 2				7	1 2 1	J k	-	¥1.			V ## E7		I Ç	T.		7		- 1
Mold assembling, maintenance and		1	Ť	T	1					┪	┪				┢┈	┞	┝	\vdash	Н	\dashv	+	-		_
trial shot of injection molding	$\neg \top$	T	\top	†	7	Ī		٦	7	7							┝	H	Н	\dashv	┿	ᅾ	4	_
1 Fundamentals of finishing		Т	T	7	Ť	7	┪	┪	┪	┪	_				Т	Н	\vdash	1-	┧		+	┰	+	_
(1) Lapping process		T	1	T	Ť	T	7	7	┪	7	┪	_	_		_	Н	-	H		\dashv	┿	+	╅	
(2) Lapping standard of cavity side	F	ΙN	ĪS	H	ΕĎ	寸	寸	十	寸	+	7	\dashv	ヿ			\vdash	-	Н	\dashv	+	\dashv	十	┰	_
(3) Lapping standard of core side					ED		7	1	┪	寸	,	7	7	ᅱ		H		H	\dashv	十	+	十	╅	_
		Γ	Γ	Γ	Τ	J	7	J	_†			┪	7			Н	_	H	7	+	+	十	+	_
2 Fundamentals of mold assembly	$\perp \Gamma$		Γ	Ι	$oxed{\int}$	J	J	J	_	╛	_	_		┪		7		Н	\dashv	十	十	十	+	-
(1) Mold assembling			Ĺ		Ι	floor	J	J		J		╛		7		_		\sqcap	ヿ	十	十	十	+	_
a Comparison of mold base with mold	F	<u> </u>	<u> IS</u>	ΗĬ	Đ	1				Ι	\Box								\neg	ヿ	\top	十	1	_
assembling drawing		L	_					$oxed{oxed}$								T		П	1	T	7	T	†	
b Checking of standard parts and	F	<u>N</u>	<u>IS</u>	ΗE	Đ	1	1		1							\Box			7	丁	T	Т	T	_
assembling components		L	L	Ļ	┸	\perp	┙											П		T	T	\top	T	_
(2) Trial shot process		L	ļ.,	┸	╀	1	1		⊥	_[_			\Box		\Box	\Box	T	T	7	T	_
a Mold fitting procedure		L	<u>L</u>	Ļ	⊥	\perp	1	1	╧				Ι					\Box			Т	T	7	_
(a)Toggle mold clamp					D		1	_ _	\perp			1										7	T	
(b)Direct pressure mold clamp					D		1	4	╧	4	1	╛	_[╛		\perp	_[\Box		floor	${\mathbb T}$	$oldsymbol{\mathbb{I}}$	T	
b Material replacement procedure			S			╀	4	4	1	_	4	4.	1	_	4	_		\Box		\perp		${\mathbb L}$	Τ	
c Material drying conditions	FI	N	S	ΗE	<u>D</u>	╀	1	┸	1.	┵	┵		┙						Ϊ	${\mathbb T}$	$oldsymbol{\mathbb{T}}$	Τ	Τ	_
(temperature, time)	<u> </u>		Ļ	Ļ	Ļ	1	4	4	1	┸	_	4	┸	┙						\perp	\perp	L	Γ	
d Conversion of molding conditions	<u> </u>	ΝI	Sŀ	뱐	<u>:D</u>	╀	4	4	∔	1	4	1	_	1	_ .		_			\perp	L			
(shot volume, injection pressure)	_		Ļ	Ļ	Ļ	╀	4	╀	┸	4	4	4	1	1	4		1			\perp	\perp	Ĺ		\Box
e Setting mold temperature by type of resin and cooling circuit	_ FI	N	St	뱐	<u>P</u>	╀	4	╀	+	┸	4	4	4	<u>Ļ</u> ,	1	4		_		丄	丄	L		
(3) Process of disassembling and		N 117	Ļ	<u>Ļ</u>	Ť	╀	+	+	+	+	4	4	4	4	4	4	_	4	1.	┵	┸	丄	L	╛
assembling of standard parts	FI	N	가	15	۲.	╀	+	+	+	+	+	+	4	+	4	4	4	4	\perp	┯	丄	丰	Ļ	1
(4) Trial assembling	FI	NIT.	L.	<u>_</u>	Ļ	╂	╀	╀	╀	╀	+	+	4	4	4	_	4		4	丰	丄	丄	L	1
(1) Trial assembling	- -\	141	<u> </u>	75	۲	╀	+-	╀	╁	+	+	4-	ļ	+	4	+	4	4	+	4	丰	↓_	<u> </u>	4
Trial shot of mold		ᅱ	Н		┝╌	╀	╀	╀	╁	╀	+	4	╀	┿	+	+	-	+	+	+	╄	╄-	╄	4
(1) Preparation and check of mold specification	FI	NII:	딖	늗	╁	╀╌	╀	╁	╁	+	╁	╀	╁	+	+		+	+	+	╄	╬	╀	┡	4
(Comparison of mold dimensions	- ' '	AT	<u> </u>	11_	۲	┢	╁	╁	╁	╀	╁	╀	╁	+	+	- -	+		╀	╀	┼	╄	╄	4
with molding machine specification)	 - 	\dashv	-		┝	╀─	╁	╁	╁	╁	╁	+	╁	╁	+	╬	+	+	- -	╀	╄	⊬	-	4
(2) Setting conditions according	FI	VI.	ᄗ	1E	┢	┢	╁	╁╴	╁	┿	╁	┿	╂	╁	┿	╫	+	-	+	┾	╁	⊢	╀	+
to sample data	- ['-î '	1	<u> </u>	<u>!!-</u>	۲	H	╁╴	╁	┢	╁	+	╬	╁	╁	╁	┿	╬	+	╫	╁	╀	⊬	⊢	ŧ
(3) Moving check on mold		┪	ᅥ			\vdash	╁	┿	╁	╁	╁	┿	╁	╁	┿		+		╀	十	╁—	⊢	⊢	+
attached to injection machine	─-i	+	┪		Н	Н	╀╌	╁	╁	╁	+	┿	╁	╀	╁	+	╁	╁	╀	╂-	╀	┝┈	┝	ł
a Setting of mold open stroke	Fo	ماا	10/-		<u> </u>	H	+	╁	H	╁╌	╁╴	╁			ŀ	INI	T C I	HE.	<u>_</u>	╀	╂┷┤	H	┝	+
b Setting of ejector stroke	Fo					-	┢	H	-	┢	╁	╬				TINE	101	HE!	<u>- </u>	╬	╁┤	┢╌┦	_	Ŧ
c Confirmation of slide core action	Fo						┢	┢	H	H	╁╌	╀╸				TNU	101	HEI	- -	╁╴	┦	┟╌┤	_	ł
Assembling and trial shot of target	- 	Ϋ	Τ	Ĭ	ř	-	┪	H	┢	H	╁	╀	Т	Т	╁	T	T	1	1 -	╆	┦┦	├─┤	H	ł
product-1 and 2 (Provided mold)		7	7	\exists	╗		T	┢	┝	H	+-	t	t	╁╴	۲	┿	╁	+	╁╌	╆	H	\vdash	_	ł
a Sample molding	FÍ	VI:	ŝΗ	Ε	5		Г	Г	┢	T	1	T	t	╁	t	┪~	╁	Ť	╁╴	╁	╁		Н	ł
b Rust prevention	FIN						T	Г	Γ	Г	1	T	力	†	٢	+	t	\top	\vdash	T	┞┤	\dashv		ł
c Mold inspection	FIN					-	Γ	Γ	 	Г		1	T	†	Τ	+	†	+	\dagger	\vdash	┢┼	\dashv	-	H
5) Assembling and trial shot of target		T	T	Ï	╗	-	Γ			Г	1	T	1	†	1	+	T	T	1	Г	┢┤	\dashv	-	ŀ
product-3 (Provided mold)		1	_	T	_		П		Г	\vdash	T	T	T	✝	Τ	†	✝	+	T	Н	┌┤	\dashv		ŀ
a Sample molding	FIN					╗					Г	Г		Т	T	\top	T	1		Н	-	\dashv	-	r
b Rust prevention	FIN	IIS	H	ΕI)			П			Г	Γ	T	Τ	1	1		†	\vdash	H	┌┼	\dashv	+	H
c Mold inspection	FIN												T		T	Τ	Τ	T	T	\vdash	\vdash	\dashv	7	Γ
	TT	Т	Т	T	ヿ				_		_	1	т	1	1	_	1-	+	f	-	-	\dashv	┪	_
6) Assembling and trial shot of target product-4 (Provided mold)				L	_1	!		!	_ 1	_	i i	ł		ı	ĺ		1			1 1	1			

Calendar Year					_					Ţ					20	00	3		_			20	04
Technology Transfer Item	I				-	2	200	02				_	Ι	_				20	00:	3			
	4	1 :	5	6	7	8	9	10	11 1	2	1 2	3	4	ā	6	7	8	9	10	11	12	1 2	Ţ
a Sample molding		<u>II</u>					Ţ	1	Ţ	I	I	Γ	Γ		Γ	L			Г				I
b Rust prevention	- ₽ <u>F</u>	IN	<u> </u>	<u> H</u>	ΕC	1	4	4	4	\downarrow	\downarrow	1	┸	\perp	1.	L		L	L	\Box	Ц	\perp	Ĺ
c Mold inspection	-15	ĪN	<u> 115</u>	эH	ΕĽ	4	4	_	\downarrow	4	4	\perp	╀	↓_	\downarrow	1	<u> </u>	L	L	Ц		Ĺ	\perp
(7) Assembling and trial shot of target product-5 (Provided mold)	+	4	+	+	+	4	+	+	4	4	\bot	+	1	╄	$oldsymbol{\downarrow}$	1_	L	L	<u> </u>	Ц	\downarrow	丄	1
	╌ ╎ ╒	TA	ITC	Η.		+	4		+	+	-1-	\perp	╄	ļ.,	╄	L	<u> </u>	Ļ	L	Ш	_	1	╀
a Sample molding b Rust prevention	ᆤ	IN	115	<u>H</u>		4	+	+	+	+-	╀	╀	 	╀	╀	ļ	┡	L	L	Ш		4	\downarrow
b Mold inspection	╀	IN	110	H	븢	4	+	+	+	╀	+	╀	╀	╀	┡	╀	<u> </u>	Ļ	ļ	Ц	_	-	╀
(8) Mold evaluation		ΪΝ					+		+	+	- -	╄	╄	_	╄	L	 	L	L		_	4	Ļ
(9) Product evaluation	 -	IN	115	<u>ы</u>	드	4	+	+	+	+	╀	╀	╀	┡		L	Ш	L	<u> </u>	Ш	_	4.	Ļ
a Appearance (visual check)	╌	ol.	<u> </u>	Ц,		+	+	+	╬	╀	┿	╀╌	lenin			1 17	Ļ	Ļ	Ļ	Н	4	4	╀
b Dimension measurement of molded product		ol					+		+	+	╁	╀╌		rteur If		IVI	SH	받	<u></u>	Н	-	- -	十
c Weight measurement of molded product	냗	ol	lo	w-	uĻ	+	+	+	╁	╁	+	╀┇			닏	IAT	<u>SH</u> SH	탪	<u> </u>	Н	\dashv	-	╄
c Weight measurement of morded product	- -	쒼	<u> </u>	T	<u>ur</u>	+	+	+	╀	╁	+	╀	I I I	1110113	1-1	IMT	<u> </u>	벋	,	\vdash	+	١.	╄
3.4 Assembling and trial shot of target	╁	╬	╁	+	+	╬	╁	+	╁	╁╴	╁	╁	╁	┝	⊢	-	\vdash		_		+	+	╀
product manufactured under the project	+	╁╌	╫	╁	+	┿	╁	┿	┿	+	╁	╁	╂	┝	⊢	-	Н	_	_	┝┉┤	+	+	╀
(1) Assembling and trial shot of target	┢	İN	is	Н		+		+	+	十	╁	\vdash	╁	-	\vdash	\vdash	\vdash	\dashv	H	Н	-	+	+
product-1	╁	ΪÌ	Ť	'''	Ť	+	+	+	+	╁╴	+	H	╁┈	\vdash	\vdash	-	Н	\dashv	Н	╟┤	+	+	+
(Evaluation of mold and Products)	╁	T	+	+	+	+	+	+	†-	+	+	-	1	\vdash	-	\vdash	Н	\dashv		⊣	+	+	+
(2) Assembling and trial shot of target	F	IN	10	Н	╬	1	+	+	+	+	╁	\vdash	┢		\vdash	\vdash	\vdash	┥	\dashv	$\vdash \vdash$	-∤-	+	\vdash
product-2	1	Ť	T	Ή	Ť	+	\dagger	+	\dagger	\dagger	T	†-	Н	\vdash	-	\vdash	\forall	┥		\dashv	+	+	+
(Evaluation of mold and Products)	+	t	†-	+	+	+	╁	+	+	十	╁	\vdash	H	Ι-	\vdash		$\vdash \vdash$	{	ᅱ	\dashv	+	+-	\vdash
(3) Assembling and trial shot of target	+	十	+	+	\dagger	╁	+	+				F	INI	<u></u>	뉴	누	┪	\dashv	\dashv	\dashv	+	╫	\vdash
product-3	十	1	T	T	\dagger	+	十	+			T	۳	1	<u>ان</u>	"		\dashv	┥	\dashv	┰	- -	╁	\vdash
(Evaluation of mold and Products)	╅┈	╁	t	\dagger	\dagger	╁	+	+	╁	╀╴	t	H	H	_	H	-	\dashv	\dashv	┪	十		╁	┢
(4) Assembling and trial shot of target	╈	†-	t	t	t	╈	✝	+	t	+-	╁	H					-	\dashv	딝	NIS	:11	눆	┢
product-4	\top	T	1	T	T	+	┪	╅	t	╁	1		Н					-	' '	111	<u>"""</u>	٣	-
(Evaluation of mold and Products)	✝	Г	T	T	✝	†	†	╅	†	t			Н		Н		1	┪	┪	-+	╅	+	Н
(5) Assembling and trial shot of target	Τ	↾	✝	T	T	十	T	\top	1	1			Н		Н		_	7	1			F	N
product-5	Τ		1	T	Ì	1	T	十	T	1		П	П		Ħ	T	寸	┪	f	Ī	Т	<u> </u>	Ë
(Evaluation of mold and Products)	Т		Π			7		T					П		\sqcap		寸	_	┪	十	十	\top	П
					Γ		Τ	Т	Γ	T					\neg		\neg	Ť	ヿ゙	7	┪	\top	П
Assembling and trial shot of semi prototyping molds				Γ		Т	I	Т	Γ								\neg	T	╗		\top	T	П
a prototyping mold A							,	F	ÎN:	Sł	ΤE	D	П			T		T	7	\top	\top	Т	\Box
(P.R. Gift : Business card Case)	L		L				Ĺ													1	T		\Box
b prototyping mold B	Ш	L	L		L								C/	41	C	ĒL	ED	П		╗	Т	П	
(Soap Box)	Ц	L	L.	L	L	L				L								Ι		7	Т	П	
c prototyping mold C	Ц	L	L	Ļ	L	L	1	┸	L										_	FIN	lis	HE	\overline{D}
(Medicine Box)	Ш	L	L	L	L	Ļ	1	1	L	L	Ш												
d prototyping mold D	Ш	Ļ	L	L	Ļ	1	L	┸	L.	Ш				╛		_				_ _			-
(Multi usage Mold)	Ш		L	<u> </u>	Ļ	L	L	<u> </u>	L	Ш	Щ			_	_	_	i_	┙	\perp	\perp			
f prototyping mold E	H	L	L	_	╄	╄	╀	╄	L	Ц	Ц	_		4	_	_	_	1	1				
(CD-ROM File)	Н	L	L	╄	╄	_	_	↓_	Ļ	Щ		_	4	_	_	4		1	Ц.		┸	Ш	_
(0) C		ليبا		L		L		L				_				╛	Ţ					Ш	
(2) Contracted prototyping works and evaluation from the outsi	₫e)															Ţ	÷		Ę	Ţ			
2.6 Pagulan shook and maintage	┨	\vdash		╀	╀	╀	+-	╀	L	\sqcup	_	_	4	4	_	4	4	4	4	4-	4	Ш	_[
3.6 Regular check and maintenance of machinery	₩	Н	-	╀	╀	⊬	╁	┼	-	\dashv	\dashv		+	4	4	-	-	+	+	4	╁		4
(1) Inspection of machinery startup	닏	لب دران		<u></u>	느	+	+	\vdash		dash	\dashv	4	+	4	+	4		+	+	+	╀	╁╌┤	4
(2) Monthly regular inspections						+	+	+	Н	$\vdash \mid$	\dashv		+	\dashv	- -	+	+	+	+	- -	+	H	4
(3) Annual inspections						╁	╁	╁	Н		\dashv	4	+	-+	+	+	+	+	- -	+	+	$\vdash \vdash$	-[
(o) tumaa mopeonono	H	7110	۷۷	Γ.	۳	H	H	+	Н	\dashv	\dashv	-	\dashv	+	+	+	十	+	+	+	+	⊢┼	ᅱ
3.7 Solving problems in molding	H	\dashv	_	\vdash	\vdash	╁	╁╌		Н		-+	ᆉ	+	+	+	+	+	+	+	- -	+-	↤	4
(1) Problems stemming from the mold	┢┉┤	\dashv	\vdash		+-	-	╁	\vdash	\vdash	\dashv	-+	┥	+	+	+	+	+	+	╁	+	┼	┥	\dashv
	탇	ااد	714	<u>. </u>	L In	\vdash	H	Η.	\dashv	\dashv	\dashv	4	+	╅	+	+	+	./N	II C	HE	누	H	4
a investigation causes		ollo				╁╴	 -	H	\dashv	+	+	-	+	╡	†	7				HE		⊢┼	\dashv
a investigation causes b Countermeasures			/ Y ¥	·		f .										-	• I ["	11/				┡╼╁	4
b Countermeasures		مال				Π	T	\vdash	\dashv	\dashv	\dashv	7	+	丁	丁								- 1
b Countermeasures c Prototype confirmation	Fo	ollo T				F				7	7		#	-	+	+				HE		\vdash	4
b Countermeasures							-						-	-	-	+							_
b Countermeasures c Prototype confirmation (2) Problems stemming from molding conditions	Fo		>W	–ն	q															HE	D	Sn	_
b Countermeasures c Prototype confirmation (2) Problems stemming from molding conditions a Investigation causes	Fo Fo	ollo	w	-u	qı															HE	D INI	SH	- - -
b Countermeasures c Prototype confirmation (2) Problems stemming from molding conditions	Fo		w	'-ն -ս -ս	p p															HE F	D INI INI	SH SH SH	- - - -



Calendar Year									Т			_		20	03	_	_	_	_	П	2	00	4
Technology Transfer Item	T					20	02					Γ					20	03	,			-	Ħ
/ Japanese Fiscal Year	1	5	6	7	8	9	10	11	12	1 2	3	1	5	6	7	8	9	10	11	12		2	3
	┸	L	L								L				П	П	П	П	П	П	Т	П	7
4 Monitoring and necessary feedback	_].	۱.	ļ.,		۱.,									2 2	\Box		J	\Box				コ	J
(Supplementary Technology Transfer)	\perp	L						7	Ţ	Γ					Ī			Ī	Ī	Ϊ		Ī	
5 Pilot Training Course	╁	╁	L			\dashv	╛	-	Ⅎ	+	1.2	Н	<u>.</u>		\exists	<u> </u>		رز	\exists	\exists	(\$4)	<u> </u>	
6 Advisory Service							1			_								\Box	I		I	bracket	
o Advisory Service								T	T	T	F										7	Ŧ	
	\Box	Γ					\neg	T	\top	Τ	Ī	П	_	ヿ	ヿ	\exists	寸	寸	十	┱	ナ	寸	┪



Sanch

Annex 15 Annual Plan of Operations (APO) *1999~2000

M	Calendar Year			1999			0000				
		Target	TFY 1999		-	TFY 2000	7007		Responsible	ļ ——.	
	Fiscal Year		7 9	JFY 1999]]	000	person in the	lnput (*)	Remarks
	Term of Technical Cooperation		Signir ▼	g of the R/D	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 5	5 6 7 JCC ▼	01 6 8	Project(*)		
	U The Project operation unit is enhanced.									···-	
	0-1 Allocate necessary personnel as planned. 0-1-1 Make personnel allocation plan.							-			`
	0-1-2 Allocate personnel as planned. 0-1-3 Review personnel allocation, if necessary.						_ _		(IS), CA, PD CA, PM	JPC, LE, PM, TPC, TC JPC, LE, TPC, TC	
	0-2 Formulate plans of activities.						·		CA, PD	JPC, LE, PM, TPC, TC	0-
	0-2-1 Formulate plans of activities for the Project. 0-2-2 Formulate plans of activities for the first year. 0-2-3 Review plans of activities is								(IS), CA, PD	JPC, LE, PM, TPC, TC	
	0-2-4 Formulate plans of activities for the second year	ear. =		-					CA, PD	JPC, LE, PM, TPC, TC	
	0-3 Make budget plan and execute properly. 0-3-1 Execute budget for TFY 1999 as planned						-· -			(1, 12, 13), 11C, 13	·
	0-3-2 Make budget plan for TFY 2000.						······································	• ••	PM PM	TPC, TC TPC, TC	<u> </u>
	0-3-4 Execute budget for TFY 2000.			- 	- -				2 5	PM, TPC, TC	
	0-3-6 Approve budget for TFY 2001.			-	-		 	 	CA, PM	JPC, LE, TPC, TC JPC, LE, TPC, TC	
	0-4 Establish and operate management system.								CA, PD	JPC, LE, PM, TPC, TC	
	0-4-1 Review existing management system. 0-4-2 Make plan of management system.		- - - -						(IS), CA, PD	 JPC, LE, PM, TPC, TC	<u> </u>
	0-4-3 Establish management system.								(IS), CA, PD	JPC, LE, PM, TPC, TC	-
	0-4-5 Monitor and review management system, if necessary.	======================================		_					CA, PM	JPC, LE, TPC, TC JPC, LE, TPC, TC	
_	Plan	 <∏hai side>							CA, r.D	JPC, LE, PM, TPC, TC	
	Implemented	PD:Proj DPD:Del PM:Proj	PD: Project Director DPD: Deputy Project Director PM: Project Manager		TPC : Thai Project Coordinator TC : Technical Coordinator C/P : Thai C/P	oordinator Iinator			 Implementation Stud CA: Chief Advisor JPC: Project Coordinator	Supplementation Study Team CA: Chief Advisor PC: Project Coordinator	
200									LE: Long-term expert SE: Short-term expert	n expert n expert	

Sarch

Annex 15 Annual Plan of Operations (APO) *1999~2000

Output 1 The necessary machinery and equipment are provided, installed, operated and maintained property.

Calendar Year		0001	the dold name and a second	9000			
	Target	TFY 1999	TEV	TEV 2000	Nesponsible	(*)	
Fiscal Year	b		IFV 1000	2002 VIII	nosia.	(_) mdiii	кетаткз
		6 7 8 9	10 11 12 1 2 3	6	In Project(*)		
Term of Technical Cooperation		Signing of the R/D					
1 The necessary machinery and equipment are provided, installed, operated and maintained properly.			,				
1-1 Make facility refurbishment plan and implement as planned. 1-1-1 Make facility refurbishment plan. 1-1-2 Implement as planned.	8				(IS), CA, PM CA, PM	JPC. LE, TPC. TC JPC, LE, TPC, TC	
1-2 Provide and install necessary machinery and equipment. 1-2-1 Identify specifications of necessary machinery and equipment.	ipment.				(IS), PM	TPC, TC	
1-2-2 Make the plan of dispatch of short-term experts for installation.	ts for			· · · · ·	(IS), CA, PM	JPC, LE, TPC. TC	
1-2-3 Implement tenders and select traders. 1-2-4 Procure and transport the machinery and equipment to the Project site.]] oment 				(IS), PM CA, PM	TPC, TC JPC, LE, TPC, TC	
1-2-5 Install the machinery and equipment.	;				СА, РМ	LE, SE, TC, C/P	
properly. 1-3-1 Make maintenance plan of the machinery and					LE, TC	LE, SE, TC, C/P	
equipment. 1-3-2 Prepare or develop operation and maintenance manual.					LE, TC	LE, SE, TC, C/P	
1-3-3 Operate and maintain the machinery and equipment as planned.	oment			-		LE, SE, TC, C/P	
1-3-4 Provide fundamental training on operation and maintenance of machinery and equipment.	:=				LE, TC	LE, SE, TC, C/P	
Plan Implemented	CThai side> PD : Projee DPD : Dep	 Thai side> Project Director DPD : Deputy Project Director PM : Project Manager 	TPC: Thai Project Coordinator TC: Technical Coordinator C/P: Thai C/P	ator	<pre></pre> <pre></pre> <pre>/Japanese side> IS : Implementation Stud CA : Chief Advisor JPC: Project Coordinator LE : Long-term expert SE : Short-term expert</pre>	<pre></pre>	

Sauch

Annex 15 Annual Plan of Operations (APO) *1999∼2000

TFY 2000 TFY 1999 The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D The R/D		Calendar Year		6661	6661		2000		Responsible		
Fixed Year Fixed Year Technical Coperation	>		Target	TFY 1999		TFY 2000			person	Input (*)	Remarks
Continued Cooperation		Fiscal Year			JFY 1999		JFY 2000		in the) tad	CH IPHI ION
Tethnical Cooperation Tethnical cooperation Tethnical cooperation Tethnical cooperation Tethnical cooperation Tethnical cooperation Program (hereinaltra retracted to as "the CPT") are 12-11 Make Tethnical Cooperation Program (ATCP) 23-13 Make Armoul Tethnical Cooperation Program (ATCP) 24-13 Make Armoul Tethnical Cooperation Program (ATCP) 25-14 Make Tethnical Cooperation Program (ATCP) 25-15 Make Armoul Tethnical Cooperation Program (ATCP) 25-15 Make Armoul Tethnical Cooperation Program (ATCP) 25-16 Make Armoul Tethnical Cooperation Program (ATCP) 25-16 Make Tethnical Cooperation Program (ATCP) 25-16 Make Tethnical Cooperation Program (ATCP) 25-17 Make Tethnical Cooperation Program (ATCP) 25-18 Make Tethnical Cooperation Program (ATCP) 25-18 Make Tethnical Cooperation Program (ATCP) 25-18 Make Tethnical Cooperation Program (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (ATCP) (A				2 2	Ξ	3	6 7		Project(*)		
Technical Cooperation Technical capability of the counterpart personnel of Perbins of Logical Cooperation Technical capability of the counterpart personnel organic control of the CPP) are upgraded. 2-1 Make Technical Cooperation Program (ATCP) 2-1 Make Technical Cooperation Program (TCP). 2-1 Make Technical Cooperation Program (TCP). 2-1 Make Technical Cooperation Program (TCP). 2-1 Make Technical Cooperation Program (TCP). 2-1 Make Technical Cooperation Program (TCP). 2-1 Make Technical Cooperation Program (TCP). 3-1 Make Technical Cooperation Program (TCP). 3-1 Make Technical Cooperation Program (TCP). 3-1 Make Technical Cooperation Program (TCP). 3-1 Make Technical Cooperation Program (TCP). 3-2 Make Technical Cooperation Program (TCP). 3-3 Monitor and evaluate the result of technology transfer to the CP. 3-3 Monitor and evaluate plan. 3-3 Monitor the result of technology transfer to the CP. 3-3 Monitor the result of technology transfer to the CP. 3-3 Monitor the result of technology transfer to the CP. 3-3 Monitor the result of technology transfer to the CP. 3-4 Monitor the result of technology transfer to the CP. 3-5 Monitor the result of technology transfer to the CP. 3-6 Monitor the result of technology transfer to the CP. 3-7 Exhibits monitoring and evaluation plan. 3-8 Monitor the result of technology transfer to the CP. 3-9 Monitor the result of technology transfer to the CP. 3-9 Monitor the result of technology transfer to the CP. 3-1 Make Technical Coordinator 4-1 Make Technical Coordinator 5-2 Topic Monitor and Exhibits Technical Coordinator 5-3 Monitor the result of technology transfer to the CA. PD. 3-4 Monitor the result of technology transfer to the CA. PD. 3-5 Monitor the result of technology transfer to the CA. PD. 3-6 Monitor the result of technology transfer to the CA. PD. 3-6 Monitor the result of technology transfer to the CA. PD. 3-7 Thing transfer to the CA. PD. 3-8 Monitor the result of technology transfer to the CA. PD. 3-9 Monitor the result of t				Signing of the R/	 		Joc.		,		
2-1. Breintial capability of the counterpart personned for the contemporal personned for the contemporal personned for the contemporal cooperation Program. 2-1. Make Technical Cooperation Program (ATCP) interviews, test, factory visit and so on. 2-1. Make Technical Cooperation Program (TCP) interviews, test, factory visit and so on. 2-1. Make Technical Cooperation Program (TCP) interviews, test, factory visit and so on. 2-1. Make Technical Cooperation Program (TCP) interviews, test, factory visit and so on. 2-1. Make Technical Cooperation Program (TCP) interviews and the cooperation Program (TCP) interviews and the cooperation Program (TCP) interviews and the cooperation Program (TCP) interviews and the cooperation plan. 2-2. Implement technology transfer as planned. 2-3. Monitor and evaluate plan. 2-3. Monitor and evaluate plan. 2-3. Monitor the result of technology transfer to the CP. 2-3. Monitor the result of technology transfer to the CP. 2-3. Monitor the result of technology transfer to the CP. 2-3. Monitor the result of technology transfer to the CP. 2-4. Evaluate the result of technology transfer to the CP. 2-5. Monitor the result of technology transfer to the CP. 2-5. Monitor the vertical condition plan. 2-5. Monitor the result of technology transfer to the CP. 2-7. Monitor the result of technology transfer to the CP. 2-8. Monitor the result of technology transfer to the CP. 2-9. Monitor the result of technology transfer to the CP. 2-9. Monitor the result of technology transfer to the CP. 2-9. Monitor the result of technology transfer to the CP. 2-9. Monitor the result of technology transfer to the CP. 2-9. Monitor the result of technology transfer to the CP. 2-9. Monitor the result of technology transfer to the CP. 2-9. Monitor the vertical condition plan. 2-9. Exchange the result of technology transfer to the CP. 2-9. Monitor the vertical condition plan. 2-9. Exchange the result of technology transfer to the CP. 2-9. Monitor the vertical condition plan. 2-9. Exchange the		Term of Technical Cooperation			-						
2-1 Make Technical Cooperation Program. 2-1-1 Evaluate technical Cooperation Program (TCP) 2-1-2 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Program (TCP) 2-1-3 Make Technical Cooperation Progr		2 Technical capability of the counterpart personne (hereinafter referred to as "the C/P") are upgraded.	2								
2-1-3 Make Trechnical Cooperation Program (ATCP) 2-1-3 Make Annual Technical Cooperation Program (ATCP) 2-1-3 Make Annual Technical Cooperation Program (ATCP) 2-1-4 Review TCP, 4 ATCP & ATCP & ATCP 2-1-5 Make Annual Technical Cooperation Program (ATCP) 2-1-5 Make Annual Technical Cooperation Program (ATCP) 2-1-5 Make ATCP for the second year of the Project. 2-2-1 Bropare teaching material. 2-2-2 Implement technology transfer to the CP. 2-2-3 Compile textbooks and necessary documents that the compile textbooks and necessary documents and evaluate the result of technology transfer to the CP. 2-3-4 Make monitoring and evaluate plan. 2-3-5 Establish monitoring and evaluate plan. 2-3-5-4 Evaluate the result of technology transfer to the CP. 2-3-4 Evaluate the result of technology transfer to the CP. 2-3-5-4 Evaluate the result of technology transfer to the CP. 2-3-4 Evaluate the result of technology transfer to the CP. 2-3-5-4 Evaluate the result of technology transfer to the CP. 2-3-5-4 Evaluate the result of technology transfer to the CP. 2-3-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-		2-1 Make Technical Cooperation Program. 2-1-1 Evaluate technical capability of the C/P through						(S)	·	JPC, LE, TPC, TC	
2-1-3 Make Annual Technical Cooperation Program (ATCP) for the first, year of the Project. 2-1-6 Review TCP, if necessary. 2-1-7 Review TCP, if necessary. 2-1-8 Make ATCP for the second year of the Project. 2-1-8 Make ATCP for the second year of the Project. 2-1-8 Make ATCP for the second year of the Project. 2-2-1 Implement technology transfer to the CP. 2-2-2 Implement technology transfer to the CP. 2-3-3 Monitor make the result of technology transfer to the CP. 2-3-1 Make monitoring and evaluate plan. 2-3-3 Establish monitoring and evaluate plan. 2-3-3 Establish monitoring and evaluate plan. 2-3-4 Evaluate the result of technology transfer to the CP. 2-3-5 Evaluate the result of technology transfer to the CP. 2-3-5 Evaluate the result of technology transfer to the CP. 2-3-5 Evaluate the result of technology transfer to the CP. 2-3-6 Evaluate the result of technology transfer to the CP. 2-3-7 Evaluate the result of technology transfer to the CP. 2-3-1 Make monitoring and evaluate plan. 2-3-3 Evaluate the result of technology transfer to the CP. 2-3-1 Make monitoring and evaluate plan. 2-3-2 Evaluate the result of technology transfer to the CP. 2-3-1 Make monitoring and evaluate plan. 2-3-2 Evaluate the result of technology transfer to the CP. 2-3-2 Evaluate the result of technology transfer to the CP. 2-3-3 Monitor the result of technology transfer to the CP. 2-3-3 Monitor the result of technology transfer to the CP. 2-3-4 Evaluate the result of technology transfer to the CP. 2-3-5 Evaluate the result of technology transfer to the CP. 2-3-5 Evaluate the result of technology transfer to the CP. 2-3-5 Evaluate the result of technology transfer to the CP. 2-3-5 Evaluate the result of technology transfer to the CP. 2-3-5 Evaluate the result of technology transfer to the CP. 2-3-5 Evaluate the result of technology transfer to the CP. 2-3-4 Evaluate the result of technology transfer to the CP. 2-4 Evaluate the condition of the CP. 2-5 Evaluate the condition of the CA. PD. 2-6 Evaluate the condition of the CA. PD.		interviews, test, factory visit and so on. 2-1-2 Make Technical Cooperation Program (TCP)									
2-14 Review TCP & A.TCP. 2-15 Make ATCP for the second year of the Project. 2-15 Make ATCP for the second year of the Project. 2-2 Implement technology transfer to the C.P. 2-2-3 Compile textbooks and necessary documents transfer to the C.P. 2-2-3 Monitor and evaluate the result of technology transfer to the C.P. 2-3 Monitor the result of technology transfer to the C.P. 2-3-4 Evaluate the result of technology transfer to the C.P. 2-3-5 Monitor the result of technology transfer to the C.P. 2-3-6 Monitor the result of technology transfer to the C.P. 2-3-7 Evaluate the result of technology transfer to the C.P. 2-3-8 Monitor the result of technology transfer to the C.P. 2-3-9 Monitor the result of technology transfer to the C.P. 2-3-1 Evaluate the result of technology transfer to the C.P. 2-3-1 Evaluate the result of technology transfer to the C.P. 2-3-1 Evaluate the result of technology transfer to the C.P. 2-3-1 Evaluate the result of technology transfer to the C.P. 2-3-1 Evaluate the result of technology transfer to the C.P. 2-3-1 Evaluate the result of technology transfer to the C.P. 2-3-2 Evaluate the result of technology transfer to the C.P. 2-3-3 Monitor the result of technology transfer to the C.P. 2-3-4 Evaluate the result of technology transfer to the C.P. 2-3-5 Monitor the result of technology transfer to the C.P. 2-3-6 Monitor the result of technology transfer to the C.P. 2-3-7 Evaluate the result of technology transfer to the C.P. 2-3-8 Evaluate the result of technology transfer to the C.P. 2-3-1 Evaluate the result of technology transfer to the C.P. 2-3-1 Evaluate the result of technology transfer to the C.P. 2-3-2 Evaluate the result of technology transfer to the C.P. 2-3-3 Evaluate the result of technology transfer to the C.P. 2-3-4 Evaluate the result of technology transfer to the C.P. 2-3-5 Evaluate the result of technology transfer to the C.P. 2-3-5 Evaluate the result of technology transfer to the C.P. 2-4 Evaluate the result of technology transfer to the C.P. 2-5 Monitor the C.P. 2-6 Figure 1		2-1-3 Make Annual Technical Cooperation Program (for the first year of the Project.	(ATCP)							JPC, LE, PM, TPC, TO JPC, LE, PM, TPC, TO	
2-2 Implement technology transfer to the C/P. 2-2-1 Prepare teaching materials as planned. 2-2-2 Implement technology transfer as planned. 2-2-3 Compile textbooks and necessary documents. 2-3 Monitor and evaluate the result of technology transfer to the C/P. 2-3-1 Make monitoring and evaluate plan. 2-3-2 Establish monitoring and evaluate plan. 2-3-3 Monitor the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-5 Evaluate the result of technology transfer to the C/P. 2-3-6 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-8 Evaluate the result of technology transfer to the C/P. 2-3-9 Evaluate the result of technology transfer to the C/P. 2-3-1 Evaluate the result of technology transfer to the C/P. 2-3-1 Evaluate the result of technology transfer to the C/P. 2-3-1 Evaluate the result of technology transfer to the C/P. 2-3-1 Evaluate the result of technology transfer to the C/P. 2-3-1 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-5 Evaluate the result of technology transfer to th		2-1-4 Review TCP & ATCP. 2-1-5 Make A TCP for the second year of the Project. 2-1-6 Review TCP, if necessary.						3 3 3		JPC, LE, PM, TPC, TC JPC, LE, PM, TPC, TC	
2-2-1 Implement technology transfer to the C/P. 2-2-2 Compile textbooks and necessary documents 2-2-1 melement technology transfer as planned. 2-2-3 Compile textbooks and necessary documents 2-3-4 Monitor and evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-5 Evaluate the result of technology transfer to the C/P. 2-3-6 Foreign of the conditation plan. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-8 Monitor the result of technology transfer to the C/P. 2-3-9 Monitor the result of technology transfer to the C/P. 2-3-1 Evaluate the result of technology transfer to the C/P. 2-3-1 Evaluate the result of technology transfer to the C/P. 2-3-1 Evaluate the result of technology transfer to the C/P. 2-3-2 Evaluate the result of technology transfer to the C/P. 2-3-1 Evaluate the result of technology transfer to the C/P. 2-3-2 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-5 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-5 Evaluate the result of technology transfer to the C/P. 2-3-5 Evaluate the result of technology transfer to the C/P. 2-3-6 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technolo								<u></u>	••··	JPC, LE, PM, TPC, T(
2-3 Monitor and evaluate the result of technology transfer to the C/P. 2-3-1 Make monitoring and evaluate plan. 2-3-2 Establish monitoring and evaluate plan. 2-3-3 Monitor the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-5 Monitor the result of technology transfer to the C/P. 2-3-5 Monitor the result of technology transfer to the C/P. 2-3-6 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-8 Evaluate the result of technology transfer to the C/P. 2-3-9 Evaluate the result of technology transfer to the C/P. 2-3-1 Make monitoring and evaluate plan. 2-3-2 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-5 Monitor the result of technology transfer to the C/P. 2-3-6 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-7 Evaluate the result of technology transfer to the C/P. 2-3-8 Evaluate the result of technology transfer to the C/P. 2-3-9 Evaluate the result of technology transfer to the C/P. 2-3-9 Evaluate the result of technology transfer to the C/P. 2-3-1 Monitoring and evaluate plan. 2-3-2 Extended to the C/P. 2-3-3 Evaluate the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. 2-3-5 Evaluate the result of technology transfer to the C/P. 2-3-5 Evaluate the result of technology transfer to the C/P. 2-3-5 Evaluate the result of the C/P. 2-3-6 Evaluate the result of the C/P. 2-3-7 Evaluate the result of the C/P. 2-3-8 Evaluate the result of the C/P. 2-3-9 Evaluate the result of the C/P. 2-3-9 Evaluate the result of the C/P. 2-3-9 Evaluate the result of the C/P. 2-3-1 Evaluate the result of the C/P. 2-3-1 Evaluate the r		 2-2 Implement technology transfer to the C/P. 2-2-1 Prepare teaching material. 2-2-2 Implement technology transfer as planned. 2-2-3 Compile textbooks and necessary documents 		-				37		LE, SE, TC, C/P LE, SE, TC, C/P LE, SP, TC, C/P	
2-3-2 Establish monitoring and evaluate plan. 2-3-3 Monitor the result of technology transfer to the C/P. 2-3-4 Evaluate the result of technology transfer to the C/P. Implemented Plan Apparese side Implemented PDD: Deputy Project Director PM: Project Manager C/P: Thai C/P TE: Long-tem		2-3 Monitor and evaluate the result of technology transfer to the C/P. 2-3-1 Make monitoring and evaluation plan.						(3)		JPC, LE, PM, TPC, TQ	Refor to 0-4-2
C.P. 2-3-4 Evaluate the result of technology transfer to the C.P. - Plan - Plan - Implemented - DPD : Deputy Project Director - TPC : Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C/P - Thai C		2-3-2 Establish monitoring and evaluate plan. 2-3-3 Monitor the result of technology transfer to the						5 5		JPC, LE, TPC, TC	Refer to 0-4-3.
Thai side> Implemented PD : Project Director TPC : Thai Project Coordinator CA : Chief Ad JPC : Project Manager C/P : Thai C/P E : Long-tem		C/P. 2-3-4 Evaluate the result of technology transfer to the						් ජ 		JPC, LE, SE, IPC, IC PC, LE, PM, TPC, TC	
Plan PD : Project Director TPC : Thai Project Coordinator DPD : Deputy Project Director TC : Technical Coordinator PM : Project Manager C/P : Thai C/P									-		
	Densh	unented	<thai sid<br="">PD: Proj DPD: De PM: Proj</thai>	est ect Director puty Project Director ject Manager	TPC: Thai Projec TC: Technical C CP: Thai CP	ct Coordinator Soordinator		E A C S C	Japanese sides : Implement. A : Chief Ad 'C : Project Co	sation Study Team visor oordinator	

Annex 15 Annual Plan of Operations (APO) *1999~2000

Output 3 Technical training and seminars are implemented systematically.

Calendar Year

	Remarke	SA PRINCE					— () h					····	, TC	Refer to 0.4-2. Refer to 0.4-3. .C/P	
	Input (*)	() md					JPC, LE, PM, TPC, TC	JPC, LE, TPC, TC	JPC, LE, TPC, TC	LE, TC, C/P		LE, SE, TC, C/P	 JPC, LE, SE, PM, TPC, TC	JPC. LE, PM, TPC. Td Refer to 04-2. JPC, LE, TPC, TC Refer to 04-3. JPC, LE, SE, TPC, TC. C/P	 State of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state
Responsible	Derson		Project(*)				(IS), CA, PD	CA, PM	CA, PM	LE, TC		LE, TC	-CA, PD	(IS), CA. PD CA, PM CA, PM	<lapanese side=""> IS : Implementation Stud CA : Chief Advisor JPC : Project Coordinator LE : Long-term expert SE : Short-term expert</lapanese>
2000		JFY 2000	5 6 7 8 9 10	>											
	TFY 2000	· ·	1 2 3 4												TPC: Thai Project Coordinator TC: Technical Coordinator C/P: Thai C/P
1999	TFY 1999	JFY	0 2				<u> </u>				-		-		t Director ty Project Director tt Manager
	- Target							strial		 eminar.				ninars.	Thai side>
Calendar Year	·	Fiscal Year		Term of Technical Connecation	3 Technical training and seminars are implemented systematically.	3-1 Make plan of technical training and seminars. 3-1-1 Grasp the needs for technical training and seminars.	3-1-1-1 Make plan of factory visit. 3-1-1-2 Implement factory visit.	3-1-1-3 Implement the regular meetings with industrial associations concerned.	3-1-2 Analyze the results of the said needs survey. 3-1-3 Make plan of technical training and seminars.	3-1-4 Develop curricula for technical training. 3-1-5 Decide theme and schedule for the opening seminar.	3-2 Implement technical training and seminars.	3-2-1 Prepare teaching material and textbooks for technical training.	3-2-1 Implement opening seminar.	3-3 Monitor and evaluate technical training and seminars. 3-3-1 Make monitoring and evaluation plan. 3-3-2 Establish monitoring and evaluation plan. 3-3-3 Evaluate the result of the opening seminar.	Implemented
 AA		,	<u>'</u>		 				 -		,	,			<u> </u>

South

Remarks IPC, LE, PM, TPC, To Refer to 0-4-2. Refer to 0-4-3. PC, LE, SE, TPC, TC, C/P PC, LE, PM, TPC, TC PC, LE, SE, TPC, TC IS : Implementation Study Team JPC, LE, TPC, TC JPC, LE, TPC, TC PC, LE, TPC, TC PC, LE, TPC, TC Input (*) LE, SE, TC, C/P LE, SE, TC, C/P JPC: Project Coordinator LE: Long-term expert SE: Short-term expert CA: Chief Advisor <Japanese side> Responsible Project(*) person in the (IS), CA, PD CA, PM CA, PM (IS), CA, PD CA, PM CA, PM CA, PM CA, PM LE TC LE, TC o IFY 2000 9 ပ္က 🕨 TFY 2000 TPC: Thai Project Coordinator TC: Technical Coordinator C/P: Thai C/P 10 11 12 Output 4 Technical information and advisory services as a trial are implemented systematically. JFY 1999 Signing of the RVD DPD: Deputy Project Director TFY 1999 ∞ PM: Project Manager PD: Project Director Target 4-1 Make plan of trial technical information and advisory 4-3-1 Implement trial technical information and advisory 4-1-1-3 Implement the regular meetings with industrial 4-4 Monitor and evaluate trial technical information and 4-3 Implement trial technical information and advisory Technical information and advisory services as 4-2-1 Collect and compile technical information and 4-1-1 Identify necessary technical information and 4-1-3 Make plan of trial technical information and 4-2 Collect and compile technical information and 4-1-2 Analyze the result of the said needs survey. 4-3-3 Monitor the trial technical information and 4-3-2 Establish monitoring and evaluation plan. 4-3-1 Make monitoring and evaluation plan. trial are implemented systematically. 4-1-1-1 Make plan of factory visit. Calendar Year 4-1-1-2 Implement factory visit Fiscal Year erm of Technical Cooperation associations concerned. Implemented services as planned. advisory services. advisory services advisory service. advisory services. - Plan material services.

AN

Annex 15 Annual Plan of Operations (APO) ∗1999∼2000

South

Annex 15 Annual Plan of Operations (APO) *1999~2000

1 1999	TFY 2000 Kesponsible	JFY 1999	8 9 10 P	of the R/D		(IS), CA, PD JPC, LE, PM, TPC, TC (A, PM JPC, LE, SE, TPC, TC (A, PM JPC, LE, SE, TPC, TC	CA, PM JPC, LE, TPC, TC	LE, TC LE, SE, TC, C/P	(IS), CA, PD JPC, LE, PM, TPC, Td Refer to 0.4-2. CA, PM JPC, LE, PM, TPC, TC Refer to 0.4-3. CA, PM JPC, LE, SE, TPC, TC, C/P	ctor TPC : Thai Project Coordinator IS : Implementation Study Team lect Director TC : Technical Coordinator CA : Chief Advisor CP : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P : Thai C/P :
Systematically	Target		9	Signing				-		<pre><thai side=""> VD : Project Director DPD : Deputy Project Director PM : Project Manager</thai></pre>
Calendar Year		Fiscal Year		Term of Technical Cooperation	5 Trial prototyping service is implemented systematically.	5-1 Make plan of trial prototyping service. 5-1-1 Grasp the needs for prototyping service. 5-1-1-1 Make plan of factory visit. 3-1-1-2 Implement factory visit. 5-1-1-3 Implement the regular meetings with industrial associations concerned.	5-1-2 Make plan of trial prototyping service.	5-2-1 Implement trial prototyping service as planned.	5-3 Monitor and evaluate trial prototyping service. 5-3-1 Make monitoring and evaluation plan. 5-3-2 Establish monitoring and evaluation plan. 5-3-3 Monitor the trial prototyping service.	Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implemented Implem

Janeh

Annex 15 Progress of Annual Plan of Operations (APO) * 2001

Output 0 The Project operation unit is enhanced.			
Calendar Year Fiscal Year	000 TF	Input (*)	Remarks
Term of Technical Cooperation	11 12 1 2 3 4 5 6 7 8 9 10 11 12 Project(*) JCC		
0 The Project operation unit is enhanced.			
0-1 Allocate necessary personnel as planned. 0-1-1 Review personnel allocation, if necessary. 0-1-2 Make personnel allocation plan. 0-1-3 Allocate personnel as planned.	A PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA, PD JPC CA	JPC, LE, PM, TPC, TC JPC, LE, PM, TPC, TC TPC, TC	
0-2 Formulate plans of activities. 0-2-1 Formulate plans of activities for the next year. 0-2-2 Review plans of activities, if necessary. 0-2-3 Implement periodic monitoring on the achievement of the plans.		JPC, LE, PM, TPC, TC JPC, LE, PM, TPC, TC	
0-3 Make budget plan and execute properly. 0-3-1 Execute budget for TFY 2001 as planned. 0-3-2 Make budget plan for TFY 2002. 0-3-3 Approve budget for TFY 2002.	CA, PM JPC.	JPC, LE, TPC, TC JPC, LE, TPC, TC	
0-4 Establish and operate management system. 0-4-1 Operate management system. 0-4-2 Monitor and review management system, if necessary.	· · · · · · · · · · · · · · · · · · ·	IPC, LE, TPC, TC	
Implemented	<thai side=""> PD: Project Director PD: Project Director TPC: Thai Project Coordinator DPD: Deputy Project Director TC: Technical Coordinator PM: Project Manager C/P: Thai C/P SE</thai>	<dapanese side=""> CA : Chief Advisor JPC : Project Coordinator LE : Long-term expert SE : Short-term exnert</dapanese>	or .

South

Annex 15 Progress of Annual Plan of Operations (APO) * 2001

Remarks Input (*) JPC, LE, TPC, TC PC, LE, TPC, TC JPC, LE, TPC, TC < Japanese side> JPC, TPC JPC, TPC SE, C/P SE, C/P SE, C/P Responsible CA, LE, PM, TC Project(*) person in the CA, LE, PM, TC CA, PM CA, PM CA, PM LE, TC E, TC LE, TC ည 12 202 JFY 200 2001 ည္) Output 1 The necessary machinery and equipment are provided, installed, operated and maintained properly. JFY20002000 ខ្ម 🌶 <Thai side> Target 1-2 Provide and install necessary machinery and equipment. 1-2-2 Procure and transport the machinery and equipment 1-2-1 Make the commission plan of necessary machinery 1-2-3 Make the commission plan of necessary machinery 1-3-3 Operate and maintain the machinery and equipment 1-1 Make facility refurbishment plan and implement as 1-3 Operate and maintain the machinery and equipment 1-1-1 Make facility refurbishment plan for technical 1-3-2 Prepare or develop operation and maintenance 1-3-1 Make maintenance plan of the machinery and The necessary machinery and equipment are and equipment for next year, if necessary. provided, installed, operated and maintained Calendar Year Fiscal Year Term of Technical Cooperation training and seminars. 1-1-2 Implement as planed. Implemented to the Project site. and equipment. as planned. equipment. Plan planned. property.

PD: Project Director TPC: Thai Project Coordinator DPD: Deputy Project Director TC: Technical Coordinator PM: Project Manager C/P: Thai C/P

JPC : Project Coordinator LE : Long-term expert SE : Short-term expert

CA: Chief Advisor

Output 2 Technical capability of the counterpart personnel (hereinafter referred to as "C/P") as Annex 15 Progress of Annual Plan of Operations (APO) * 2001

Calendar Year 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000	- Ciliantel	2000		2001	G I		
	Target		TFY2001		202 nerson		
Fiscal Year	1	JFY2000		JFY 2001	in the	(_) indui	Kemarks
		11 12	2 3 4 5 6	7	11 12 Project(*)		
		ઝું ▶	▶ ⊃or	-			
l ern of Technical Cooperation				-			
2 Technical capability of the counterpart personnel (hereinafter referred to as "the C/P") are upgraded.			,				
2-1 Make Technical Cooperation Program. 2-1-1 Review TCP, if necessary. 2-1-2 Make Annual Technical Cooperation Program (ATCP)					CA, PD	JPC, LE, PM, TPC, TC	
for the next year. 2-1-3 Review ATCP, if necessary.					CA, PD	JPC, LE, PM, TPC, TC JPC, LE, PM, TPC, TC	
2-2-1 Prepare teaching material.					Ç.		
2-2-2 Implement technology transfer as ATCP. 2-2-3 Compile textbooks and necessary documents					LE, TC	SE, C/P	***************************************
2-3 Monitor and evaluate the result of technology transfer to the C/P.			· · · · · · · · · · · · · · · · · ·	-			
2-3-1 Review monitoring and evaluation method, if necessary. 2-3-2 Monitor the result of technology transfer to the					CA, PD	JPC, LE, PM, TPC, TC	
C/P. 2-3-3 Evaluate the recuit of tachnolomy transfer to the					ጅ ፈ	JPC, LE, SE, TPC, TC, C/P	
C/P.			 		CA, PD	JPC, LE, PM, TPC, TC, C/P	
2-3-4 Share the result of monitoring and evaluation on the occasion of JCC.					CA, PD	JPC, LE, PM, TPC, TC, C/P	
n					-		
Implemented	<thai side=""> PD: Projec</thai>	<thai side=""> PD: Project Director</thai>	TPC : Thai Project Coordinator	ordinator		<japanese side=""></japanese>	

<Thai side>
PD : Project Director TPC : Thai Project Coordinator DPD : Deputy Project Director TC : Technical Coordinator PM : Project Manager C/P : Thai C/P

CA: Chief Advisor
JPC: Project Coordinator
LE: Long-term expert
SE: Short-term expert

#

Annex 15 Progress of Annual Plan of Operations (APO) * 2001

Output 3 Technical training and seminars are implemented systematically.

V Calendar Year	2000	0		2001		Resnonsible		
	Target		TFY2001		202	nerson	Input (*)	Demostra
Fiscal Year		JFY2000		JFY 2001		in the	() and m	NGIIIAIRS
	11	12 1 2 3	4 5 6	6 7 8 9	10 11 12	Project(*)		
Term of Technical Cooperation	or ▶		▶		▶			
					_			
3 Technical training and seminars are implemented systematically.								
3-1 Make plan of technical training and seminars. 3-1-1 Grasp the needs for technical training and								·
3-1-1-1 Review the plan of factory visit and meeting with factory, if necessary.						CA, PD	JPC, LE, PM, TPC, TC	
3-1-1-2 Implement the regular meetings with industrial associations concerned.						CA, PM	JPC, LE, TPC, TC	
3-1-2 Analyze the results of the said needs survey. 3-1-3 Make plan of technical training and seminars. 3-1-4 Develop curricula for technical training.						CA, PM CA, PM LE. TC	JPC, LE, TPC, TC JPC, LE, TPC, TC SF C/P	
3-2 Implement technical training and seminars. 3-2-1 Prepare teaching material and textbooks for technical training.						LE. TC	SE, C/P	
3-2-2 Conduct a training method training for C/P. 3-2-3 Implement technical training and seminar.						CA. PD	LE, TC, C/P JPC, LE, SE, PM, TPC, TC	
3-3 Monitor and evaluate technical training and seminars. 3-3-1 Review monitoring and evaluation plan, if necessary. 3-3-2 Monitor and evaluate the result of technical training and seminar.						CA, PD .CA, PM	JPC, LE, PM. TPC. TC JPC, LE, SE, TPC. TC. C/P	
Implemented	Thai side> PD : Project Director DPD : Deputy Project Director PM : Project Manager	·	TPC: Thai Project Coordinator TC: Technical Coordinator C/P: Thai C/P	oordinator dinator			<pre><dapanese side=""> CA : Chief Advisor JPC : Project Coordinator LE : Long-term expert SE : Short-term expert</dapanese></pre>	ator t t

Output 4 Technical information and advisory services as a trial are implemented systematically. Annex 15 Progress of Annual Plan of Operations (APO) * 2001

ndar Yea	Target	Responsible person in the I2 Project(*)	Input (*)	Remarks
1 erm of 1 echnical Cooperation 4 Technical information and advisory services as a trial are implemented systematically.				
 4-1 Make plan of trial technical information and advisory services. 4-1-1 Identify necessary technical information and advisory service. 4-1-1-1 Review the plan of factory visit and meeting with factory. 		·		
if necessary. 4-1-1-2 Implement factory visit and meeting with factory. 4-1-1-3 Implement the regular meetings with industrial		CA, PD JPC,	JPC, LE, PM, TPC, TC	
associations concerned. 4-1-2 Analyze the result of the said needs survey. 4-1-3 Make plan of trial technical information and			JPC, LE, TPC, TC	
4-2 Collect and compile technical information and material.		CA, PM JPC, LE	JPC, LE, TPC, TC SE, C/P	
4-3 Implement trial technical information and advisory services as planned.		LE, TC SE, C/P	- dí	<u> </u>
 4-4 Monitor and evaluate trial technical information and advisory services. 4-4-1 Review the monitoring and evaluation plan, if necessary. 4-4-2 Monitor and evaluate the result of trial technical information and advisory services. 		CA, PD JPC, I	JPC, LE, PM, TPC, TC JPC, LE, SE, TPC, TC, C/P	
Plan Implemented	<f< td=""><td> </td><td><pre></pre> <pre></pre> <pre></pre> <pre></pre> <pre>CA : Chief Advisor <pre>JPC : Project Coordinator <pre>LE : Long-term expert</pre></pre></pre></td><td></td></f<>		<pre></pre> <pre></pre> <pre></pre> <pre></pre> <pre>CA : Chief Advisor <pre>JPC : Project Coordinator <pre>LE : Long-term expert</pre></pre></pre>	

CA: Chief Advisor JPC: Project Coordinator LE: Long-term expert SE: Short-term expert

Annex 15 Progress of Annual Plan of Operations (APO) * 2001 Output 5 Trial prototyping service is implemented systematically

Calendar Vear		Fiscal Vear	10001		Term of Technical Cooperation	5 Trial prototyping service is implemented systematically.	5-1 Make plan of trial prototyping service.	5-1-1 Grasp the needs for prototyping service. 5-1-1 Review the nian of factory vicit and mosting with factors.	if necessary in a mounty in a mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the mounty of the	5-1-1-3 implement the regular meetings with industrial	5-1-2 Make plan of trial prototyping service.	5-2 Implement trial prototyping service as planned.	5-3 Monitor and evaluate trial prototyping service.	5-3-2 Monitor and evaluate the trial prototyping service.		The The The PD : DPD : DPD PM PM PM PM
יייייי	7000	TFY2001	JF1 2 3 4 5 6 7 8 0 10 11	ODIT OF												<pre><thai side=""> PD : Project Director</thai></pre>
	Responsible		in the	1 JCC LTOJECI(*)	-				CA, PD JPC, LE, PM, TPC, TC	CA, PM JPC, LE, SE, TPC, TC		<u>, , , , , , , , , , , , , , , , , , , </u>	LE, SE, TC, C/P	CA, PD JPC, LE, PM, TPC, TC	CA, PM JPC. LE, SE, TPC, TC, C/P	<pre></pre> <pre></pre> <pre>CA : Chief Advisor</pre>
		Remarks							2	v				Ų	5	sor ordinator expert

AL

Annex 15 Annual Plan of Operations (APO) *2002

		C	Kemarks							Reffer to 2-1											
		* * *: a c]	(.) ındıır					JPC, LE, PM, TPC, TC	TPC, TC		JPC, LE, TPC, TC	JPC, LE, PM, TPC, TC	11 C, EL, 114, 1FC, 1C	JPC, LE, PM, TPC, TC JPC, LE, PM, TPC, TC	JPC, LE, TPC, TC JPC, LE, TPC, TC	JPC, LE, TPC, TC		JPC, LE, TPC, TC, C/P	JPC, LE, TPC, TC, C/P		utor t t
	Responsible	person		10 Project(*)				CA, PD	PD, PM		CA, PM	CA, PD	<u> </u>	CA, PD	CA, PM	PD CA, PM		CA, PM	CA, PD		<lapanese side=""></lapanese>CA: Chief AdvisorJPC: Project CoordinatorLE: Long-term expertSE: Short-term expert
	2002	TFY2002	JFY 2002	4 5 6 7 8 9					-			11		•							Thai Project Coordinator Technical Coordinator Thai C/P Support Staff
	2001	- 00 04 201	JF Y 2001	11 12 1 2 3	•															\open_	ct Director TPC: ty Project Director TC: ct Manager C/P: SP:
Call at the	Calendar Year	Fiscal Vear			Term of Technical Cooneration	O The Desired	o and religious up to sentation unit is enhanced.	0-1 Allocate necessary personnel as planned. 0-1-1 Revise personnel allocation plan, if necessary. 0-1-2 Allocate personnel as planned.	0-2 Make annual plans of artivities (ADO on AATET)	and revise 5 years plans of activities (PO and TSI) if, necessary.	0-2-1 Formulate annual plans of activities for the next year and review 5years plans of activities.	0-2-2 Approve a series of plans at JCC. 0-2-3 Implement periodic monitoring and evaluation	with the share of results at JCC. 0-2-4 Revise plans of activities, if necessary.	ಲ	0-3-1 Execute budget for TFY 2002 as planned. 0-3-2 Make budget plan for TFY 2003. 0-3-3 Approve budget for TFY 2003.	0-3-4 Execute budget for TFY 2003.	0-4 Operate project management system. 0-4-1 Hold periodical meeting as planned.	(SIC weekly meeting, Thai administrative C/P weekly meeting C/P monthly meeting. Experts weekly meeting.	0-4-2 Hold JCC every half year.	Plan <thei cide=""></thei>	PD: DPD: DPD: PM:

14/25 Annex 15			Remarks	-								·						
1 Anne			Input (*)					JPC, TPC	JPC, TPC	JPC, LE, TPC, TC, C/P	·	JPC, LE, TPC, TC, C/P	LE, TPC, TC, C/P			SE, C/P SE, C/P	,	Or
	Reconstitle	nerson	in the	10 Project(*)				CA, LE, PM, TC	CA, LE, PM, TC	CA, PM			PD. PM			LE, TC S		<japanese side=""> CA: Chief Advisor JPC: Project Coordinator LE: Long-term expert SE: Short-term expert</japanese>
operly.	2002	TFY2002	JFY 2002	3 4 5 6 7 8 9			-											TPC: Thai Project Coordinator TC: Technical Coordinator C/P: Thai C/P SP: Support Staff
Operated and maintained pr	2001	Target	JFY2001	11 12 1 2														side> Project Director Deputy Project Director Project Manager
Output 1 The necessary machinery and equipment are provided, installed, operated and maintained properly.	Carolina 1 Gal	Fiscal Vear			Term of Technical Cooperation	 The necessary machinery and equipment are provided, installed, operated and maintained properly. 	I-1 Make facility refurbishment plan and implement as planned. I-1-1 Make facility refurbishment plan for technical training	seminars and prototyping service, if necessary. 1-1-2 Implement as planned.		1-2-1 Make the plan of necessary machinery and equipment to be purchased by Japanese side for next year, if necessary. 1-2-2 The plan is approved by Language 1.	1-2-3 Procure and transport the machinery and equipment	1-2-4 Make the plan of necessary machinery and	equipment, then purchase as planned by Thai side, if necessary.	 1-3 Uperate and maintain the machinery and equipment as planned. 	1-3-1 Compose operation and maintenance manual.	as planned.	Dlos	Flan < Thai
AN					,						 							

Calendar Year	-		
Fiscal Year	TFY2002 JFY2001 JFY 2002	(*)	Remarks
Term of Technical Cooperation		((*)	
2 Technical capability of the counterpart personnel (hereinafter referred to as "the C/P") are upgraded.			
 2-1 Make plan of technology transfer to the C/P. 2-1-1 Formulate Annual Technical Cooperation Program (ATCP) for the next year and review Technical Cooperation Program for 5 years (TCP), if necessary. 2-1-2 Approve ATCP and TCP at JCC. 2-1-3 Revise ATCP and TCP; if necessary. 	CA, PM	JPC, LE, TPC, TC, C/P JPC, LE, PM, TPC, TC	
 2-2 Implement technology transfer to the C/P. 2-2-1 Prepare teaching material. 2-2-2 Implement technology transfer as ATCP. 2-2-3 Compile textbooks and necessary documents. 2-2-4 Implement echo-training and self training by C/P. 2-2-5 Implement C/P training in Japan. (The plan could be subjected to change under constraints such as budget appropriation.) 	LE, TC LE, TC LE, TC LE, TC LE, TC MM, TC	JPC, LE, PM, TPC, TC, C/P SE, C/P SE, C/P C/P IPC, LE, PM, TPC, TC, C/P	
 2-3 Monitor and evaluate the result of technology transfer to the C/P. 2-3-1 Review monitoring and evaluation method, if necessary. 2-3-2 Develop the material for monitoring. 2-3-3 Monitor and evaluate the result of technology transfer to the C/P. 2-3-4 Share the results of monitoring and evaluation at JCC. 	CA, LE, SE LE, SE CA, LE, SE CA, LE, SE CA, LE, SE	JPC JPC, TPC, TC, C/P JPC, LE, PM, TPC, TC, C/P	
Plan	 CThai side> PD: Project Director TPC: Thai Project Coordinator DPD: Deputy Project Director TC: Technical Coordinator DPC: Project Coordinator DPC: Project Coordinator DPC: Project Coordinator DPC: Project Coordinator DPC: Project Coordinator DPC: Project Coordinator DPC: Support Staff SP: Support Staff SE: Short-term expert 	sor ordinator expert expert	

Sarch

Fiscal Year			
	2001		
		Input (*)	Remarks
	8 9 10 P		 -
Term of Technical Cooperation			
Technical training and seminars are implemented systematically.			
3-1 Grasp an appropriate perception of present situation of			
That plastic injection mold industry.			<u> </u>
y isn't factory and meet factory personnel at BSID. Conduct factory questionnaire survey.	CA, TPC	JPC, LE, TC, C/P	
Hold information sessions with industrial associations.	CA, TPC	JPC, LE, TC, C/P	
3-2 Complete training courses and implement them regularly.		JPC, LE, TPC, TC, C/P	
Assign personnel to administrative work of training courses.			
Analyze present situation of Thai plastic injection mold	PM, TPC	TC, C/P, SP	
Revise curricula and texthonks if necessary		ירל, נב, וכ, כון	
Announce information regarding training courses	LE, TC	C/P	
Accept applicants for training courses.	CA, PM	JPC, LE, TPC, TC, C/P, SP	
Prepare material for hands-on-training and text books.	TPC	SP	
Conduct teaching method training and practice sessions.	OH THE	LE, TPC, TC, C/P, SP	•
Revise attendants questionnaire if necessary	CA, PM	LE, TC, CP, SP	
Conduct questionnaire survey and produce analytical report.	CA, PM	JPC, LE, TPC, TC, C/P	
3-3 Make text book for nilot training course	Wa	TPC, TC, C/P, SP	:
Analyze present situation and make plan for			•
pilot training course.	CA, PM	JPC, LE, TPC, TC, C/P	
Develop curricula for pilot training course.			
Hold Advisory Committee Meeting for finalizing curricula.	TE, TC	C/P	
Amend and complete curricula,	CA, PM	JPC, LE, TPC, TC, C/P	
Collect material for text book.	JE JE JE JE JE JE JE JE JE JE JE JE JE J	C/P	
Make text book.	LE, TC	CP	
	LE, TC	C/P	
- Yian < Thai side>	Side>		
PD: DPD:	Project Director TPC: Thai Project Coordinator CA: Deputy Project Director TC: Technical Coordinator		
PM:	C/P: Thai C/P	ator rt	
	SP: Support Staff SE: Short-term expert	ť	

15		Remarks						===	
Annex 15		Input (*)			JPC, LE, TPC, TC, C/P, SP SP I F TPC TC C/P SP	TC, C/P LE, TC, C/P, SP LE, TC, C/P, SP TC, C/P, SP TC, C/P, SP	JPC, LE, TPC, TC JPC, LE, TPC, TC JPC TPC, TC	JPC, IC, CP, SP TPC, IC, CP, SP	utor t T
	Responsible	in the	ļ	CA, PM PM, TPC	CA, PM TPC PM TPC	PM, TPC CA, PM CA, PM TPC	CA, PM CA, PM CA, PM	CA, PD	 <lapanese side=""></lapanese> CA: Chief Advisor JPC: Project Coordinator LE: Long-term expert SE: Short-term expert
	2002 TFY2002	JFY2001 JFY 2002	. ⊃⊃r						TPC: Thai Project Coordinator Director TC: Technical Coordinator C/P: Thai C/P SP: Support Staff
1000	7001	=	JOF					<u> </u>	1 (X)
S Calendar Vear	Target		Term of Technical Cooperation	¦.≌	3-4-3 Accept applicants for pilot training course. 3-4-4 Prepare material for hands-on-training and text books.	3-4-6 Implement pilot training course. 3-4-7 Revise attendants questionnaire, if necessary. 3-4-8 Conduct questionnaire survey and produce analytical report.	3-5 Implement mold technology seminar. 3-5-1 Decide objectives and theme/s for the seminar. 3-5-2 Select suitable guest speaker/s for the seminar. 3-5-3 Send invitation card to guests. 3-5-4 Implement mold tacknot contact.	- 11	Plan <thai PD; DPD; DPD; PM;</thai

South

Calendar Year 2001	2001 Responsible 1	
Fiscal Year	JFY2001 JFY 2002	Input (*) Remarks
Term of Technical Cooperation	7 200 →	
 4 Technical information and advisory services as a trial are implemented systematically. 4-1 Grasp an appropriate perception of present situation of Thai plastic injection mold industry. 4-1-1 Visit factory and meet factory personnel at BSID. 4-1-2 Conduct factory questionnaire survey. 4-1-3 Hold information sessions with industrial associations. 4-2 Make plan of trial technical information and advisory services. 4-2-1 Accept company's request for technical information and advisory services. 4-2-2 Make plan of trial technical information and advisory services. 4-2-2 Make plan of trial technical information and advisory services. 4-2-2 Make plan of trial technical information and advisory services. 4-2-4 Make plan of trial technical information and advisory services. 4-2-6 Make plan of trial technical information and advisory services. 4-2-7 Make plan of trial technical information and advisory services. 		JPC, LE, TC, C/P JPC, LE, TPC, TC, C/P JPC, LE, TPC, TC, C/P TPC, LE, TPC, TC, C/P TPC, TC, C/P, TPC, TC, C/P TPC, TC, C/P, S/P
at BSID. 4-3 Implement trial technical information and advisory services. 4-3-1 Hold the initial advisory meeting at BSID. 4-3-2 Visit factory as planned. 4-3-3 Make factory visitation report. 4-3-4 Visit any factory, if requested and make factory visitation report on each occasion.	CA, LE, TPC, TC, CP TC, CP TC, CP TC, CP TC, CP TC, CP TC, CP TC, CP TC, CP TC, CP TC, CP TC, CP	7.7 7.5, C/P
 4-3 Monitor and evaluate trial technical information and advisory services. 4-3-1 Revise the monitoring and evaluation questionnaire of factories visited, if necessary. 4-3-2 Conduct questionnaire survey and produce analytical report. 	CA, TPC	JPC, LE, TC, C/P TPC, TC, C/P, SP
. 1411	Alapanese side> PD: Project Director TPC: Thai Project Coordinator CA: Chief Advisor DPD: Deputy Project Director TC: Technical Coordinator JPC: Project Coordinator C/P: Thai C/P CA: CA: Chief Advisor JPC: Project Coordinator JPC: Project Coordinator C/P: Thai C/P CA: CA: CA: CA: CA: CA: CA: CA: CA: CA:	_

Target	Trial prototyping service is implemented systematically.		Annex 15	15
Targel IFY2001 TFY2002 In the Input (*)	Calendar Year		sible	
tions. 1 12 2 3 4 5 6 7 8 9 10 Project(*)	Fiscal Year	JFY2001 JFY 2002		Remarks
Mold CA, PM PM PM PM PM PM PM PM	Term of Technical Cooperation	JCC JCC JCC JCC JCC JCC JCC JCC JCC JCC	zi(*),	
at BSID. lassociations. e. Internal Mold Internal Mold emal Mold can additical report. Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM Can PM	ng service is implemented systematically.			
Internal Mold ternal Mold ternal Mold stronnaire, c analytical report. Physical Deputy Project Director TC: Technical Coordinator Physical Coordinator Physical Project Manager Physical Project Manager Physical Project Coordinator Physical Project Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Director TC: Technical Coordinator Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Physical Phy	propriate perception of present situation of injection mold industry. actory and meet factory personnel at BSID. of factory questionnaire survey. formation sessions with industrial associations.	CA, TPC	JPC, LE, TC, C/P JPC, LE, TC, C/P	
ternal Mold setionnaire, canalytical report. Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM Ch. PM	f trial prototyping service. blan of mold manufacturing service. blan of machine sharing service. personnel to administrative work prototyping service. prototyping service.	CA, PM PM PM	JPC, LE, IPC, IC, C/P JPC, LE, TPC, TC TPC, TC TPC, TC TPC, TC	*
setionnaire, ce analytical report. Chai side> PD: Project Director TPC: Thai Project Coordinator CA: Chief Advisor DPD: Deputy Project Director TC: Technical Coordinator JPC: Project Coordinator JPC: Project Coordinator SP: Support Staff	ial prototyping service. information of trial prototyping service. nent trial prototyping service. process and assemble the SIC Internal Mold	CA, PM	JPC, LE, TPC, TC, C/P JPC, LE, TPC, TC, C/P, SP LE, TC, C/P, SP	
<thai side=""></thai>	evaluate trial prototyping service. the monitoring and evaluation questionnaire, ssary. ct questionnaire survey and produce analytical report.	CA, PM	JPC, LE, TPC, TC, C/P	
Project Director TPC: Thai Project Coordinator CA: Deputy Project Director TC: Technical Coordinator JPC: Project Manager C/P: Thai C/P LE: SP: Support Staff	— Plan	ai side>	1. C, 1C, C/F, 3F	
מבלקטוני סומון	,	Project Director TPC: Thai Project Coordinator CA: Deputy Project Director TC: Technical Coordinator JPC: Project Manager C/P: Thai C/P LE: SP: Support Staff	isor ordinator expert	

Annex 15 Annual Plan of Operations (APO) *2003

Plan	Input (*) Remarks		JPC, LE, PM, TPC, TC TPC, TC Reffer to 2-1	IPC, LE, TPC, TC IPC, LE, PM, TPC, TC IPC, LE, PM, TPC, TC	JPC, LE, PM, TPC, TC JPC, LE, PM, TPC, TC JPC, LE, TPC, TC JPC, LE, TPC, TC	JPC, LE, TPC, TC JPC, LE, TPC, TC, C/P JPC, LE, TPC, TC, C/P
	Responsible person in the Project(*)				CA, PD CA, PD JI CA, PM JI PD	
<lapanese side=""> CA: Chief Advisor JPC: Project Coordinator LE: Long-term expert SE: Short-term expert</lapanese>	9 22 ▶					•
	TFY2003 11: 12					*
- Alexander	Fiscal Year Fiscal Year Term of Technical Cooperation	0 The Project operation unit is enhanced.	0-1 Allocate necessary personnel as planned. 0-1-1 Revise personnel allocation plan, if necessary. 0-1-2 Allocate personnel as planned. 0-2 Make annual plans of activities (APO and ATSI) and revise 5 years plans of activities (PO and TSI) if, necessary. 0-2-1 Formulate annual plans of activities for the next year	and review 5years plans of activities. 0-2-2 Approve a series of plans at JCC. 0-2-3 Implement periodic monitoring and evaluation with the share of results at JCC. 0-2-4 Revise plans of activities, if necessary.	0-3 Make the project budget plan by Thai side and execute properly. 0-3-1 Execute budget for TFY 2003 as planned. 0-3-2 Make budget plan for TFY 2004 0-3-3 Approve budget for TFY 2004 0-3-4 Execute budget for TFY 2004	0-4 Operate project management system. 0-4-1 Hold periodical meeting as planned. (SIC weekly meeting, Thai administrative C/P weekly meeting C/P monthly meeting, Experts weekly meeting) 0-4-2 Hold JCC every half year.

21/25 Annex 15	Remarks					,	
	Input (*)			JPC, TPC	JPC, TPC JPC, LE, TPC, TC, C/P	JPC, LE, TPC, TC, C/P LE, TPC, TC, C/P	SE, C/P SE, C/P
	Responsible person in the Project(*)	J		CA. LE, PM, TC	CA, LE, PM, TC	CA.PM	1.E. T.C
	TFY2004 TFY2003 8 9 10 11 1						
		₹ ►			-		
	JFY2002		D D C L				
Calcndar Year	Fiscal Year	Term of Technical Cooperation Output 1 The necessary machinery and equipment are provided, installed, onersted and maintained.	I The necessary machinery and equipment are provided, installed, operated and maintained properly.	 1-1 Make facility refurbishment plan and implement as planned. 1-1-1 Make facility refurbishment plan for technical training, 2cminars and prototyping service, if necessary. 1-1-2 Implement as planned. 	 1-2 Provide and install necessary machinery and equipment. 1-2-1 Make the plan of necessary machinery and equipment to be purchased by Japanese side for next year, if necessary. 1-2-2 The plan is approved by Japanese Government. 	(1 he plan could be subjected to change under constraints such as budget appropriation.) 1-2-3 Procure and transport the machinery and equipment to the Project site. 1-2-4 Make the plan of necessary machinery and equipment, then purchase as planned by Thai side, if necessary.	1-3 Operate and maintain the machinery and equipment as planned. 1-3-1 Compose operation and maintenance manual. 1-3-2 Operate and maintain machinery and equipment as planned.
6	148		-				

22/25 Anney 15

	Remarke	Cu minimum														
	Innut (*)	() and						JPC, LE, TPC, TC, C/P	JPC, LE, PM, TPC, TC JPC, LE, PM, TPC, TC, C/P	SE, C/P SE, C/P	SE, C/P C/P IPC IF PM TPC TC C/P			JPC	JPC, TPC, TC, C/P	JPC, LE, PM, TPC, TC, C/P
Responsible	person	in the	Project(*)					СА, РМ	CA, PD CA, PD	LE, TC LE, TC	-	<u>.</u>		CA, LE, SE	CA, LE, SE	CA, PD
	TFY2004		10 11 12	→ Dor:									-			.
2003	TFY2003	JFY2003	5 6 7 8 9	↓					 					1-		<u> </u>
		JFY2002	1 12 1 2 3 4			"C/P") are ungraded.						-		1 -	 	· ·
Calendar Year		Fiscal Year			Term of Technical Cooperation	Output 2 Technical capability of the counterpart personnel (hereinafter referred to as "C/P") are upgraded	2 Technical capability of the counterpart personnel (hereinafter referred to as "the C/P") are upgraded.	2-1 Make plan of technology transfer to the C/P. 2-1-1 Formulate Annual Technical Cooperation Program (ATCP) for the next year and review Technical Cooperation Program	for 5 years (TCP), if necessary. 2-1-2 Approve ATCP and TCP at JCC. 2-1-3 Revise ATCP and TCP, if necessary.	<u> </u>	2-2-3 Compile textbooks and necessary documents. 2-2-4 Implement echo-training and self training by C/P.		2-3 Monitor and evaluate the result of technology transfer to the C/P.		2-5-2. Develop the material to monitoring. 2-3-3. Monitor and evaluate the result of technology transfer	2-3-4 Share the results of monitoring and evaluation at JCC.

Samel

Calendar Year	2003 Responsible		
Fiscal Year	TFY2003 JFY2002 JFY2003	[nput (*)	Remarks
Term of Technical Cooperation	11. 12		
Output 3 Technical training and seminars are implemented systematically.			
3 Technical training and seminars are implemented systematically.			
3-1 Grasp an appropriate perception of present situation of Thai plastic injection mold industry. 3-1-1 Visit factory and meet factory personnel at BSID. 3-1-2 Conduct factory questionnaire survey. 3-1-3 Hold information sessions with industrial associations.	CA, TPC CA, TPC CA, PM	JPC, LE, TC, <i>C/P</i> JPC, LE, TC, <i>C/P</i> JPC, LE, TPC, TC, C/P	
덛	PM, TPC	TC, C.P., SP JPC, LE, TC, C.P.	
3-2-3 Revise curricula and textbooks, if necessary. 3-2-4 Announce information regarding training courses. 3-2-5 Accept applicants for training courses. 3-2-6 Prepare material for hands-on-training and text books. 3-2-7 Conduct teaching method training and practice sessions. 3-2-8 Implement training courses. 3-2-9 Revise attendants questionnaire, if necessary. 3-2-10 Conduct questionnaire survey and produce analytical report.	LE, TC CA, PM TPC PM, TPC CA, PM CA, PM PM, TPC CA, PM PM, TPC CA, PM PM, TPC CA, PM PM, TPC CA, PM PM, TPC CA, PM	CP JPC, LE, TPC, TC, CP, SP SP LE, TPC, TC, CP, SP TC, CP LE, TC, CP, SP JPC, LE, TPC, TC, CP TPC, TC, CP, SP	
3-3-1 Make text book for training course. 3-3-1 Analyze present situation and make plan for pilot training course. 3-3-2 Develop curricula for pilot training course. 3-3-3 Hold Advisory Committee Meeting for finalizing curricula. 3-3-4 Amend and complete curricula. 3-3-5 Collect material for text book. 3-3-6 Make text book.	CA, PM LE, TC CA, PM LE, TC LE, TC LE, TC	JPC, LE, TPC, TC, C/P C/P JPC, LE, TPC, TC, C/P C/P C/P	
3-4 Implement pilot training course. 3-4-1 Assign personnel to administrative work of pilot training course. 3-4-2 Announce information regarding pilot training course. 3-4-3 Accept applicants for pilot training course. 3-4-4 Prepare material for hands-on-training and text books. 3-4-5 Conduct teaching method training and practice sessions. 3-4-6 Implement pilot training course. 3-4-7 Revise attendants questionnaire, if necessary. 3-4-8 Conduct questionnaire survey and produce analytical report.	CA, PM PM, TPC CA, PM TPC PM, TPC PM, TPC CA, PM TPC CA, PM TPC CA, PM TPC TPC TPC TPC TPC TPC TPC TPC TPC	JPC, LE, TPC, TC TC, CP, SP JPC, LE, TPC, TC, CP, SP SP LE, TPC, TC, CP, SP TC, CP LE, TC, CP, SP JPC, LE, TPC, TC, CP TC, CP TC, CP SP JPC, LE, TPC, TC, CP	
3-5 Implement mold technology seminar. 3-5-1 Decide objectives and theme/s for the seminar. 3-5-2 Select suitable guest speaker/s for the seminar. 3-5-3 Send invitation card to guests. 3-5-4 Implement mold technology seminar. 3-5-5 Conduct questionnaire survey and produce analytical report.	CA, PM CA, PM CA, PM CA, PM CA, PM CA, PM	JPC, LE, TPC, TC JPC, LE, TPC, TC JPC, TPC, SP JPC, LE, PM, TPC, TC, CJP, SP TPC, TC, CJP, SP	

AB

Sauch

Colondar Vone		2000		13.		C1 YOUR
Calcillar real	:	2003		Kesponsible		
Fiscal Year	JFY2002	TFY2003 JFY2003	TFY2004	person in the	Input (*)	Remarks
	11 12 1 2 3	4 5 6 7 8 9	10 11 12	Project(*)		
Tern of Technical Cooperation	;)	Jcc.	A			
Output 4 Technical information and advisory services as a trial are implemented systematical	stematically.	-				
4 Technical information and advisory services as a trial are implemented systematically.						
 4-1 Grasp an appropriate perception of present situation of Thai plastic injection mold industry. 4-1-1 Visit factory and meet factory personnel at BSID. 4-1-2 Conduct factory questionnaire survey. 4-1-3 Hold information sessions with industrial associations. 				CA TPC CA TPC CA PM	IPC, LE, TC, C/P IPC, LE, TC, C/P IPC, LE, TPC, TC, C/P	,
4-2 Make plan of trial technical information and advisory services. 4-2-1 Accept company's request for technical information and advisory servicesRevise questionnaire, if necessary.				A A A A A A A A A A A A A A A A A A A	ar or or or	
-Conduct questionnaire survey and produce analytical report. 4-2-2 Make plan of trial technical information and advisory services.				W	TPC, TC, C/P, SP	
 -Analyze questionnaire data and choose companies to be visited. -Make the appointment for the initial advisory meeting at BSID. 				CA, TPC CA, TPC	JPC, LE, TC LE	
 4-3 Implement trial technical information and advisory services. 4-3-1 Hold the initial advisory meeting at BSID. 4-3-2 Visit factory as planned. 4-3-3 Make factory visitation report. 4-3-4 Visit any factory, if requested and make factory visitation report on each occasion. 				CA LE, TPC, TC, C/P TPC CA, PM	TC, C/P LE, TC, C/P	
 4-3 Monitor and evaluate trial technical information and advisory services. 4-3-1 Revise the monitoring and evaluation questionnaire of factories visited, if necessary. 4-3-2 Conduct questionnaire survey and produce analytical report. 				CA, TPC PM	JPC, LE, TC, C/P TPC, TC, C/P, SP	

Sand

AS

				Annex 15
Calendar Year	2003	Responsible		
	TFY2003	berson	(*)	Damodo
Fiscal Year	JFY2002 JFY2003 1FY2003 11 12 1 1 2 3 4 5 6 7 8 9 10 11 12	in the Project(*)	mbar (.)	NCIII AIN
Tern of Technical Cooperation				
Output 5 Trial prototyping service is implemented systematically.				=
S Trail prototyping service is implemented systematically.			,	
5-1 Grasp an appropriate perception of present situation of Thai plastic injection mold industry.				
5-1-1 Vivil ractory and freet lactory personnel at BSID. 5-1-2 Conduct factory questionnaire survey. 5-1-3 Hold information sessions with industrial associations.		CA, TPC JPC, CA, TPC JPC, CA, PM JPC,	JPC, LE, TC, C/P JPC, LE, TC, C/P JPC, LE, TPC, TC, C/P	
5-2 Make plan of trial prototyping service. 5-2-1 Make plan of mold manufacturing service. 5-2-2 Make plan of markine sharing service	0 8	CA PM JPC.	PC, LE, TPC, TC	
			TPC, TC, C/P, SP	
5-2-4 Make plan of SIC Internal prototipe mold 5-3 Implement trial prototyping service.		CA PM JPC,	PC, LE, TPC, TC, C/P	
5-3-1 Notify information of trial prototyping service. 5-3-2 Implement trial prototyping service. 5-3-3 Design proposes and assemble the CIC Internal Mold		CA, PM IPC, CA, PM LE, '	JPC, LE, TPC, TC, C/P, SP LE, TC, C/P, SP	
			PC.LE.TPC.TC.CDP	
if necessary. 5-4-2 Conduct questionnaire survey and produce analytical report.	Wa		TPC, TC, C/P, SP	

South

54

Annex 16 Annual Tentative Schedule of Implementation (ATSI)*1999~2001

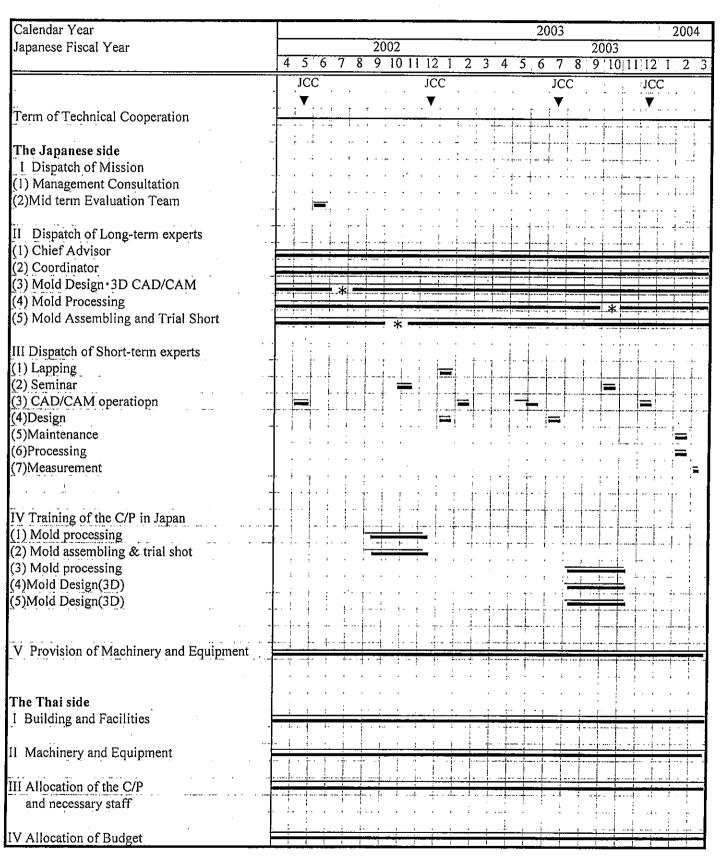
Calendar Year		1999		<u> </u>	200		<u> </u>		2001		200
Japanese Fiscal Year			99		1	200				2001	
	4 5	6 7 8 9	10. 11; 12	1 2 3						8 9 10 11	12: 1 . 2
•		Signing	of the		JC	2	JCC		JCC		JCC ;
	1	Signing	or the		. ▼	, .	▼.		▼		▼ '
Ferm of Technical Cooperation		. 🛦 .	. ==	-	 :			=			
							. :				
The Japanese side					,						. !
I Dispatch of Mission	ļ į	ļ ļ <u>i</u> .	;	; 		جو جند اسا			·		
1) Implementation Study		=			:		1 1 1				-+: ·
2) Management Consultation		1 : :-		. į .	. ,				- +		
	- + -					4 4	111		- -		
I Dispatch of Long-term experts			· · ·	; ! !:	, , , , ,	4.4	<u> </u>		<u></u>		
1) Chief Advisor									1 - 1 1 1		
2) Coordinator	1 . ,					- i i i-				*_	
3) Mold Design					<u> </u>	100					
4) Mold Processing						ļ ļļ		4.4.4			1.
5) Mold Assembling and Trial Short	1 : 1		-	·	,						
TIP) II COI	-; ·	1 1 1		1		4. 4		-	- - -		_ļ.¦.
II Dispatch of Short-term experts	4- } }-	+- +-			, <u>-</u> + +	. . _ _	. -				<u>-</u>
I) CAD/CAM/DNC	ަ	. .					1-1-1	4-1-1		-+	
2) Installation and Operation (CAD/CAM/DNO	4	;	, ; ; ,			· ·	-	4.4	.1.		. ļ. l.
B) EDM/W-EDM					;	-	. ; ;	· · ·			<u>; </u>
1) Lapping 5) Production Control				. ! :				4. 1		- -	
				. . .		: : :		1.4.4	+ + -		++
5) Heat Treatment 7) Surface Treatment	- i i	+ -	-		1 4 4 4	4 + +	+ + +				
3) Seminar					. .		+	1. + -		+ + + + + + + + + + + + + + + + + + + +	
)) Others (If necessary)	+ ; ;		-	i .	+ + +	1-1-	 -				
) Others (II necessary)	 	1 4	- -					++ i			
V Training of the C/P in Japan	1 ! h	4		i :		- j - F	1 + 1	4 1 1	-		
1) CAD/CAM operation		,		; '		<u> </u>	<u>.</u>	1 , .			1 1
2) CAD/CAM operation				: '			, 	• : •			- ! : .
3) CAD/CAM operation	1 : :			į ·		-	<u> </u>	1::	1 1	+ + + + + + + + + + + + + + + + + + + +	i .
4) Mold processing	1111	+ -		1-7	111	177		 	171	<u></u>	<u>.</u>
5) Mold processing	1-1-			:		+++	+++				
5) Mold assembling & trial shot		- 1-1-1		-	- † † †	†" -†"	111				
	1 1	7		- 1	177	1-1-1-	<u> </u>	111		1 1 T	
	T 1	1 1 1 1			·	+			1111		77
Provision of Machinery and Equipment	[1 1 1 1		- 1 - 1 - 1	- + + + + + + + + + + + + + + + + + + +	1111	1 1 1	T 1			
				1 .							_ [- [-
								1 . :			4 I''
he Thai side			1.1								
Building and Facilities		1 1 1. 1									1
		1111				1					
Machinery and Equipment		land a le									
				,			$\Box \Box \Box$				
I Allocation of the C/P						 					
and necessary staff	l .					1.7			T	171	. i i i
			1 1 1					; • • •			. 1. 1
/ Allocation of Budget								1 1 1	1 7 1		

Plan Implemented



Smili

Annex 16 Annual Tentative Schedule of Implementation (ATSI) * 2002~2003



Plan
Inplemanted



South

Annex 17 Annual Technical Cooperation Program (ATCP)*2004

	Impleme				Hands-d	n Trainin	g Advisory	service			ing a S/I Training	
Calendar Year		2003				20	04	2004		<u> </u>		
Technology Transfer (tem / Japanese Fiscal Year		2003	3	4	5	6	7	8	9	10	11	1:
		·- ·-										-
m of Technical Cooperation 2-2 Implement Technology Transfer to the C/P	-										٠	
a a simplement recommend.												ļ.,
Fundamentals (common items)		 -	 -					 				┼
0.1 Precondition for mold technology (1) General engineering drawings	_							i			 	t
a Design standards.	FINISH											
b Method of section	FINISH	IED						 				
(2) Properties of plastic a Types and characteristics	FINISH	IED						1		-	-	
h Forming methods.	FINISH	IED										T
(3) Fundamentals of steel for mold	FINISH	ED					ļ				ļ	
a General steel b Special steel	FINISH			 -							 	<u> </u>
(4) Fundamentals of metal processing												
a Fundamentals of cutting	FINISH	1ED					ļ				<u> </u>	<u> </u>
b Fundamentals of EDM processing c Functions of processing equipment	FINISH	RED		<u> </u>								
(5) Fundamentals of plastic injection	LINIO	i i										
a Outline of injection molding machine												
(a)Mold clamping mechanism	FINISH						 -		 	 	-	-
(b)Injection mechanism b Injection molding process for thermoplastics	FINISH		 	 	 			 				t
e infector morning brocess for energylassages								L				
Principles of injection mold		.					ļ	<u> </u>	<u> </u>	ļ	_	├
(1) Primary injection mold	-+-	 		 	-			 	 		 	╁
(what is mold?, industrial standard etc.) a what is a mold	FINISH	IED	<u> </u>		<u> </u>							
b Industrial standard	FINISI											\sqsubseteq
(2) Name and function of components			<u> </u>	<u> </u>	<u> </u>			ļ			<u> </u>	+
(guide pin, locate ring etc.)	FINISH	(ED	 	 	 				ļ		 	+
a Components of the two plate mold b Components of the three plate mold	FINISH											\top
(3) Name and function of mold elements				ļ <u> </u>								<u> </u>
(runner, gate etc.)	CINICI	I I	ļ				-	<u> </u>		<u> </u>	 	₩
Runnet - basic configuration Gate-basic configuration, advantages	FINISH		 		 			-				
and disadvantages				·								
			ļ	ļ						<u> </u>	<u> </u>	-
Mold design Standard			-	 				 				-
(1) Name and function of molded products a Boss ejector system and mold design	FINISH	IED			-							
b Rib ejector system and mold design	FINISH	IED_										ļ
(2) Determination of injection condition	FINISH	JED.	 	 	 			<u> </u>			-	╁
S Calculation of injection volume(weight) into designed mold	FINISH					 -			 			忊
b Calculation of clamping force for design mold	FINISH	HÉD.										_
c Design mold dimensions and injection	FINISH					ļ				 	 	-
molding machine specifications	FINISH	IFD				 			-			+
(3) Process from product model to mold design a Methods of product model design	FINISH	IED										
b Reflecting study in mold design	FINISH	IED							ļ		ļ <u> </u>	╀
(4) Layout of basic mold	FINISH	JED									<u> </u>	╁╴
a General design b Special design	FINISH	IED .	-	-		 						1
(5) Design of molded product	1.1.1.1											
a Molded product design		150		<u> </u>	 		ļ				 	\vdash
(a)Undercut	FINISH		 	 	 	 		1	 	 	 	+
(b)Draft angle b Quality of manufactured goods											ļ <u>.</u>	
(a)Dimensional tolerance	FINISH	IED					ļ				ļ	-
(b)P.L code	FINISH	1ED				 	1	 	 	 	<u> </u>	\vdash
(c)U.L code c Mold shrinkage	- 14101	1			1							
(Thickness of forming material and	FINIS	(ED			[╄
molded product)		 -		 	-	 	 -	 		 	-	+
d Plastics flow (Fluid ratio [Length/thickness] at injection pressure P)	FINISH	IED.	-	 	 	 	<u> </u>		<u>† </u>			
(6) Design of mold standard parts												L.
a Standard parts	FINIS				ļ		ļ	 				╁
b Selection and design of standard parts	FINISH	1 <u>ED</u>	-			 	 	 	 	 		╁
(7) Undercut a Types of undercut method	FINISH	HED.	_		L							I
b Selection of undercut method	FINIS	HED			[_
(8) Fundamental design using target		ļ		<u> </u>	ļ		-		 		 	+
product-1(pen tray)	FINISH	JED.	-	 		 	 	 	 	-	 	╁╴
a Required function of the product	FINISH				 	<u> </u>		 				1
b Specification mold design	1 4/4/21											
Fundamentals of mold processing and		ļ							ļ	<u> </u>		
plestic injection molding		ļ <u>.</u>	 	 	 	 	-				 	\vdash
(1) Mold processing	FINISH	ieu I				<u> </u>	 	 	 	 	 	+-
8 Mold processing methods b Mold processing conditions	FINISH			_	-	L		<u> </u>				
b Mold processing conditions (2) Plastic injection molding		Ī.							<u> </u>			Γ
a Three factor of molding				1	L		ļ	ļ	 		 	╀
	FINISH											



Annex 17 Annual Technical Cooperation Program (ATCP)*2004___

	Calendar Year			aining in .			on Training Advisory service 2004			Dispatching a S/E				
	Technology Transfer item / Japanese Fiscal Year	-	2003	1 3	4	1 5	6	7	2004 8	9	10	11	12	
	(c)Material resin	FINIS	-IED											
ь	Three principles of molding (a)Temperature	FINIS	1 IED	 	<u> </u>					1		 	<u> </u>	
	(b)Pressure	FINIS	HED										ļ	
	(c)Cycle	FINIS	TEU	 	 	-	 		-	<u> </u>	 	 	-	
	amentals of computer	FOLIA	150			ļ			ļ					
	omputer operation peration of CAD, CAM and CAD/CAM	FINIS		<u> </u>			-	 	 	 		1	1	
Injection	mold design	1				+	 	1	ļ .	ļ			╁	
Fund	amentals of mold design		ļ		ļ		ļ						ļ	
	sage of the applications for Mold layout low to design target product-1	<u> </u>		 	 	 	 	 	+				├	
(1	Pen Tray)	CINICI					<u> </u>				ſ.			
a h	Molded product Specification of mold design	FINIS	HED	 -	 	 	 	ļ——			 	-	\vdash	
(3) H	ow to design target product-2			ļ			ļ							
	Front Case for Alarm Clock) Molded product	FINISH	HED.	-	-		ļ ·		 	 				
b	Specification of mold design	FINISI	ED											
	ommon use of parts and standardization f common parts				-		 	-	_					
a	Objectives	FINISI			ļ	ļ	ļ							
	Specification (old design based on prediction	FINISH	1 <u>LD</u>	-		-	-	 	 	 	 -	 	-	
	Predicted product defects	FINISH										<u> </u>		
b	Countermeasures for predicted product defects	FINISH	HED I		 	 	 	 		-		-	-	
						ļ					Ī			
	design by 3D CAD/CAM echniques of CAD,CAM and CAD/CAM			-										
a	CAD	Follow												
	CAM Linking between CAD and CAM	Follow Follow		-		 					<u> </u>			
(2) G	uidance by each CAD/CAM software				·				1					
(3) E	akers for mold making xchange of CAD/CAM network data	Follow	~up	 			FINISH	l IED						
	·						1 10 10 00							
	AD/CAM operation and mold design				 							-	 	
8	Specification of CAD/CAM operation	Follow				_	FINISH							
b	Specification of CAD/CAM operation in mold design	Follow	-up	 		╫─	FINISH	IEU.	 	-				
	esign of target product-1 by CAD													
	Pen Tray) Molded product	FINISH	IED.				ļ							
b	Specification of mold design	FINISH												
(6) D	esign of target product-2 by CAD Front Case for Alarm Clock)										-			
a	Molded product	FINISH												
	Specification of mold design esign of target product-3 by CAD	LINIOL	IEU .											
	Front Panel for Personal Computer) Molded product	FINISH	ED.			-							<u> </u>	
	Molded product Specification of mold design	FINISH												
	esign of target product-4 by CAD Japan Case for Telephone)			_			-						-	
	Molded product	FINISH												
	Specification of mold design esign of target product-5 by CAD	FINISH	IED		<u> </u>				 					
((amore Body)					<u> </u>								
	Molded product Specification of mold design				FINISH FINISH	ED FD			 				_	
U.	Specification of fitota design				- Intion									
	n of semi prototyping molds	FINISH	IED.		<u> </u>	ļ	 	·						
	prototyping mold A (P.R. Gift : Business card Case)													
b	prototyping mold B	FINISH	IED			 			<u> </u>					
С	(Soap Box) prototyping mold C	FINISH	ED											
	(Medicine Box) prototyping mold D		Ŀ_	FINISH	I IED									
	(Multi usage Mold)					,								
f	prototyping mold E (CD-ROM File/Cace)		_	FINISH	I IED		- · ·							
	(CD-ROM File/Opener)		FINISH							·				
	(CD-ROM File/Holder)				FINISH	(ED								
Solve	problem after trial shot													
(Prob	lems and solution of injection													
	ng assembly) comparing molded product dimensions with	Follow	-up		_	<u></u>								
cli	sign dimensions					l .								
	omparing design dimensions with old component dimension	Follow	~up						111111111111111111111111111111111111111					
U)	oto component unitension													



Sanch

Annex 17 Annual Technical Cooperation Program (ATCP)*2004

Intention Flore Intention Flore Vant	Calendar Year	Implemented Hands-on Training Dispatching a S/E C/P Training in Japan Advisory service Training cu
2. Inches and processing 2. Available of processing 3. Available of processing 3. Available of processing 4. Available of processing 5. Committee of processing 5. Committee of processing 5. Committee of processing 5. Committee of processing 5. Committee of processing 5. Committee of processing 5. Committee of processing 5. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of processing 6. Committee of process	Technology Transfer !tem	2003 2004
Colline Users 4 Nilling 5 All Milling 1 All Milling 1 All Milling 1 All Milling 1 All Milling 1 All Milling 1 All Milling 1 All Milling 1 All Milling 1 All Milling 1 All Milling 1 All Milling 1 All Milling 1 All Milling 1 All Milling 1 All Milling 2 All Milling 3 All Milling 1 All Milling 1 All Milling 2 All Milling 3 All Milling 3 All Milling 3 All Milling 3 All Milling 4 All Milling 4 All Milling 4 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Milling 5 All Mill	2 injection mold processing	1 2 3 4 5 6 7 8 9 10 11
A Allings D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D Lacket D	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	
C. Gride (E. EM Processing twore (B. E. E. C. AND CALLACE GAD) (E. C. C. C. C. C. C. C. C. C. C. C. C. C.		EINISUED
EN CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRETE CHAPT CEST CONCRE		FINISHED
Edit of CAP/CAP/CAP/CAP and Service state states and service states are stated as a service state state and service states are states as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service state as a service as a service state as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a service as a servi		FINISHED
a. Def shifting electric discharge metaline D. Witter district, discharge metaline Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow u.B. Fillow	(Edit of CAD/CAM/CNC date)	
D. Wirstell, descript discharge qualities D. Inspection of Branch and State of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communication of Communicati	a Dei sinking electric discharge machine	Follow-up FINISHED
Dispersion and increasement of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of		Follow-up FINISHED
8 20 newsworster das College up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up FINIS-ED Pollow-up	(3) Inspection and measurement	Follow-up FINISHED
D. Overdam and franction of croscating succious of the franction of croscating succious of the franction of croscating succious of the franction of croscating succious of the franction of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the croscation of the	a 3D measurement data	Follow-up FINISHED
institution of Conventional Follow UP FINISHED (D) Operation and function of conventional (E) Operation and function of INC (D) Operation and function of INC (D) Operation and function of INC (D) Operation and function of CNC (D) Operation and function of CNC (D) Operation and function of CNC (E) Operation and function of CNC (D) Operation and function of CNC (E) Operation and function of CNC (D) Operation and function of CNC (D) Operation and function of CNC (D) Operation and function of CNC (D) Operation and function of CNC (D) Operation and function of CNC (D) Operation and function of CNC (E) Operation and function of CNC (E) Operation and function of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of CNC (E) Operation of	b General measurement data	Follow-up FINISHED
Description of Secription of Conventional Follow-up FINSHED	2.2 Operation and function of processing	
machinery and function of NC	machinery	
Observation of Net Control of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section of CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC Follow-up FINSHED Section CNC	- Total Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Contro	Follow-up FINISHED
machinery microtron of CNC Follow-up FINSHED Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014, W-9504 ec.) Interchart (2014,		
Interface (EDM, VFEM etc.) O CAMCCK, Operation and programming O CAMCCK, Operation and programming O CAMCCK, Operation and programming Follow up FINISHED O CAMCCK, Operation and programming Follow up FINISHED O Processing and solinide A Stanting of processing process FINISHED O Processing conditions FINISHED O Processing conditions E PRISHED O Processing conditions O Processing conditions O Processing conditions O Processing conditions O Processing conditions O Processing conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions		Follow-up FINISHED
Interface (EDM, VFEM etc.) O CAMCCK, Operation and programming O CAMCCK, Operation and programming O CAMCCK, Operation and programming Follow up FINISHED O CAMCCK, Operation and programming Follow up FINISHED O Processing and solinide A Stanting of processing process FINISHED O Processing conditions FINISHED O Processing conditions E PRISHED O Processing conditions O Processing conditions O Processing conditions O Processing conditions O Processing conditions O Processing conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing process of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions O Processing of Conditions	(3) Operation and function of CNC	Follow-up FINISHED
(a) CANUCNC operation and progressmology (b) Module production and progressmology (c) Module production and progressmology (c) Processing and teologicy (c) Processing and processing acrosss (c) Processing of processing acrosss (c) Processing of Provided mode parts (c) Processing of Provided mode parts (c) Processing of Provided mode parts (c) Processing of Provided mode parts (c) Processing of Provided mode parts (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing process proming (c) Processing process proming (c) Processing process proming (c) Processing process proming (c) Processing process product-1 (c) Processing process proming (c) Processing process product-1 (c) Processing and Startest product-1 (c) Processing of Startest product-1 (c) Processing and Startest product-1 (c) Processing and Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1 (c) Processing of Startest product-1	machinery (EDM, W-EDM etc.)	
(6) Model production technology Processing and technology Processing and technology Processing and technology Processing consistency Processing of Provides and party Processing of Provides and party Processing of Provides and party Processing of Provides and party Processing of Provides and party Processing of treat product— South and party Processing of treat product Provides and the party Processing of treat product Processing process planning Processing of treat product Processing process planning Processing of treat product Processing process planning Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing process of designing data Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Processing of treat product— Process		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
Processing and coulting a Parenting of processing excess b Tooling FINISHED b Tooling FINISHED C Processing of Provided moderary (Provided mode C Provided mode FINISHED C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided mode C Provided Moderate Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Provided Moderate C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processing C Machine processi	(6) Mold production technology	POHOW-UP IFINISHED
D Tooling C Processing conditions FINISHED C Processing of Microsoft and parts FINISHED C Processing of Microsoft and parts FINISHED C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Processing of Microsoft and Processing C Microsoft and Microsoft and Processing C Microsoft and Microsoft and Processing C Microsoft And Microsoft and Processing C Microsoft and Microsoft and Processing C Microsoft and Microsoft and Processing C Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft And Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and Microsoft and M	(Processing and tooling)	
c. Processing of Provided mod parts (T) Processing of Provided mod parts (T) Processing of Provided mod parts (T) Expressing of target product: 1 b. Underent pin infriction for target product; 2 and the other core pins 2.3. Processing of target product: 1 c. Processing for target product: 1 d. Pinning draws process of designing data b. Quality control 2. Processing process of designing data b. Quality control 2. Processing stream product: 1 c. Production control 3. Processing of target product: 1 c. Production outcomed the processing of target product: 1 c. Processing of target product: 1 d. Processing of target product: 1 c. Processing of target product: 2 d. Processing of target product: 2 d. Processing of target product: 2 d. Processing of target product: 2 d. Processing of target product: 2 d. Processing of target product: 2 d. Processing of target product: 2 d. Processing of target product: 2 d. Processing of target product: 2 d. Processing of target product: 2 d. Processing of target product: 2 d. Processing of target product: 2 d. Processing of target product: 2 d. Processing of target product: 3 d. Machine processing d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Insp		
(2) Processine of Provided modit parts (Provided modit parts (Provided modit of trage product 1 5. Undercore pin finite testion for target (Provided modit of trage product 2 7. Processine of trace product (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process pluming (Processine process) (Processine processine process pluming (Processine processine process pluming (Processine processine process pluming (Processine processine process pluming (Processine processine process pluming (Processine processine process process pluming (Processine processine processine process process pluming (Processine processine processine processine processine processine product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product product pro	c Processing conditions	
a Cavity making of largest product-1 b. Undersup in Interpretation for targets products, and the pathers core pins 3. Processing fusest products (I) Processing process planning b. General process planning b. General process planning c. General process planning c. General process of designing falls designing falls b. Gutslift process planning c. General products c. Production control c. Production control c. Production control c. Production control c. Production control c. Production control c. Production control c. Production control c. Production control c. Production control c. Production control c. Production control c. Production control c. Production control c. Production control c. Production control c. Production confirmation based on NC data bus c. Machine processing c. FINISHED c. Machine processing c. Processing of Large product-2 c. Production confirmation based on NC data bus c. Machine processing d. Inspection d. Inspection d. Processing of Large product-3 c. Programation of Large product-3 c. Programation of Large product-3 c. Programation of Large product-3 c. Processing of Large product-3 c. Processing of Large product-3 c. Processing of Large product-3 c. Processing of Large product-3 c. Processing of Large product-3 c. Processing of Large product-3 c. Processing of Large product-3 c. Machine processing d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d. Inspection d.	(7) Processing of Provided mold parts	TANOPIEU .
B. Undervox pin Interestion for targest products? 2.3 Processing of target products 3 Planeting process planning 4 Planeting of processing process of designing described process of designing described process of designing described process of designing described process of designing described process of designing described process of designing described process of designing described process of designing described process of designing described process of designing described process of designing described process of designing described process of designing described process of designing described process of designing described process of designing described process of designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing designing design		
product-2 and the others core pins 2.3 Processing of target products (1) Processing process planning a Planning of processing process of delening data b Quality control 2.7 Processing process of delening data b Quality control 2.8 Processing for product-1 2.9 Processing process of delening data b Action confirmation based on NC data bus ENINSHED 5. Action confirmation based on NC data bus ENINSHED 6. Action confirmation data bus ENINSHED 7. Processing of larget product-2 8. Properations / setup 6. Machine processing 6. Inshelled 6. Machine processing 6. Inshelled 7. Processing of user product-3 8. Properations / setup 8. PINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation based on NC data bus ENINSHED 9. Action confirmation data data data data data data data dat	b Undercut pin fabrication for target	FINISHED
4. Planning of processing process of designing data by Qualification of Production control of Production control of Production confirmation based on NC data bus of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspection of Inspec	product-2 and the others core pins	FUNISHED
4. Processing process pleaning 4. Planning of processing process of designing data 5. Quality control C. Production control C. Production confirmation based on NC data bus C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. Machine processing C. M	2 D	
a Pleaning of processing process of designing data by Quality control and processing of target product -1 and processing of target product -1 and processing of target product -1 and processing of target product -1 and processing by Processing of target product -2 and processing of target product -2 and target product -2 and target product -2 and target product -2 and target product -2 and target product -2 and target product -2 and target product -2 and target product -2 and target product -2 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and target product -3 and targ		
desching data b Quite control	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	
C Production control 2 Prosperations of target product—1 2 Prosperations / setup 5 Action confirmation besed on NC data bus 5 FINISHED 6 Inspection 7 FINISHED 7 FINISHED 8 Processing of target product—2 9 Processing of target product—2 9 Progrations / setup 1 FINISHED 1 FINISHED 1 FINISHED 2 PROSPERATIONS / setup 5 FINISHED 6 Inspection 6 Inspection 6 Inspection 7 FINISHED 9 Processing of target product—3 a Preparations / setup 6 Inspection 7 FINISHED 9 Action confirmation based on NC data bus 6 FINISHED 1 Action confirmation based on NC data bus 7 FINISHED 1 Action confirmation based on NC data bus 8 FINISHED 9 Processing of target product—3 8 Preparations / setup 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 2 PROSPERATIONS / setup 3 PROSPERATIONS / setup 4 PROSPERATIONS / setup 5 PROSPERATIONS / setup 6 PROSPERATIONS / setup 6 PROSPERATIONS / setup 7 FINISHED 8 PROSPERATIONS / setup 9 PROSPERATIONS / setup 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 2 PROSPERATIONS / setup 4 Inspection 6 Inspection 7 FINISHED 9 Processing of target product—5 8 Preparations / setup 9 Action confirmation based on NC data bus 6 Mechine processing 1 FINISHED 9 Processing of setup product—5 8 Preparations / setup 9 Action confirmation based on NC data bus 1 FINISHED 9 Action confirmation based on NC data bus 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 1 FINISHED 2 FINISHED 2 FINISHED 3 FINISHED 4 FINISHED 5 FINISHED 5 FINISHED 6 FINISHED 7 FINISHED 7 FINISHED 8 FINISHED 8 FINISHED 9 FINISHED 9 FINISHED 9 FINISHED 9 FINISHED 9 FINISHED 9		
Processing of target product-1 PINISHED		
a Preparations / setup Action confirmation based on NC data bus ENISHED C Machine processing G Inspection (3) Processing of urnet product-2 A Preparations / setup B Action confirmation based on NC data bus ENISHED Action confirmation based on NC data bus ENISHED G Inspection G Inspection G Inspection A Inspection A Inspection A Preparations / setup B Action confirmation based on NC data bus ENISHED C Machine processing G Inspection G Inspection C Machine processing C Instruction C Machine processing C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Machine processing C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruction C Instruc		
b Action confirmation based on NC data bus C Machine processing G Inspection A Properations / setup B Action confirmation based on NC data bus C Machine processing G Inspection C Machine processing G Inspection C Machine processing G Inspection C Machine processing G Inspection C Machine processing G Inspection FINISHED A Committee of target product-3 A Preparations / setup B Action confirmation based on NC data bus C Machine processing G Inspection C Machine processing G Inspection G Inspection G Inspection G Inspection G Inspection FINISHED A Committee processing G Inspection G Inspection FINISHED A Committee processing G Inspection FINISHED A Preparations / setup FINISHED A Preparations / setup FINISHED A Committee of target product-4 A Preparations / setup FINISHED A Committee of target product-5 A Preparations / setup B Action confirmation based on NC data bus C Machine processing G Inspection G Inspection FINISHED A Committee of target product-5 A Preparations / setup B Action confirmation based on NC data bus FINISHED C Machine processing G Inspection FINISHED A Committee of target product-5 A Preparations / setup B Action confirmation based on NC data bus C Machine processing G Inspection FINISHED C Machine processing G Inspection FINISHED C Processing of target product-5 A Preparations / setup B Action confirmation based on NC data bus C Machine processing G Inspection FINISHED C Processing of target product-5 A Preparations / setup B Action confirmation based on NC data bus C Machine processing G Inspection FINISHED C Processing of target product-5 A Preparations / setup B Action confirmation based on NC data bus FINISHED C Processing of target product-5 A Preparations / setup B Action confirmation based on NC data bus FINISHED C Processing of target product-5 A Preparation / setup B Action confirmation based on NC data bus FINISHED C Processing of target product-5 A Preparation / setup B Action confirmation bas	a Preparations / setup	FINISHED
d Inspection (3) Processing of tarset product-2 a Preparation / setup b Action confirmation based on NC data bus FINISHED c Machine processing finished d Inspection finished b Action confirmation based on NC data bus finished c Machine processing a Preparation / setup FINISHED b Action confirmation based on NC data bus c Machine processing finished finished finished finished c Machine processing finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished	b Action confirmation based on NC data bus	FINISHED
(3) Processing of target product-2 a Preparations / setup b Action confirmation based on NC data bus c Machine processing d Inspection b Action confirmation based on NC data bus finished c Machine processing c Inspection b Action confirmation based on NC data bus finished c Attach confirmation based on NC data bus finished c Machine processing finished c Machine processing finished c Machine processing finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished finished fi		
b Action confirmation based on NC data bus C Machine processing d Inspection (A) Processing of target product-3 ENISHED D Action confirmation based on NC data bus EINISHED D Action confirmation based on NC data bus EINISHED (B) Processing of target product-4 E Preparations / setup EINISHED D Action confirmation based on NC data bus EINISHED (C) Processing of target product-4 E Preparations / setup EINISHED D Action confirmation based on NC data bus EINISHED C Mechine processing d Inspection (G) Processing of target product-5 E Preparations / setup D Action confirmation based on NC data bus C Mechine processing C Mechine processing C Mechine processing D Action confirmation based on NC data bus C Mechine processing C Mechine processing D Action confirmation based on NC data bus E Processing of semi prototyping molds A prototyping mold A CP.R. Gift : Business card Case) D prototyping mold B CSoap Box) C ANCELED C Medicine Box D Multil usass Mold I prototyping mold E CCD-ROM File) Mold assemblina, maintenance and tiral shot of intection molding Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenance and Mold assemblina, maintenanc	(3) Processing of target product-2	FINISHED
C Machine processing FINISHED d Inspection FINISHED e. Preparations / Jesup FINISHED b. Action confirmation based on NC data bus FINISHED c. Machine processing FINISHED d. Reperations / Setup FINISHED for Processing of target product-4 a. Preparations / Setup FINISHED b. Action confirmation based on NC data bus FINISHED c. Machine processing FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINISHED d. Inspection FINIS	a Preparations / setup	
d Inspection (A) Processing of terget product-3 a Preparations / setup	c Machine processing	
4 Processing of terget product-3 a Preparations / setup b Action confirmation based on NC data bus c Machine processing d Inspection (6) Processing of target product-4 a Preparations / setup b Action confirmation based on NC data bus c Machine processing of target product-5 a Preparations / setup d Inspection (6) Processing of target product-5 a Preparations / setup b Action confirmation based on NC data bus c Machine processing of setup b Action confirmation based on NC data bus c Machine processing of setup b Action confirmation based on NC data bus c Machine processing d inspection Processing of semi prototyping molds a prototyping mold A (PR. Gir. Spainess card Case) b prototyping mold A (PR. Gir. Spainess card Case) c prototyping mold B (Song Box) C ANCELED d prototyping mold C (Madicine Box) d prototyping mold E (CD-ROM File) (G) Contracted prototyping works from the outside	d Inspection .	
b Action confirmation based on NC data bus c Machine processing d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED b Action confirmation based on NC data bus c Mechine processing d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED d Inspection fINISHED for CANCELED d Inspection fINISHED for CANCELED d Inspection fINISHED for CANCELED for prototyping mold G for prototyping mold C for prototyping mold C for prototyping mold C for prototyping mold C for prototyping mold C for prototyping mold C for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold E for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping mold F for prototyping m		
c Machine processing d Inspection (6) Processing of target product-4 a Preparations / setup D Action confirmation based on NC data bus C Machine processing d inspection (6) Processing of target product-5 a Preparations / setup D Action confirmation based on NC data bus C Machine processing d inspection D Action confirmation based on NC data bus C Machine processing d inspection Processing of semi prototyping molds a prototyping mold A FINISHED (P. R. Gift : Business card Case) D prototyping mold B (Soap Box) C ANCELED C Procotyping mold C (Medicine Box) d prototyping mold D R Multi usase Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Fondamentals of finishing		
d Inspection (5) Processing of target product-4 a Preparations / setup b Action confirmation based on NC data bus c Mechine processing d inspection (6) Processing of target product-5 a Preparations / setup b Action confirmation based on NC data bus c Mechine processing d inspection (6) Processing of target product-5 a Preparations / setup b Action confirmation based on NC data bus c Mechine processing d inspection Processing of semi prototyping molds a prototyping mold A (P.R. Gift : Business card Case) b prototyping mold B (Soap Box) C prototyping mold C (Medicine Box) d prototyping mold C (Medicine Box) d prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and trial shot of injection moldling Fundamentals of finishing	c Machine processing	
8 Preparations / setup b Action confirmation based on NC data bus FINISHED c Machine processing d inspection (6) Processing of terget product-5 6 Preparations / setup b Action confirmation based on NC data bus c Machine processing d inspection Processing of semi prototyping molds a prototyping rold A (P.R. Gift : Business card Case) b prototyping mold B (Soap Box) C prototyping mold B (Soap Box) C prototyping mold C (Medicine Box) d prototyping mold D (Multi usage Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and trial shot of lucetion molding Fundamentals of finishing		
b Action confirmation based on NC data bus c Machine processing d inspection (6) Processing of target product-5 a Preparations / setup b Action confirmation based on NC data bus c Machine processing d inspection Processing of semi prototyping molds a prototyping mold A (P.R. Gift : Business card Case) b prototyping mold B (Soap Box) c prototyping mold C (Medicine Box) d prototyping mold D (Medicine Box) d prototyping mold D (Multi usase Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and triel shot of injection molding Fundamentals of finishing		EINICHED
d inspection d inspection (6) Processing of target product-5 a Preparations / setup b Action confirmation based on NC data bus c Machine processing d inspection Processing of semi prototyping molds a prototyping mold A (P.R. Gift: Business card Case) b prototyping mold B (Soap Box) c prototyping mold C (Medicine Box) d prototyping mold D f prototyping mold D f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and triel shot of injection molding Fundamentals of finishing	b Action confirmation based on NC data bus	
(6) Processing of terget product-5 E Preparations / setup b Action confirmation based on NC data bus c Machine processing d inspection Processing of semi prototyping molds a prototyping mold A (P.R. Gift : Business card Case) b prototyping mold B (Soap Box) C prototyping mold C (Medicine Box) d prototyping mold D f prototyping mold D f Prototyping mold D f Prototyping mold E (Multi usage Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and trial shot of injection moldling Fundamentals of finishing	c Machine processing	
a Preparations / setup b Action confirmation based on NC data bus c Machine processing d inspection Processing of semi prototyping molds a prototyping mold A (P.R. Gift: Business card Case) b prototyping mold B (Soap Box) c prototyping mold C (Medicine Box) d prototyping mold D (Multi usage Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and trial shot of injection molding Fundamentals of finishing		
b Action confirmation based on NC data bus c Mechine processing d inspection Processing of semi prototyping molds a prototyping mold A (P.R. Gift : Business card Case) b prototyping mold B (Soap Box) c prototyping mold C (Medicine Box) d prototyping mold D (Multi usage Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and triel shot of injection molding Fundamentals of finishing	8 Preparations / setup	
d inspection Processing of semi prototyping molds a prototyping mold A (P.R. Gift: Business card Case) b prototyping mold B (Soap Box) c prototyping mold C (Medicine Box) d prototyping mold D (Multi usage Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and triel shot of in/ection molding Fundamentals of fin/ection molding	b Action confirmation based on NC data bus	
Processing of semi prototyping molds a prototyping mold A (P,R. Gift: Business card Case) b prototyping mold B (Soap Box) c prototyping mold C (Medicine Box) d prototyping mold D (Multi usage Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and trial shot of infection molding Fundamentals of finishing		
a prototyping mold A (P.R. Gift : Business card Case) b prototyping mold B (Soap Box) c prototyping mold C (Medicine Box) d prototyping mold D (Multi usage Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and triel shot of infection molding Fundamentals of finishing	u inspection	
a prototyping mold A (P.R. Gift : Business card Case) b prototyping mold B (Soap Box) c prototyping mold C (Medicine Box) d prototyping mold D (Multi usage Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and triel shot of infection molding Fundamentals of finishing	Processing of semi prototyping molds	
(P.R. Gift : Business card Case) b prototyping moid B (Soap Box) c prototyping moid C (Medicine Box) d prototyping mold D (Multi usage Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and trial shot of infection molding Fundamentals of finishing	a prototyping mold A	FINISHED
(Soap Box) c prototyping mold C (Medicine Box) d prototyping mold D (Multi usage Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and triel shot of infection molding Fundamentals of finishing		
c prototyping mold C (Medicine Box) d prototyping mold D (Multi usage Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and trial shot of infection molding Fundamentals of finishing		CANCELED
(Medicine Box) d prototyping mold D (Multi usage Mold) f prototyping sold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and trial shot of infection molding Fundamentals of finishing	c prototyping mold C	OMNOCELEU
(Multi usage Mold) f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and trial shot of injection molding Fundamentals of finishing	(Medicine Box)	
f prototyping mold E (CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and trial shot of injection molding Fundamentals of finishing		FINISHED
(CD-ROM File) (3) Contracted prototyping works from the outside Mold assembling, maintenance and trial shot of infection molding Fundamentals of finishing		
Mold assembling, maintenance and triel shot of injection molding Fundamentals of finishing		
Mold assembling, maintenance and triel shot of injection molding Fundamentals of finishing	(3) Contracted procedures	
Mold assembling, maintenance and trial shot of injection molding Fundamentals of finishing	car Contracted prototyping works from the outside	
trial shot of injection molding Fundamentals of finishing	Mold assembling, maintenance and	
	trial shot of injection molding	
(1) Consider the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the cont		
(1) Lapping process FINISHED (2) Lapping standard of cavity side FINISHED		FINISHED
(2) Lepping standard of cavity side FINISHED (3) Lapping standard of core side FINISHED	· · · · · · · · · · · · · · · · · · ·	
FINISITEU		I INIO ILU

AD

Soule

Annex 17 Annual Technical Cooperation Program (ATCP)*2004 Hands-on Training Dispatching a S/E C/P Training in Japan Training curse Advisory service Calendar Year 2003 Technology Transfer Item 12 10 11 lapanese Fiscal Year Fundamentals of mold assembly Mold assembling FINISHED a Comparison of mold base with mold assembling drawing FINISHED b Checking of standard parts and assembling components Trial shot process a Mold fitting procedure FINISHED FINISHED (a)Toggle mold clamp (b)Direct pressure mold clamp FINISHED FINISHED b Material replacement procedure c Material drying conditions (temperature, time) FINISHED d Conversion of molding conditions (shot volume, in ection pressure) FINISHED e Setting mold temperature by type of resin and cooling circuit FINISHED Process of disassembling and (3) assembling of standard parts FINISHED (4) Trial assembling Trial shot of mold FINISHED Preparation and check of mold specification (Comparison of mold dimensions with molding machine specification) FINISHED Setting conditions according to sample data Moving check on mold (3) attached to injection machine FINISHED ollow-up a Setting of mold open stroke FINISHED FINISHED b Setting of ejector stroke c Confirmation of slide core action ollow-up Follow-up Assembling and trial shot of target (4) product-1 and 2 (Provided mold) FINISHED FINISHED FINISHED Sample molding b Rust prevention Mold inspection (5) Assembling and trial shot of target product-3 (Provided mold) FINISHED FINISHED FINISHED Sample molding b Rust prevention c Mold inspection Assembling and trial shot of target (6) product-4 (Provided mold) FINISHED FINISHED FINISHED a Sample molding b Rust prevention c Mold inspection Assembling and trial shot of target product-5 (Provided mold) FINISHED FINISHED FINISHED a Sample molding b Rust prevention b Mold inspection INISHED (8) Moid evaluation Product evaluation Follow-up FINISHED a Appearance (visual check) INISHED b Dimension measurement of molded product Follow∽up Follow-up FINISHED c Weight measurement of molded product Assembling and trial shot of target product manufactured under the project Assembling and trial shot of target FINISHED (Evaluation of mold and Products) Assembling and trial shot of target (2) FINISHED product-2 (Evaluation of mold and Products) (3) Assembling and trial shot of target FINISHED product-3 (Evaluation of mold and Products) (4) Assembling and trial shot of target FINISHED (Evaluation of mold and Products) Assembling and trial shot of target (5) FINISHED product-5 (Evaluation of mold and Products) Assembling and trial shot of semi prototyping molds a prototyping mold A FINISHED (P.R. Gift : Business card Case) b prototyping moid B CANCELED (Soap Box) prototyping mold C FINISHED (Medicine Box) d prototyping mold D FINISHED (Multi usage Mold) f prototyping mold E (CD-ROM File) (2) Contracted prototyping works and evaluation from the outside

A

Annex 17 Annual Technical Cooperation Program (ATCP)*2004

	Implemented Hands								Dispetching a S/E				
	C/P Training in Japan Advisory service							y service	Training curse				
Calendar Year	2004												
Technology Transfer Item	2003							2004					
/ Japanese Fiscal Year	+	2	3	4	. 5	6	7	8	9	10	11	12	
3.6 Regular check and maintenance of		1	 	†			 		 			 	
machinery		1		 	1	·	1	-			 	1	
(1) Inspection of machinery startup	Follov	/=up		<u> </u>	· · · · · ·	1							
(2) Monthly regular inspections	Follow-up		1.		1 -					i			
(3) Annual inspections	Follov	/-up			l.		<u> </u>					1	
		<u> </u>						II					
3.7 Solving problems in molding			<u> </u>						<u></u> .				
(1) Problems stemming from the mold		<u> </u>					<u> </u>						
a investigation causes	FINIS		<u> </u>										
b Countermeasures	FINIS										1		
c Prototype confirmation	FINIS	1ED									Ĺ		
(2) Problems stemming from molding			<u> </u>		L	1		l					
conditions		1							l			f	
a investigation causes	FINIS												
b Countermeasures	FINIS											'	
c Prototype confirmation	FINIS	IED											
. , ,	-	ļ	ļ	<u> </u>									
4 Monitoring and necessary feedback	+	 	 -	ļ				 					
(Supplementary Technology Transfer)	1			*****	441,0	****				-,-,-,-,-			
	1					-		-					
5 Pilot Training Course	Wilder Att	9 t 9 y 3 wyn-	Constitute.	The Vindage's	authorn	e grading	Specific	经统经	医组织 4.	的基础。			
6 Advisory Service													
		Ì			· · · · · · · · · · · · · · · · · · ·								



Same