

Annex 9: MIDC Foundry Activities (Annual Self-Income of Foundry Shop)

MIDC FOUNDRY ACTIVITIES

31-Dec-01

NO	ACTIVITIES	NR OF ACT	VALUE
1	Training .. Foundry Technology .. Melting .. Pattern	3	132,512,000
1	Testing .. Chemical composition	1	1,600,000
2	Product manufacturing .. Ingot mould .. Bearing housing .. Spare parts .. ARM .. Pattern gear cast .. Pattern & casting .. Gear cast .. Front case .. CAM .. Pattern & casting fixture .. Casting from case	11	169,185,200
		15	303,297,200

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MIDC FOUNDRY ACTIVITIES
 2000
 31 Desember 2000

NO	ACTIVITIES	NR OF ACT	VALUE
1	Training Pattern Quality Control	2	72,790,000
1	Testing Composition Verification of sand testing	2	550,000
2	Product manufacturing Pattern of bearing housing Spareparts Gear Al Component Jack lever	5	8,850,000
		9	82,190,000




MIDC FOUNDRY ACTIVITIES
1999/2000

31 Maret 2000

NO	ACTIVITIES	NR OF ACT	VALUE
1	Supervision & Consultation Technical Assistance	1	154,000,000
6	Product manufacturing Laboratory practicum Aero model Pattern bearing housing	3	22,170,000
		4	176,170,000

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LAPORAN JASA PELAYANAN TEKNIS
SEKSI PENGECORAN LOGAM
PER 31 JULI 2001

Annex 10: Record of Technical Services by Foundry Shop

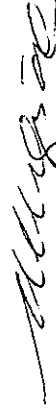
No.	Jenis Pekerjaan	Nama Perusahaan	No. SPK	Nilai SPK/ Kontrak	Pembayaran/ Angsuran	Pengeluaran	Saldo	
							SPK/Kontrak	Penerimaan
1	Cor Bearing	A	17/L. 4/2001	500,000	500,000	-	-	500,000
2	Jack Lever	B	37/L. 4/2000	1,200,000	-	-	1,200,000	-
3	Stang ARIM	C	25/L. 4/2001	2,000,000	-	-	2,000,000	-
4	Ingot Mould	D	10/L. 4/2001	15,000,000	15,000,000	14,286,375	-	713,625
5	Cor Komponen Kendaraan	E	24/L. 4/2001	558,600,000	22,500,000	12,124,560	-	10,375,440
6	Pembuat Patren Gear	F	37/L. 4/2001	13,765,400	-	-	13,765,400	-
7	Pengecoran Impellin	G	33/L. 4/2001	2,400,000	-	-	2,400,000	-
8	Pelatihan Bidang Cor	H	18/L. 4/2001	81,400,000	81,400,000	61,677,550	-	19,722,450
9	Pelatihan IKM Teknik Peleburan	I	19/L. 4/2001	20,504,000	-	5,846,250	-	(5,846,250)
10	Pelatihan IKM Pembuatan Cetakan Inti	J	20/L. 4/2001	30,608,000	-	7,046,650	-	(7,046,650)
11	Pelatihan IKM/PPC	K	21/L. 4/2001	20,504,000	-	5,846,250	-	(5,846,250)
				746,481,400	119,400,000	106,827,635	627,081,400	12,572,365

FILE:LAP-COR/DIK'S

CV. AKUR Ikatan Pengadaan Bahan
1. CV. Himapersa Rp. 18.315.000,-
2. CV. Puragabaya Rp. 48.083.750,-

Bandung, 31 Juli 2001

A.n. Balai Besar
Pengembangan Industri Logam & Mesin
Kepala Bagian Tata Usaha



Dis. HADI NUGROHO, MM
NIP. 090007355

PERSONNEL ALLOCATION

Director	1
Administration	74
Research. Development	8
Product. Development	30
Process. Development	73
I) Total Civil Servant	186
II) Non Civil Servant (Honorarist/Project Personnel)	17
Total	203

Non Civil Servant 17 Persons

S1 Mechanical Engineering	4
S1 Metallurgy Engineering	1
S1 Non Engineering	3
D3 Electro	1
STM (Technical High School/Machinery)	2
SMA (Senior High School)	2
SD (Elementary School)	4
Total	17

ANNEX 12: LIST OF JAPANESE EXPERTS DISPATCHED (1/2)
 JICA/MIDC Project on Supporting Industries Development for Casting Technology in Indonesia

as of Dec. 31, 2001

ID No.	Name	Title	Assignment	M/M	Remarks
L01	Hidehito YASUI	Chief Advisor	Apr. 05, 99 – Apr. 04, 01	24.0	Terminated
L02	Toru HOMMA	Coordinator and SME Development	Apr. 05, 99 – Apr. 04, 02	32.9	In Service
L03	Ryozo HASHIDA	Casting Technology Management	Apr. 15, 99 – Apr. 14, 02	32.5	In Service
L04	Tsuneto NONAKA	Pattern Making	Sep. 01, 99 – Aug. 31, 01	24.0	Terminated
L05	Teiji SUZUKI	Moulding	Feb. 01, 00 – Jan. 31, 02	23.0	In Service
L06	Jitsuo SAKAKIBARA	Chief Advisor	Apr. 01, 01 – Mar. 31, 03	9.0	In Service
			(Long-term, Total M/M)	145.4	(Avg. 4.41/M th)
S01	Toshio YAMAGATA	Layout of Machinery	Apr. 15 – May 12, 99	0.9	
S02	Kenichi YAMADA	Facilities Design (Moulding System)	Apr. 18 – Apr. 25, 99	0.2	
S03	Katsushige ISHIKURO	Facilities Design (Moulding System)	Apr. 18 – Apr. 25, 99	0.2	
S04	Katsuki YOROIZUKA	Facilities Design (Moulding System)	Apr. 18 – Apr. 25, 99	0.2	
S05	Seichi SHIRAIISHI	Machinery Installation and Facilities Maintenance	Nov. 01 – Dec. 23, 99	1.8	
S06	Isao NATORI	Machinery Installation (Organic Sand Moulding System)	Nov. 14 – Dec. 23, 99	1.3	
S07	Yoshihiko UCHIYAMA	Machinery Installation (Organic Sand Moulding System)	Nov. 14 – Dec. 23, 99	1.3	
S08	Toyoyuki KOBAYASHI	Machinery Installation (Moulding System)	Dec. 01 – Dec. 23, 99	0.8	
S09	Toyoyuki KOBAYASHI	Machinery Installation (Moulding System)	Jan. 23 – Mar. 31, 00	2.3	
S10	Akihiro KATO	Sand Preparation	Feb. 01 – Mar. 31, 00	2.0	
S11	Seichi SHIRAIISHI	Machinery Installation and Facilities Maintenance	Feb. 03 – Mar. 31, 00	1.9	
S12	Isao NATORI	Machinery Installation (Organic Sand Moulding System)	Feb. 06 – Feb. 25, 00	0.7	
S13	Yoshihiko UCHIYAMA	Machinery Installation (Organic Sand Moulding System)	Feb. 06 – Feb. 25, 00	0.7	
S14	Minoru YOSHIDA	Machinery Installation (Organic Sand Moulding System)	Feb. 06 – Feb. 25, 00	0.7	
S15	Eisuke NIYAMA	Foundry Technology (Seminar Presentation)	Feb. 27 – Mar. 04, 00	0.2	
S16	Yasuoki ISHIHARA	Foundry Technology (Seminar Presentation)	Feb. 27 – Mar. 04, 00	0.2	
S17	Katsuki TAKAHASHI	Machinery Installation (Moulding System)	Mar. 05 – Mar. 31, 00	0.9	
S18	Fumio OBATA	Ductile Cast Iron Melting	Apr. 11 – Jul. 29, 00	3.6	
S19	Tetsuya KIBE	Machine Moulding	Apr. 11 – Sep. 22, 00	5.4	
S20	Seichi SHIRAIISHI	Machinery Maintenance	May 14 – Jul. 29, 00	2.5	
S21	Toyoyuki KOBAYASHI	Machinery Operation (Moulding System)	May 14 – Jun. 8, 00	0.8	
S22	Nobuhiro KONDO	Casting Technology (Seminar Presentation)	Jul. 20 – Jul. 29, 00	0.3	
S23	Hiroshi NAGAFUCHI	Casting Design Drawing	Sep. 24 – Dec. 15, 00	2.7	
S24	Fumio OBATA	Ductile Cast Iron Melting	Jan. 14 – Apr. 20, 01	3.2	
S25	Seichi SHIRAIISHI	Facilities Maintenance	Jan. 14 – Apr. 20, 01	3.2	
S26	Noboru YAMANAKA	Casting Technology (Seminar Presentation)	Mar. 18 – Mar. 31, 01	0.4	

JICA/MIDC Project on Supporting Industries Development for Casting Technology in Indonesia

ANNEX 12: LIST OF JAPANESE EXPERTS DISPATCHED (2/2)
 JICA/MIDC Project on Supporting Industries Development for Casting Technology in Indonesia

					as of Dec. 31, 2001	
S27	2000-S10	Masatake ICHIKI	Casting Technology (Seminar Presentation)	Mar. 18 – Mar. 24, 01		0.2
S28	2000-S11	Chuichi SAITO	Dimensional Inspection	Mar.26 – Jun. 29, 01		3.1
S29	2001-S01	Shigeru TOYOSHIMA	Non Destructive Testing	May 8 – Aug. 8, 01		3.0
S30	2001-S02	Shigeki KAJIWARA	Moulding Sand Control / Machine Moulding	Jun. 6 – Aug. 30, 01		2.8
S31	2001-S03	Eizo MAEDA	Technical Extension Consultation (Defect Analysis and Countermeasures)	Aug. 12 – Sep. 27, 2001		1.5
S32	2001-S04	Seiichi SHIRAIISHI	Facilities Maintenance	Aug. 26 – Nov. 2, 2001		2.2
S33	2001-S05	Yoshinori KOBAYASHI	Melting	Aug. 26 – Nov. 24, 2001		2.9
S34	2001-S06	Hiroshi NAGAFUCHI	Casting Design	Aug. 26 – Dec. 7, 2001		3.4
				(Short-term, Total M/M)		57.5 (Avg. 1.74/M'th)
Others						
C01	1999-C01	Naofumi HATTORI	Electric Consultant (Management Consultation I)	Apr.25 – May 14, 99		0.7
C02	1999-C02	Naofumi HATTORI	Electric Consultant (Management Consultation II-1)	Aug.22 – Sep.28, 99		1.2
C03	1999-C03	Naofumi HATTORI	Electric Consultant (Management Consultation II-2)	Nov.16 – Dec.15, 99		1.0
				(Consultant, Total M/M)		2.9 (Avg.0.09M'th)

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ANNEX 13: LIST OF TRAINING FOR MIDC COUNTERPART PERSONNEL (C/P) IN JAPAN

JICA/MIDC Project on Supporting Industries Development for Casting Technology in Indonesia

					As of December 31, 2001	
ID No.	Name	Training Subject	Position in MIDC	Assignment	M/M	Remarks
01	J. Suyono	Project Management	Head, MIDC	Mar. 07 – Mar. 20, 99	0.5	
02	Abdurahim	Project Management	Head, Research Division (at the time)	Mar. 07 – Mar. 20, 99	0.5	
03	Achmad	Casting Design	Staff, Engineering Group, Foundry Section	Jun. 27 – Oct. 02, 99	3.2	
04	Rahmat	Wood Pattern Making	Staff, Pattern Making Group, Foundry Section	Jun. 27 – Oct. 02, 99	3.2	
05	Juanda	Moulding	Staff, Moulding Group, Foundry Section	Jun. 27 – Oct. 02, 99	3.2	
06	Agus Hermawan	Casting Inspection Technique	Staff, Engineering Group, Foundry Section	Aug. 24 – Nov. 24, 00	3.0	
07	Sudarman	Moulding Sand Quality Control	Staff, Foundry Section	Aug. 24 – Oct. 31, 00	2.2	
08	Roslina	Chemical and Metallurgical Quality Control	Staff, Foundry Section	Aug. 24 – Oct. 31, 00	2.2	
09	Purbaja Adi Putra	Casting Design	Staff, Engineering Group, Foundry Section	Mar. 10 – Jun. 16, 01	3.2	
10	Suharna	Facilities Maintenance	Staff, Foundry Section	May 13 – Aug. 01, 01 (Plan – Aug. 11, 01)	2.6 (2.9)	
11	Boimin	Moulding	Staff, Moulding Group, Foundry Section	Aug. 26 – Nov. 23, 01	2.9	
12	Dedi Supriatna	Pattern Making	Staff, Pattern Making Group, Foundry Section	Aug. 26 – Nov. 23, 01	2.9	
				(Total M/M)	29.6	

MACHINERY AND EQUIPMENT PROVIDED BY JICA

for the Project on Supporting Industries Development for Casting Technology

No.	Name of Equipment	Maker	Supplier	Type / Specification	Qty.	to be kept	Value(¥)	Value(Rp./\$)	Delivered	Remarks
J	[JICA Equipment procured in Japan]									
<J01>	Procurement in Japan in FY1998									
J0101	HICASS Flow & Solidification Simulation System	Hitachi Kwowa Eng.	Hitachi Kwowa Eng.	Flow-T for PC, FLORA 350, Display, Tablet, Printer	1	JICA Room	194,698,250		Jun-99	
J0102	Double Squeeze High Pressure Green Sand Moulding System (KDM-5)	Kanamori Sinto	Hato Bussan	KDM-5, Squeeze Pressure 4-10 kg/cm ²	1	Moulding	139,650,000		Nov-99	
J0102-01	1. Automatic Moulding Machine (KDM-5)									
	2) Upper Portion for Moulding Machine									
	3) Ladder & Piping for Moulding Machine									
	4) Lower Portion for Moulding Machine									
	5) Squeeze Cylinder for Moulding machine									
	6) Oil Compressor (Hydraulic Unit)									
	7) Mineral Oil for Oil Compressor									
J0102-02	2. Moulding Line									
	1) Flask Pushing Device									
	2) Mould Turn-over Device									
	3) Sand Cutter									
	4) Sprue Cutter									
	5) Mould Closer									
	6) Traversor (Truck, Rail and Support)									
	7) Roller Conveyors (RU)									
	8) Roller Conveyors (RM)									
	9) Castings Take-out Device									
	10) Platform & Ladder									
J0102-03	3. Control Panel									
	1) Power Board									
	2) Operating Board									
J0102-04	4. Accessories									
	1) Carrier Plates									
	2) Metallic Pattern Sprue									
	3) Pattern Plates									
	4) Liners									
	5) Test Pattern									
	6) Iron Flasks									
	7) Pins & Bushes for iron Flasks									
	8) Carriages									
	9) Weights									

as of December 14, 2001

MACHINERY AND EQUIPMENT PROVIDED BY JICA
for the Project on Supporting Industries Development for Casting Technology

as of December 14, 2001

No.	Name of Equipment	Maker	Supplier	Type / Specification	Qty. to be kept	Value(¥)	Value(Rp./\$)	Delivered	Remarks
	6) Sand Reclaimer								
	7) Fluidized Sand Separator								
	8) Bucket Elevator No.3 with Belt								
	9) Belt Conveyor No.1								
	10) Reclaimed Sand Bin No.1								
	11) Belt Conveyor No.2 with Shooting Duct & Hangers								
J0103-04	12) Platforms, Legs and Braces								
J0103-05	4. Control Panels								
	5. Dust Collector								
	1) Main Body (Roof, Hopper, Legs, Braces, Monkey Step, Suction Pipe, Connection Pipe, Accessories)								
	2) Fan with Structure, Silencer and Bend								
	3) Control Panel								
J0103-06	6. Wooden Pattern								
	1) Test Piece								
	2) Model								
	3) Core Box								
J0103-07	7. Compression Strength Tester								
J0103-08	8. Raw Materials (Sand)								
J0103-09	9. Tools and Sub-materials								
	1) Tools and Sub-materials (Balancers, Vessels, Vent-holes & Cleaner, Drills, Electric Drill, Electric Thunder, Standard Tool-set, Hammer, Wooden Hammer, Vises, Gassing Plates & Rubber, Files & Sand Paper, Hand Saw, Scales, Bond, Separator, Stamp/Scrapers/Spatulas)								
	2) Working Tables								
J0103-10	10. Wiring, Piping and Accessories								
	1) Wire, Wiring Pipes, Wiring Racks, Supporting Pieces								
	2) Air Pipes, Hoses, Supporting Pieces, Pneumatic Control Parts								
J0103-11	11. Attached Facilities (Peripherals)								
	1) Duct, Brackets, Supporting Poles								
	2) Landings, Handrails, Steps, Monkey Steps,								
	3) Chain Hoists with Structures and Rails								
	4) Paint and Thinner								
J0103-12	12. Resin for α/β (Ester, Resin)							(Feb-00)	

MACHINERY AND EQUIPMENT PROVIDED BY JICA

for the Project on Supporting Industries Development for Casting Technology

No.	Name of Equipment	Maker	Supplier	Type / Specification	Qty.	to be kept	Value(¥)	Value(Rp./\$)	Delivered	Remarks
J0103-13	13. Resin for α/β (Methyl Formate)									
<J11>	Procurement in Japan in FY1999 (Phase 1)									
<J11>	Pattern Making Equipment									
J1101	1. Polishing Machine Buff Type	Fujikyu	Sirius	TF Type						
J1102	2. Wood Trimmer with Legs	Fujikyu	Sirius	T-21 Delux	1	1 Pattern	220,500			
J1103	3. Bites for Wood Lathe Machine	Fujikyu	Sirius		1	Damaged on Delivery	420,000			
J1104	4. Portable Band Saw	Ryowa	Sirius		1	set	384,930			
J1105	5. Automatic Single Surface Planer	Tayo	Sirius	BSW-200, with Welding Machine	1	1 Pattern	582,750			May-00
J1106	6. Wood Vice	Teranishi	Sirius	PQ-500	1	Damaged on Delivery	1,869,000			
J1107	7. Pattern Making Tools	Fujikyu	Sirius		5	Pattern	131,250			
					1	set	255,570			
<J12>	Procurement in Japan in FY1999 (Phase 2)									
<J12>	Testing and Inspection Equipment									
J1201	1. Ultrasonic FCD Spheroidization Analyzer	KusakaRareMetal	Ogawa Seiki	ND-3			8,213,500			
J1202	2. Immersion Pyrometer	Chino	TokyoDenkiSangyo	ND511-RNN, 1700C, with 200 tips	1	Melting	4,935,000			
J1203	3. CE Meter	Nakayama	Hato Bussan	QC Recorder Mini	1	Melting	273,000			
J1204	4. Electronic Mould Strangth Meter	Hisagoya/Gf	Hato Bussan	PPF, 0.2-34.5 N/cm2	1	Melting	1,619,100			Mar-00
J1205	5. Measuring Tools			Tilting Rotary Table, Gauges, Calipers, Cranving Kit etc.	1	Moulding	302,400			
					1	set	1,084,000			Jan-00
<J13>	Procurement in Japan in FY1999 (Phase 3)									
J1301	Used Moulding Sand	Hisagoya		Hitachi Metals Moka Works			190,000			
<J21>	Procurement in Japan in FY2000 (Phase 1)									
J2101	Immersion Pyrometer		Tec International	for Chino ND511-RNN			79,800			
J2101-01	Attachments & Consumables						79,800			Aug-00
J2101-02	1. Portable Holder				1	Melting				
J2101-03	2. Contact Block				5					
					100					
<J22>	Procurement in Japan in FY2000 (Phase 2)									
<J22>	Pattern Making Equipment (Re-procured)									
J2201	1. Wood Trimmer with Legs	Fujikyu	Sirius	T-21 Delux			2,289,000			Sep-00
J2202	2. Automatic Single Surface Planer	Tayo	Sirius	PQ-500			420,000			
							1,869,000			

as of December 14, 2001

MACHINERY AND EQUIPMENT PROVIDED BY JICA for the Project on Supporting Industries Development for Casting Technology

as of December 14, 2001

No.	Name of Equipment	Maker	Supplier	Type / Specification	Qty.	to be kept	Value(¥)	Value(Rp./\$)	Delivered	Remarks
<J23>	Procurement in Japan in FY2000 (Phase 3)						4,589,970			
J2301	System Back Up CD-ROM	Hitachi Kwowa Eng.	Hitachi Kwowa Eng.	HICASS, PC-UNIX, X-window	1	JICA Room	61,425			
J2302	Materials for α / β Organic Sand Moulding System	Koei	Koei							
J2302-01	1. β Resin	Koei	Koei	BSR-114	40kg	Moulding	10,920		Dec-00	
J2302-02	2. β Hardener	Koei	Koei	BSh-10	20kg	Moulding	21,525			
J2303	Spare Parts for D/S Green Sand Moulding System	Kanamori Sinto	Hato Bussan							
	1. Parts for Moulding Machine Squeeze Head	Kanamori Sinto	Hato Bussan	Liner, Rail etc.		Moulding				
	2. Parts for Moulding Machine Piping	Kanamori Sinto	Hato Bussan	Oil Hose, Joint etc.		Moulding				
	3. Parts for Career Plate	Kanamori Sinto	Hato Bussan	Liner, Pin, Bush etc.		Moulding				
	4. Electronic Sensor	Kanamori Sinto	Hato Bussan	Limit Switch, Sensor etc.		Moulding	3,362,100			
	5. Electric Parts	Kanamori Sinto	Hato Bussan	Inverter, CPU, Breaker etc.		Moulding				
	6. Parts for Hydraulic Oil Unit	Kanamori Sinto	Hato Bussan	Solenoid Valve, Controller etc.		Moulding				
J2304	Spare Parts for α / β Organic Sand Moulding System	Koei	Koei							
	1. Heat Resisting Belt (with Belt)	Koei	Koei	For Bucket Elevator No1		Moulding			Apr-01	
	2. Roler Assy	Koei	Koei	For Sand Reclaimer		Moulding				
	3. Blade for Mixing	Koei	Koei	For Continuous Sand Mixer		Moulding				
	4. Pneumatic Actuated Ball Valve (3position)	Koei	Koei	For Continuous Sand Mixer		Moulding	1,134,000			
	5. Gear Pump	Koei	Koei	For Binder Supply Unit		Moulding				
	6. Bag Filter	Koei	Koei	For Dust Collector		Moulding				
	7. Electric Parts	Koei	Koei	Breaker, Power Unit etc.		Moulding				
<J31>	Procurement in Japan in FY2001 (Phase 1)						51,398			
J3101	Adjusting Tools for Automatic Surface Planer		Toyo Keiryoki	Magnet Block, Wrench, Blade etc.		Pattern	51,398		Aug-01	
<J32>	Procurement in Japan in FY2001 (Phase 2)									
J3201	Materials for α / β Organic Sand Moulding System	Koei	Koei							
J3201-01	1. β Resin	Koei	Koei	BSR-114	40kg	Moulding			Dec-01	
J3201-02	2. β Hardener	Koei	Koei	BSh-10	20kg	Moulding				
	Procurement in Japan in FY1998						194,696,250			
	Procurement in Japan in FY1999						12,267,500			
	Procurement in Japan in FY2000						6,958,770			
	Procurement in Japan in FY2001						51,398			
	Total (Procured in Japan)						213,973,918	(=US\$1,783,116)		
								(=Rp.16,460 mil.)		

MACHINERY AND EQUIPMENT PROVIDED BY JICA for the Project on Supporting Industries Development for Casting Technology

No.	Name of Equipment	Maker	Supplier	Type / Specification	Qty.	to be kept	Value(¥)	Value(Rp./\$)	Delivered	Remarks
[JICA Equipment procured in Indonesia]										
<L11> Local Procurement in FY1999 (Phase 1)										
L1101	1. High Frequency Induction Furnace	Inductotherm	Makmur Meta	500kg-200kg, 300kW, 1000Hz	1	Melting	36,651,920	US\$249,000	Mar-00	
L1101-01	1) Power and Control System						28,137,000			
L1101-02	2) Auto-transformer (345kVA, 380/460 V)									
L1101-03	3) 200kg Hydraulic Tilting Furnace									
L1101-04	4) 500kg Hydraulic Tilting Furnace									
L1101-05	5) Prefabricated Furnace Busbar									
L1101-06	6) Water Cooled Leads									
L1101-07	7) Hydraulic Module / Melter's Console									
L1101-08	8) 200kg Refractory Lining with Former									
L1101-09	9) 500kg Refractory Lining with Former									
L1101-10	10) Vibrator and Hand Ramming Tools									
L1101-11	11) Closed Circuit Cooling System									
L1101-12	12) Replacement 200kg Furnace Coil									
L1101-13	13) Replacement 500kg Furnace Coil									
L1101-14	14) Spare Parts									
L1102	2. Overhead Crane	Verlinde	Tira Austenite	2.0t, Pendant, Anti-Collision	1	Foundry	2,129,383	US\$18,844.1	Feb-00	
L1103	3. Forklift	Komatsu	United Tractors	FD25JC-12, 2.5t	1	Foundry	2,486,000	US\$22,000	Oct-99	
L1104	4. Vehicle	Toyota	Antusiapipta	Kijang LGX, 1800cc	1	Machining	1,802,350	US\$15,950	Nov-99	
L1105	5. Photocopy Machine	Canon	Samafitro	NP6850, with Sorter B1	1	JICA Room	1,402,350	Rp.93,490,000	Oct-99	
L1106	6. Computer Peripherals	HP etc.	Harrisma	Printer, Scanner, Hubs etc.	1 set	JICA Room	694,837	US\$6,149	Oct-99	
<L12> Local Procurement in FY1999 (Phase 2)										
L1201	1. Dust Collector (for Sand Preparation System)	Silika Foundry	Silika Foundry	50m3/min	2	Moulding	9,659,170			
L1202	2. Shot Blast Machine (with Dust Collector)	Nicchu	Antusiapipta	LNF-1, Bag Filter NBF-1	1	Melting	1,072,500	Rp.71,500,000	Mar-00	
L1203	3. Induction Furnace Coil	Inductotherm	Makmur Meta	for Elphiac 80kg	1	Melting	7,014,550	US\$66,175	Mar-00	
L1204	4. Swing Grinder (with Dust Collector / Frame)	Alcorindo	Alcorindo	for Cutting, Dia. 400mm	1	Melting	489,720	US\$4,620	Jul-00	
							1,082,400	Rp.72,160,000	Mar-00	
<L13> Local Procurement in FY1999 (Phase 3)										
L1301	1. Ladle	Alcorindo	Alcorindo	Pouring Ladle (500kg, 200kg), Ductile Treatment Ladle (500kg, 200kg)	4	Melting	10,432,242			
L1302	2. Pig Iron for Cast Iron		Makmur Meta	3300kg for FC, 800kg for FCD	1 set	Melting			Mar-00	
L1303	3. Ferro Alloy		Makmur Meta	Fe-Si, Fe-Mn, Fe-Mo, HC Fe-Cr	1 set	Melting	588,225	Rp.39,215,000	Mar-00	
L1304	4. Ferro Nickel		Makmur Meta	500kg	1 set	Melting			Mar-00	
L1305	5. Additives for Molten Metal		Makmur Meta	Innoculant, Fe-Si-Mg, Rescarbuzor	1 set	Melting			Mar-00	

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MACHINERY AND EQUIPMENT PROVIDED BY JICA for the Project on Supporting Industries Development for Casting Technology

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No.	Name of Equipment	Maker	Supplier	Type / Specification	Qty.	to be kept	Value(¥)	Value(Rp./\$)	Delivered	Remarks
L1306	6. Consumable Tip		Makmur Meta	Tem Tip, Tec Tip (1000pcs each)	1 set	Melting			Mar-00	
L1307	7. Isothermic Material		Makmur Meta	Thermex 200H(Korea), 250kg	1 set	Melting	3,874,860		Mar-00	
L1308	8. Slag Remover		Makmur Meta	Slax (Japan), 1000kg	1 set	Melting			Mar-00	
L1309	9. Alumina Lining		Makmur Meta	ex Finland, 3500kg	1 set	Melting			Mar-00	
L1310	10. Silica Lining		Makmur Meta	ex Finland, 3500kg	1 set	Melting			Mar-00	
L1311	11. Plastic Refractory		Makmur Meta	ex Indonesia, 750kg	1 set	Melting			Mar-00	
L1312	12. Mica Sheet		Makmur Meta	Ceramic Fiber Paper (UK), 20m ²	1 set	Melting			Mar-00	
L1313	13. Steel Shot		Makmur Meta	SSI S330 (Korea), 500kg	1 set	Melting			Mar-00	
	<Material for Moulding>									
L1314	14. Silica Sand		Makmur Meta	SM5-SM6 (Local), 15000kg	1 set	Moulding			Mar-00	
L1315	15. Additives (Bentonite, Sea Coal)		Makmur Meta	Sodium Bentonite (Geko) 1500kg, Sea Coal (Ecosil, Korea) 150kg	1 set	Moulding			Mar-00	
	<Air Grinder>									
L1316	16. Air Grinder for Rough Grinding	Atlascopco	Atlascopco	Straight Grinders, Couplings etc.	1 set	Melting	1,425,882		Mar-00	
L1317	17. Air Grinder for Finishing	Atlascopco	Atlascopco	Die Grinders, Vertical Grinders, Angle Grinders	1 set	Melting			Mar-00	
L1318	18. Surface Table	Ostenco	Ostenco	1200 x 1200 x 700, FC250	2	Pattern	990,000	Rp.66,000,000	May-00	
L1319	19. Magnetic Particle Testing Machine	Tiede	Mitra Global	Magnetizing Device, Cables, Electrodes, Handles, UV Light, Transformer, Magnetic Particle, Darkened Room	1 set	Engineering	1,622,764	US\$15,603.5	Mar-00	
	<Material for Pattern Making>									
L1320	20. Wood for Pattern		Enceha Pacific	Pinus 3m3 etc.	1 set	Pattern			Mar-00	
L1321	21. Plywood for Pattern		Enceha Pacific	18, 15, 12, 6, 4, 3mm	1 set	Pattern			Feb-00	
L1322	22. Resin for Pattern		Enceha Pacific	Resin & Hardener (Gel Coat, Casting, Laminating), Release Agent	1 set	Pattern	769,803	Rp.51,320,225	Feb-00	
L1323	23. Books		Antusiapipta	AFS etc.	1 set	JICA Room	624,903	US\$6,008.68	May-00	
L1324	24. Facsimile	Canon	Antusiapipta	F-250, with Cartridge	1	JICA Room	188,250	Rp.12,550,000	Feb-00	
L1325	25. Copyboard	Panasonic	Antusiapipta	KX-B630, with Stand etc.	1	JICA Room	213,905	US\$2,056.78	Feb-00	
<L21>	Local Procurement in FY2000 (Phase 1)									
L2101	1. Carbon/Sulphur Determinator	Leco	Magna Sardo	CS-200	1	Metal Labo	7,648,620		May-01	
L2102	2. α Resin	Borden	Makmur Meta	A-9048	250kg	Moulding	7,594,720	US\$67,810.00	Feb-01	
<L22>	Local Procurement in FY2000 (Phase 2)									
L2201	1. Maintenance Tools		Kawan Lama	61 items		Maintenance	3,195,330		Sep-01	
L2202	2. Overhead Crane Maintenance and Parts		Tira Austenite	for Verlinde Crane 2t		Moulding	1,357,262	US\$11,405.56	Mar-01	
L2203	3. α / β Organic Sand Moulding System Extension Monorail	Alcorindo	Alcorindo	for α / β System		Moulding	581,065	US\$4,882.90	Mar-01	
							263,120	Rp.20,240,000	Jun-01	

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No.	Name of Equipment	Maker	Supplier	Type / Specification	Qty.	to be kept	Value(¥)	Value(Rp./\$)	Delivered	Remarks
L2204	4. Post Crane for Swing Grinder	Alcorindo	Alcorindo	Jib Crane, Turn Table		Melting	404,690	Rp.31,130,000	Sep-01	
L2205	5. Ladle Heating Oil Burner	Ostenco	Ostenco	Burner, Blower, Tank etc.		Melting	357,500	Rp.27,500,000	Jul-01	
L2206	6. Personal Computer for Casting Design		Multicom	Mugen 5200, Desktop		Engineering	231,693	US\$1,947	Mar-01	
<L31>	Local Procurement in FY2001 (Phase 1)									
L3101	1. Standard Sample for Spectrometer	Hilger	Ostenco	11 items	1 set	Metal Labo				
L3102	2. Standard Sample for C/S Determinator	Leco	Magna Sardo	6 items	1 set	Metal Labo				
L3103	3. Metal Processing Machine for Testing			Hacksaw, Bandsaw, Lathe, chipper	1 set	Metal Labo				
L3104	4. Flask			Small 15 sets, Medium 10 sets	1 set	Moulding				
L3105	5. Spare Parts for Double Squeeze & α / β Moulding System			23 items	1 set	Moulding				
	Local Procurement in FY1999						56,743,332			
	Local Procurement in FY2000						10,843,950			
	Local Procurement in FY2001									
	Total (Local Procurement in Indonesia)						67,587,282	(=US\$563,227)		
								(=Rp.5,199 mil.)		
	Grand Total (Procurement in Japan & in Indonesia)						281,561,200	(=US\$2,346,343)		
								(=Rp.21,659 mil.)		

*1: in JICA Official Rate in the month approved by JICA HDQ

(1) DAILY REPORT OF KDM-5 MOULDING LINE OPERATION

KDM-5 造型ライン作業日誌

Operation Date 作業日	1-9-2002	Operator Name 作業者名	Boimin
Weather 天候		Operating Time 作業時間	~
Temperature 気温、℃		Moisture 湿度、%	

CHECK ON COMMENCEMENT OF WORK 始業時点検

1. Air Check エアーチェック		2. Oil Check オイルチェック	
<input checked="" type="checkbox"/>	◆Compressor コンプレッサー	<input checked="" type="checkbox"/>	◆Hydraulic Oil Unit 油圧ユニット
<input checked="" type="checkbox"/>	◆Air Dryer エアードライヤー	<input checked="" type="checkbox"/>	◆Individual Hold Oil 各ホールドオイル
<input checked="" type="checkbox"/>	◆Receiver Tanks レシーバータンク	<input checked="" type="checkbox"/>	◆Individual Pipe Unit Oiler Oil 各配管ユニットオイル
<input checked="" type="checkbox"/>	◆Individual Pipe Unit 各配管ユニット	<input checked="" type="checkbox"/>	◆Individual Cushion Oil 各クッションオイル

GREASE OILING グリス給油

1. Moulding Machine 造型機		2. Other Line Equipment 其他ライン装置	
<input checked="" type="checkbox"/>	◆Squeeze Head Portion スクイズヘッド部	<input checked="" type="checkbox"/>	◆Flask Pushing Portion 枠送り部
<input checked="" type="checkbox"/>	◆Squeeze Jolt Portion スクイズジョルト部	<input checked="" type="checkbox"/>	◆Flask Clamping Portion 枠クランプ部
<input checked="" type="checkbox"/>	◆Up-Set Portion セットアップ部	<input checked="" type="checkbox"/>	◆Flask Turning-Over Portion 枠反転部
<input checked="" type="checkbox"/>	◆Rotary Portion 回転部	<input checked="" type="checkbox"/>	◆Sand Cutter Portion サンドカッター部
<input checked="" type="checkbox"/>	◆Pattern Circle Portion パターンサークル部	<input checked="" type="checkbox"/>	◆Flask Assembly Portion 枠合せ部
<input checked="" type="checkbox"/>	◆Sand Throwing Portion 砂入部	<input checked="" type="checkbox"/>	◆Traversing Portion under Flask Assembly 枠合せ下トラバーサ部
<input checked="" type="checkbox"/>	◆Rotary Cylinder Joint Portion 回転シリンダー連結部	<input checked="" type="checkbox"/>	◆Pouring Traversing Portion 注湯トラバーサ部
<input checked="" type="checkbox"/>	◆Carrier Plate Portion キャリアプレート部	<input checked="" type="checkbox"/>	◆Carriage Separating Portion 台車分離部
		<input checked="" type="checkbox"/>	◆Carriage Setting Portion 台車セット部
		<input checked="" type="checkbox"/>	◆Damping Portion ダンピング部
		<input checked="" type="checkbox"/>	◆Mould Opening Portion 型バラシ部
		<input checked="" type="checkbox"/>	◆Mould Separating Portion 型分離部

CHECK IMMEDIATELY AFTER STARTING 起動直後チェック

<input checked="" type="checkbox"/>	◆Sand Preparation Conveyers 砂供給コンベアー	<input checked="" type="checkbox"/>	◆Running Condition 起動条件
<input checked="" type="checkbox"/>	◆Spill Sand Conveyers スピルサンドコンベアー	<input checked="" type="checkbox"/>	◆Flask Arrangement 枠配列
<input checked="" type="checkbox"/>	◆Sand Recovering Conveyers and so forth 回収砂コンベアー等	<input checked="" type="checkbox"/>	◆Inverter Electric Power Source インバーター電源
<input checked="" type="checkbox"/>	◆Cooling Water for Hydraulic Unit 油圧冷却水	<input checked="" type="checkbox"/>	◆Irregularity of CPU Battery CPU バッテリー異常

ACCIDENTS AND TROUBLES OCCURRED TODAY 本日発生 of 故障とトラブル

No.	Item 内容	Countermeasure 対策	By 担当者
1	TROUBLES - SQUEEZE		Boimin
2	JOLT PORTION		dumaena
3	OPS. 24 ♀		WAHID
4			SUZUKI
5			NUR YANTRO
6			

FINAL CHECK OF PORTION TRABLED TODAY 本日発生 of トラブル箇所最終チェック

No.	Item 内容	Checked by 担当者	No.	Item 内容	Checked by 担当者
1			4		
2			5		
3			6		

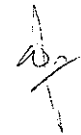
QUANTITY OF FLASKS MOULDED TODAY 本日の造型枠数

No.	Part Name 部品名	Drawing No. 図面番号	Quantity 型数
1			
2			
3			
4			
5			
Total Counter 総カウンター数		Start 始	End 終

Rev. リビュー	App. 承認

(2) DAILY PERORT OF $\alpha\beta$ MOULDING MACHINE OPERATION

LAPORAN HARIAN PENGOPERASIAN MESIN CETAK $\alpha\beta$

Tgl Pengoperasian	4-12-22	Nama Operator	NURYANTORO		
Cuaca		Waktu Pengoperasian	10 ⁰⁰ ~ 11 ³⁰		
Suhu (°C)	24°C	Kelembapan (%)	75%		
PENGECEKAN SAAT MULAI BEKERJA					
1. MESIN DUST COLLECTOR Pastikan Tekanan pada manometer pada pasisi 100 mm/Aq (apabila angka tekanan tdk 100 mm/Aq, periksalah bagian kantung-kantung filter apakah sudah terlampau kotor atau robek)	OK	6. Bagian BUCKET ELEVATOR(4 set) Pengecekan putaran dan gerakan dari kaca jendela pengecek (bila terjadi kelainan suara, cobalah untuk mengecek ketegangan karet beltnya, longar/tidak)	OK		
2. Bagian ROTARY SCREEN Periksalah ada tidaknya sumbatan atau merusakkan	OK	7. Bagian CONTINOUS MIXER Pengecekan bagian dalam mixer sehabis dioperasikan Pengecekan mata pisau mixer	OK		
3. Bagian SAND RECLAIMING (KM POLISHER) Pengecekan bagian rotor, drum dan keramik Pengecekan kelonggaran baud-baud	OK	8. Bagian CORE-SHOOTER(β) Pengecekan packing bagian penyemprot gas (bila gas bocor, ganti packingnya. Bila masih bocor juga, ganti bagian shooternya dgn yg baru)	OK		
4. Bagian SEPARATOR (setiap sehabis bekerja sisa-sisa pasir harus dibersihkan)	OK	9. Bagian GAS BOX, GAS CONTROLLER, GENERATOR, TANKI PENAMPUNG GAS(β) Pengecekan setiap aliran gas dalam pipa-pipa, bocor/tidak	OK		
5. Bagian CONVEYOR BELT (2 set) pengecekan putaran belt	OK				
KEJADIAN DAN GANGGUAN YANG TERJADI HARI INI					
No	Gangguan/Masalah	Penanggulangan	Operator		
1.	tidak ada masalah		NURYANTORO		
2.					
3.					
4.					
5.					
GANGGUAN YANG TERAKHIR DICEK					
No	Gangguan	Operator Pengecek	No	Gangguan	Operator Pengecek
1.	Tidak ada gangguan				
2.					
3.					
JUMLAH FLASK YANG DIPAKAI MENCETAK HARI INI					
No	Bagian	No. Gambar	Jumlah	Paraf pengecek	Disetujui Oleh
1.		tidak ada	SATU (1)		
2.					
3.					
4.					
Jumlah total (SATU)	Mulai (waktu)		10 ⁰⁰	Selesai (waktu)	11 ³⁰

Annex 17: List of Equipment Currently Existing and Prepared by MIDC

List of Equipment Currently Existing in MIDC
Project Supporting Industries Development for Casting Technology

No	Name of equipment Machinery	Maker Country of origin	Model	Capacity	Specification	Volume	Date of Installation	Current usage and its frequency	Status of spare part stored	Available of spare part in Indonesia	Remarks
1	Circular Saw	France	Kamro SK	o circular 400ml	4.05 kwh	1 unit	1974	5 days/week		Available	
2	Band Saw Machine	Belgium	DANKAERT	lengh 5450 mm	4.00 kwh	1 unit	1974	5 days/week		Available	
3	Combined Planning Machine	France	Durem	weidht400 mm	4.05 kwh	1 unit	1974	5 days/week		Available	
4	Milling Machine	Belgium	Vertongen	Max.cutt er size 250 mm	3.45 kwh	1 unit	1974	Temporary		Available	
5	Disk Sander	France	Ducuroir			1 unit	1974	5 days/week		Available	
6	Horizontal Drilling Machine	France	Ducuroir			1 unit	1974	Temporary		Available	Not used
7	Spindel Sander	France	Ducuroir	max 150 x		1 unit	1974	5 days/week		Difficult	
8	Vertical Drilling Machine	Italy	Gloria			1 unit	1974	Temporary		Available	
9	Abrasive Band Machine	England	Sheer			1 unit	1974	Temporary		Dificult	Not used
10	Dust Colector	Belgium	Vertegen			1 unit	1974	5 days/week		Dificult	
11	Automatic Grinding Machine	France	Ducuroir			1 unit	1974	Temporary		Not Available	
12	Tools Grinding Machine	Belgium	Vertegen			1 unit	1974	5 days/week		Available	
13	Vertical Abrasive Machine	Belgium	Elan			1 unit	1974	Temporary		Available	Not used
14	Hot Melt Hand Gun	England	AD 25			1 unit	1974			Not available	Not used

No	Name of equipment Machinery	W.Germany	W.Germany	Ideal	Capacity	Specification	Volume	Date of Installation	Temporary usage and its frequency	Status of spare part stored	Not Available	Remarks
15	Electric Band Saw Grinder	W.Germany	W.Germany	Ideal			1 unit	1974	Temporary		Not Available	
16	Electric band saw welder	W.Germany	W.Germany	Ideal			1 unit	1974	Temporary		Not Available	
17.	Portable Router	W.Germany	W.Germany	IDEAL			1 unit	1974	Temporary		Available	
No	Name of equipment Machinery	Maker Country of origin	WADKIN	Model	Capacity	Specification	Volume	Date of Installation	Temporary usage and its frequency	Status of spare part stored	Not Available	Remarks
18	Universal Milling machine	England	WADKIN				1 unit	1983	Temporary	Available	Not Available	
19	Wood Lathe machine	Germany	JIMMERMAN				1 unit	1983	5 days/week	Available	ditto	
20	Planning Cutter Grinder	Belgium	Vertongen				1 unit	1974	Temporary		Available	
21	Work Bench	Belgium					2 unit	1974	5 days/week	Available	Ditto	
22	Contraction ruller	Germany				1000 mm	3 unit	1974	5 days/week		ditto	
23	Vermier Caliper	England	Preisser			300 mm	2 unit		5 days/week		ditto	
24	Height Gauge	England	Keisser			1000 mm	1 unit	1974	Temporary		ditto	
25	Depth Gauge	England	INNOX			300 mm	1 unit	1974	5 days/week		ditto	
26	Level Protactor	England	INNOX				1 unit	1974	5 days/week		ditto	
27	Iron work bench	Belgium				1.5 x 2 m	1 unit	1974	5 days/week		ditto	
28	Hand Tools (hamer, chiceel, file,s crewdriver, planer etc.)	China					2 unit	1985	5 days/week		ditto	

List of Equipment Currently Existing in MIDC
Project Supporting Industries Development for Casting Technology

No	Name of equipment Machinery	Maker Country of origin	Model	Capacity	Specification	Volume (UNIT)	Date of Installation	Current usage and its frequency	Status of spare part stored	Available of spare part in Indonesia	Remarks
1	Cupola	Belgium	Cold Blast	1,5 ton/hr	550 mm (dia.)	1	1974	Temporary		Available	Not used
2	Shot Blast	France	Hanger Type	1 ton	Sisson Leman	1	1974	4 days/week		Available	
3	Ladle Heating	Belgium	Monometer	3 ladles	Oil burner	1	1974	5 days/week		Available	
4	Fuel Pump	Belgium		150 ltr/hr	Axial type	1	1974	5 days/week		Available	
5	Induction F/C	USA	Elphiac	75 kg	2000 Hz	1	1974	5 days/week		Not Available	
6	Bale Out F/C	England	Monometer	100 kg	Oil Burner	1	1974	temporary		Available	Not used
7	Shake Out	Belgium	AM 100 LVA	500 kg	Vibrator type	1	1974	4 days/week		Available	
8	Tilting F/C	England	Monometer	300 and 150 (kg)	Oil burner	2	1974	Temporary		Available	
9	Grinding M/C	Belgium	REMA		500 mm (dia)	1	1974	5 days/week		Available	
10	Ladles	Belgium	Open Ladle Tea pot Ladle Open Ladle Open Ladle	100 Kg 750 Kg 500 Kg 750 Kg		2 2 1 1	1974 1974 1974 1974	5 days/week Temporary Temporary Temporary		Available	Not used Not used Not used Not used
11	Gantry Crane	German	Verlinde	2 tons	2 speed	1	1974	5 days/week		Available	
12	Work Bench	Belgium	PRAM		0,75x2 m	1	1974	5 days/week		Available	
13	Rotary F/C	England	Monometer	500 kg	25 gal/hr	1	1982	Temporary		Available	

No	Name of equipment Machinery	Maker Country of origin	Model	Capacity	Specification	Volume (UNIT)	Date of Installation	Current usage and its frequency	Status of spare part stored	Available of spare part in Indonesia	Remarks
14	Pyrometer Optic	USA	L&N		2000 °C	1	1974	Temporary		Available	
15	Pyrometer Digital Thermocouple	Belgium	Mark III Electro Nite		1800 °C	1	1983	5 days/week		Available	Out of order
16	Thermocouple	USA	L&N			1	1974	Temporary		Not Available	Out of order
17	Crucible F/C	Belgium	Salamander	60 kg	Oil burner	1	1974	Temporary		Available	
18	CE Meter Computer	Japan	Nakayama			1	1986	5 days/week		Not Available	
19	Digital CE Meter	Japan	YAHAGI EEC			1	1983	Temporary		Not Available	Out of order (%C Problem)
20	Steel Analyses Digital	USA	L&N			1	1974	Temporary		Not Available	
21	CE Meter Grafic	USA	L&N			1	1974	Temporary		Not Available	Out of order
22	Electro Nite CE Meter	Belgium	QUICK LAB II			1	1974	Temporary		Not Available	Out of Order (Printer Problem)
23	Digital CE Meter	Belgium	L & N			1	1974	Temporary		Not Available	Not used
24	Balance	England	Berkel	500 Kg		1	1974	5 days/week		Available	
25	Balance	Belgium	Rhewa	25 Kg		1	1980	5 days/week		Available	
26	Balance	Belgium	Hanger type	500 Kg		1	1974	Temporary		Available	
27	Small Grinder M/C	Japan	HITACHI	150 (dia)		2	1985	5 days/week		Available	

List of Equipment Currently Existing in MIDC
 Project Supporting Industries Development for Casting Technology

No	Name of equipment Machinery	Maker Country of origin	Model	Capacity	Specification	Volume (Unit)	Date of Installation	Current usage and its frequency	Status of spare part stored	Available of spare part in Indonesia	Remarks
1	Sand Preparation	Belgium	Conveyor type	5 tons/hr		1	1974	5 days/week		Available	
2	Moulding M/C	Belgium	5.600 B	30 flask/hr	Jolt and squeeze	1	1974	-		Not available	Out of order
3	Moulding M/C	Belgium	5.600 B2	30 flask/hr	Jolt and squeeze	1	1974	-		Not available	Out of order
4	Ribbon flow Mixer	Belgium	L 22	2 tons/hr	Screw type	1	1974	-		Not available	Out of order
5	Sand Mixer	Belgium	GHETART	250 Kg	Muller	1	1974	5 days/week		Available	
6	Core Making M/C	Belgium	Varcel		Hot Box	1	1974	-		Not available	Out of order
7	Drying Oven	Belgium		1.8 x 2 x 2 mtr		1	1974	Temporary		Available	
8	Hoist Compressed Air System	Belgium				1	1974	Temporary		Available	Not used
9	Compressor	Sweden	KAESER	7 Bar	Screw Type	1	1997	5 days/week		Available	Not used
10	Core Work Bench	Belgium	PRAM			1	1974	5 days/week		Available	
11	Sand Dryer	Belgium	L 42	1 ton/hr		1	1974	Temporary		Available	

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MOULDING

No	Name of equipment Machinery	Maker Country of origin	Model	Capacity	Specification	Volume (Unit)	Date of Installation	Current usage and its frequency	Status of spare part stored	Available of spare part in Indonesia	Remarks
12	Mixer 75 kg	Japan	SINTO	75 kg	Muller	1	1983	5 days/week		Available	
13	Mixer 25 kg	Japan	SINTO	25 kg	Muller	1	1983	5 days/week		Available	Out of order
14	Pneumatic	Sweden	ATLASCOPO	-	-	4	1974	Temporary		Available	
15	Core Mixer	Belgium	Mixer	50 kg	Mixer	1	1974	Temporary		Available	
16	Flask	Germany			45x45x10 cm	30 pcs	1974	5 days/week			10 pcs out of order
17	Flask	Germany			75x55x15 cm	30 pcs	1974	5 days/week			6 pcs out of order
18	Flask	Germany			83x83x20 cm	10 pcs	1974	Temporary			
19	Flask	Germany			112x112x30 cm	4 pcs	1974	Temporary			
20	Flask	Germany			172x172x40 cm	2 pcs	1974	Temporary			
21	Roller Conveyor	Belgium			Small	1 unit	1974	5 days/week		Available	Not used
22	Roller Conveyor	Belgium			Big	1 unit	1974	5 days/week		Available	Not used

List of Equipment Current Existing in MIDC
 Project Supporting Industries Development for Casting Technology

No	Name of equipment Machinery	Maker Country of origin	Model	Capacity	Specification	Volume	Date of Installation	Current usage and its frequency	Status of spare part stored	Available of spare part in Indonesia	Remarks
1	Laboratory Shifter	Switzerland (GF)	PSA			1 unit	1974	Temporary	-	Not Available	
2	Jolt Squeeze	Switzerland (GF)				1 unit	1974	Temporary	-	Not Available	
3	Wet Tensile Strength	Switzerland (GF)	PMF			1 unit	1974	Temporary	-	Not Available	Out of order
4	Central Controller	Switzerland (GF)	PZS			1 unit	1974	Temporary	-	Not Available	"
5	Compressive Stress	Switzerland (GF)	PDA			1 unit	1974	Temporary	-	Not Available	"
6	Dilato Meter	Switzerland (GF)				1 unit	1974	Temporary	-	Not Available	"
7	Universal Strength Machine	Switzerland (GF)	PFA			1 unit	1974	Temporary	-	Not Available	
8	Sintering Furnace	Switzerland (GF)	PSO			1 unit	1974	Temporary	-	Not Available	Out of order
9	Checking Device	Switzerland (GF)	PKV			1 unit	1974	Temporary	-	Not Available	
10	Agitator	Switzerland (GF)	PED			1 unit	1974	Temporary	-	Not Available	
11	Rammer	Switzerland (GF)	PRA			1 unit	1974	Temporary	-	Not Available	
12	Accessories to Sand Rammer	Switzerland (GF)	PRA-PRA.E			1 unit	1974	Temporary	-	Not Available	
13	Hygro Metter	Switzerland (GF)	PRAM			1 unit	1974	Temporary	-	Not Available	
14	Permeability Meter	Switzerland (GF)	PDN			1 unit	1974	Temporary	-	Not Available	
15	Infra Red Rappid Dryer	Switzerland (GF)	PIT			1 unit	1974	Temporary	-	Not Available	

AR

SAND LABORATORY

No	Name of equipment Machinery	Maker Country of origin	Model	Capacity	Specification	Volume	Date of Installation	Current usage and its frequency	Status of spare part stored	Available of spare part in Indonesia	Remarks
16	Stereoscopic Microscopic	Switzerland (GF)	46/RT/428			1 unit	1974	Temporary	-	Not Available	
17	Drying Oven	Switzerland (GF)	Eihret			1 unit	1974	Temporary	-	Not Available	
18	Mettler Balance	Switzerland (GF)	P200N			1 unit	1974	Temporary	-	Not Available	
19	Flowability Test	Switzerland (GF)	PFS			1 unit	1974	Temporary	-	Not Available	
20	Labo Mixer	Switzerland (GF)	PRAM	1,5 kg		1 unit	1974	Temporary	-	Not Available	
21	Laboratory Mixer	Switzerland (GF)	PLK	6 kg		1 unit	1974	Temporary	-	Not Available	
22	Sand Saampler	Switzerland (GF)	PSN			1 unit	1974	Temporary	-	Not Available	
23	Continuous Clay Washer	Switzerland (GF)	PKA			1 unit	1974	Temporary	-	Not Available	
24	Green Tensile Strength	Switzerland (GF)	PZS			1 unit	1974	Temporary	-	Not Available	
25	Core Hardness	Switzerland (GF)	PKE			1 unit	1974	Temporary	-	Not Available	
26	Mould Hardness	Switzerland (GF)	PFN			1 unit	1974	Temporary	-	Not Available	
27	Sand Rammer	JAPAN	SINTO-KOGIO			1 unit	1974	Temporary	-	Not Available	
28	Permeability Meter	JAPAN	SINTO-KOGIO			1 unit	1986	Temporary	-	Not Available	
29	Rot-Tap Shaker	JAPAN	SINTO-KOGIO			1 unit	1986	Temporary	-	Not Available	
30	Moisture Teller	JAPAN	SINTO-KOGIO			1 unit	1986	Temporary	-	Not Available	
31	Universal Strength Machine	JAPAN	SINTO-KOGIO			1 unit	1986	Temporary	-	Not Available	

List of Equipment Currently Existing in MIDC
Project Supporting Industries Development for Casting Technology

No	Name of equipment Machinery	Maker Country of origin	Model	Capacity	Specification	Volume	Date of Installation	Current usage and its frequency	Status of spare part stored	Available of spare part in Indonesia	Remarks
1	Surfmet Grinder Abrasive	USA	Buchler LTD	-	-	1	1974	Temporary	-	Available	
2	Polishing Machine	DENMARK	Struers	-	-	1	1974	Temporary	-	Available	
3	Polishing Machine	DENMARK	API	-	-	1	1974	Temporary	-	Available	
4	Water Distillation	GERMANY	EXELO	2.5 l/hr	Electrical heater	1	1974	Temporary		Available	
5	Orsat Analysis Gas for O ₂ & N ₂	GERMANY	STROCHLEIN	-	-	1	1974	Out of Order	-	Not Available	
6	Magnetic Mixer	GERMANY	HEILDOLPH	-	-	1	1974	Temporary	-	Available	
7	Heater/Cook Plate	INDONESIA	Katorik	-	-	1	1990	Temporary	-	Available	
8	Carbon & Sulfur Determinator	GERMANY	STROCHLEIN	-	-	1	1974	Out of order	-	Not Available	
9	Heating Furnace	BELGIUM	ANALIS	-	1200° C	1	1974	Temporary	-	Not Available	
10	Drying Oven	GERMANY	MEMERT	-	200° C	1	1974	Temporary	-	Available	
11	Balance	FRANCE	METLER	1200 gr	-	1	1974	Temporary	-	Available	
12	Balance	GERMANY	BOSCH	1200 gr	-	1	1974	Out of order	-	Available	

20th November 2001
METAL LABORATORY

No	Name of equipment Machinery	Maker Country of origin	Model	Capacity	Specification	Volume	Date of Installation	Current usage and its frequency	Status of spare part stored	Available of spare part in Indonesia	Remarks
13	Microscope Metapan	AUSTRIA	REICHRET	-	50-800 time	1	1974	Temporary	-	available	Camera out of order
14.	Hardness Tester	SPAIN	HOYTOM	-	HRC;HRB	1	1974	Temporary	-	Available	
15.	Electro Lyseur	France	Etielm	-	-	1	1974	Temporary	-	Available	
16.	Electro Analysis apparatus	USA	EBERBACH	-	-	1	1981	Out of order	-	Not available	
17.	Carbon Determinator	USA	Leco	-	-	1	1983	Temporary	-	Not available	
18.	Sulfur Determinator	USA	Leco	-	-	1	1983	Temporary	-	Available	
19.	Spectrometer	England	Hilger	14 element	Ferrous Test	1	1995	Temporary	-	Available	
20.	Spectro Grinder Speciment	England	Huston	-	Ø 120 mm	1	1992	Temporary	-	Available	
21.	Spectro Polishing Speciment	England	Herzog	-	70 mm width	1	1992	Temporary	-	Available	
22.	Argon Prifer	England	Sircal	-	7,5 amper	1	1992	Temporary	-	Available	
23.	Micro Hardness	Japan	Shimadzu	-	Micro Vikers	1	1987	Temporary	-	Available	
24.	Microscope Metallography	Japan	Nikon	-	50 - 400 time	1	1987	Temporary	-	Available	
25.	Mocroscope Metallography	Japan	Nikon	-	50 - 1000 time	1	1992	Temporary	-	Available	

RECORD OF SERVICES TO INDUSTRIES

MIDC/JICA Project on Supporting Industries Development for Casting Technology in Indonesia (1 / 7) as of November 12, 2001

I. SEMINAR / OPENING CEREMONY

No.	Date	Title / Location	Participants	Contents
1	Mar.2, 2000	1st SEMINAR on Iron Casting Technology at Panghegal Hotel (Bandung)	Appr. 130 Participants (Industries, etc.), Presentation by :<Japan> Prof. Niyama, Dr. Ishihara, <Indonesia> MIDC, APLINDO, ITB, PT. Pindad	Presentations (7 sessions including HICASS demonstration), Exhibition, Discussions etc.
2	Jul.25, 2000	OPENING CEREMONY for and GRAND OPENING of the Project in MIDC (Bandung)	Appr. 200 Participants (Industries, etc.), Presentation by Mr. Kondo, Exhibition by 6 Companies	Opening Ceremony, Presentation, Handing-Over Ceremony, Turn-key Ceremony, Demonstration, Exhibition, Workshop Tour, Clinic of Technology etc.
3	Mar. 22, 2001	2nd SEMINAR on Iron Casting Technology at Hotel International Imperium (Bandung)	Appr. 180 Participants (Industries, etc.), Presentation by :<Japan> Mr. Ichiki, Mr. Yamanaka, <Indonesia> Univ. Indonesia, MIDC, GIAMM, Pakarti Riken	Presentations (6 sessions), Discussions etc.
4	Mar. 5, 2002 (Tentative)	3rd SEMINAR on Iron Casting Technology at BAPEDA JABAR (Bandung)	(Under Planning)	(Under Planning)

RECORD OF SERVICES TO INDUSTRIES

MIDC/JICA Project on Supporting Industries Development for Casting Technology in Indonesia (2 / 7) as of November 12, 2001

II-1. TRAINING COURSE FOR SMALL & MEDIUM SCALE FOUNDRY INDUSTRIES (Except for short courses less than one week)		Title / Location	Participants	Contents
No.	Date			
1	Jul.31-Aug.16, 2000	Wood and Metal PATTERN MAKING TRAINING COURSE in Theory and Practice for Small and Medium-scale Foundry Industries in MIDC (Bandung) sponsored by ILMEA	12 Trainees from Industries Trainers: MIDC (Pattern Making Group (5 staff) and Other Staff), JICA Expert (Mr. Nonaka & Others)	Wood Pattern Making Practice, Lectures on Pattern Making, Castings Production with Trainees' Pattern, Lectures on Casting Tech., Casting Design, etc.
2	Aug.28-Sep.13, 2000	Casting QUALITY CONTROL TRAINING COURSE in Theory and Practice for Small and Medium-scale Foundry Industries in MIDC (Bandung) sponsored by ILMEA	19 Trainees from Industries Trainers: MIDC (Foundry Shop Staff and Other Staff), JICA Experts	Practices on Testing and Examinations, Lectures on Testing and Examinations, Castings Production etc.
3	Jun.25-Jul.3, 2001	CASTING TRAINING COURSE for Small and Medium-scale Foundry Industries in MIDC (Bandung) sponsored by ILMEA in the sub-courses of (1) Moulding, (2) Melting, (3) Planning Production Control (PPC)	60 Trainees (20 Trainees for each sub-courses) from Industries Trainers: MIDC (Foundry Shop Staff and Other Staff), JICA Experts	Lectures and Practices on Moulding, Melting and Production Control, Industries Visit etc.
4	Jul.9-27, 2001	PATTERN MAKING TRAINING COURSE in Theory and Practice for Small and Medium-scale Foundry Industries in MIDC (Bandung) sponsored by JICA/MIDC	17 Trainees from Industries Trainers: MIDC (Pattern Making Group (5 staff) and Other Staff), JICA Expert (Mr. Nonaka & Others)	Wood Pattern Making Practice, Lectures on Pattern Making, Castings Production with Trainees' Pattern, Lectures on Casting Tech., Casting Design, etc.
5	Mar., 2002	(Under Planning)	(Under Planning)	(Under Planning)

II-2. TRAINING COURSE (CHARGED ORDER-MADE) (Except for short courses less than one week)		Title / Location	Participants	Contents
No.	Date			
1	Feb.19-Mar.23, 2001	Casting Training for Trainers in Toyota Astra Motors (Phase I)	Two Trainees from Toyota Astra Motors Trainers: MIDC (Foundry Shop Staff and Other Staff)	
2	Mar.27-May 1, 2001	Casting Training for Trainers in Toyota Astra Motors (Phase II)	Two Trainees from Toyota Astra Motors Trainers: MIDC (Foundry Shop Staff and Other Staff)	
3	Mar.28-May 10, 2001	Casting Training for Students in Gajah Mada University Yogyakarta	Two Students from Gajah Mada University Trainers: MIDC (Foundry Shop Staff and Other Staff)	

RECORD OF SERVICES TO INDUSTRIES

MIDC/JICA Project on Supporting Industries Development for Casting Technology in Indonesia (3 / 7) as of November 12, 2001

III. EXTENTION SERVICES (VISIT TO INDUSTRIES) (1/5)

No.	Date	Name of Companies / Organizations	Project Staff visited	Remarks
1	May 5, 1999	<Bandung> HANCO	Yasui, Hashida, Homma, Abdurahim	
2	Jun.13-16, 1999	<CEPER / KLATEN / YOGYAKARTA>		
2-1	Jun.14, 1999	<CEPER> Laboratorium Uji Logam dan Mini Foundry Ceper	Yasui, Hashida, Homma, (Sato), Abdurahim	
2-2	Jun.14, 1999	<CEPER> UPT Ceper		
2-3	Jun.14, 1999	<CEPER> CV. Sinar Super Baja		
2-4	Jun.14, 1999	<CEPER> Aneka Megah Alloy Corporation (AMAG)		
2-5	Jun.14, 1999	<CEPER> Aneka Adhilogam Karya		
2-6	Jun.14, 1999	<CEPER> Mitra Karya Utama		
2-7	Jun.15, 1999	<KLATEN> PT. Itokoh Ceperindo		
2-8	Jun.15, 1999	<YOGYAKARTA> CV. Karya Hidup Sentosa (KHS)		
3	Aug.10, 1999	<JAKARTA>		
3-1		<JAKARTA> ASPEP	Yasui, Hashida, Homma, (Sato), Abdurahim	
3-2		<JAKARTA> Inter Satria		2nd Visit
4	Sep.15-18, 1999	<SURABAYA / GERSIK / SIDOARJO / PASURUAN>		
4-1	Sep.16, 1999	<GERSIK> PT. Agrindo	Hashida, Nonaka, Homma, Abdurahim	
4-2	Sep.16, 1999	<GERSIK> PT. Barata Indonesia		
4-3	Sep.17, 1999	<SIDOARJO> PT. Pakarti Riken		
4-4	Sep.17, 1999	<PASURUAN> PT. Aneka Banusakti		
5	Nov.19, 1999	<BANDUNG>		
5-1		<BANDUNG> PT. Baninusa Indonesia	Hashida, Homma, Nonaka, Abdurahim, Sjaifudin	
5-2		<BANDUNG> Silika Foundry Utama		2nd Visit
6	Feb.28, 2000	<JAKARTA> Inter Satria	Hashida, Homma, Niyama, Ishihara	
7	Mar.3, 2000	<BANDUNG> Bara Multi Metalika	Niyama, Ishihara, Yasui, Nonaka, Suzuki, Homma, Kato, Furqon	
8	Mar.15, 2000	<BANDUNG>	Nonaka, Suzuki, Homma, Kobayashi, Takahashi, (Sugaya), Sjaifudin	
8-1		<BANDUNG> Berdikali Metal Engineering		
8-2		<BANDUNG> Silika Foundry Utama		
9	Apr.25, 2000	<BANDUNG> Kopinkra Sugih Mukti	Homma, (Nishita, Kanokogi), Marman	

RECORD OF SERVICES TO INDUSTRIES

MIDG/JICA Project on Supporting Industries Development for Casting Technology in Indonesia (4 / 7)
 as of November 12, 2001

III. EXTENTION SERVICES (VISIT TO INDUSTRIES) (2/5)

No.	Date	Name of Companies / Organizations	Project Staff visited	Remarks
10	Jun.29, 2000	<TANGERANG/BEKASI>	Nonaka, Homma, Obata, Kibe, Abdurahim, Dedi, Adi	
10-1	23	<TANGERANG> Bina Usaha Mandiri Mizusawa (BUMM)		
10-2	24	<BEKASI> Bakrie Tosanjaya		
11	Jul.5, 2000	<BANDUNG> Politeknik Manufaktur (Polman)	Hashida, Homma, Obata, Abdurahim	
12	Jul.6, 2000	<CIREGON> Indah Kiat	Suzuki, Homma, Kibe, Abdurahim, Furqon, Achmad	
13	Jul.26, 2000	<BANDUNG>	Kondo, Yasui, Nonaka, Homma, Obata, Kibe, Abdurahim	
13-1	27	<BANDUNG> Pindad		
13-2	28	<BANDUNG> Bara Multi Metalika		2nd Visit
14	Jul. 27-28, 2000	<KARAWANG / JAKARTA>	Kondo, Nonaka, Homma, Obata, Kibe, shiraishi, Abdurahim, Dadang, Adi	
14-1	29	<KARAWANG> PT. AT Indonesia		
14-2	30	<JAKARTA> PT. Komatsu Indonesia		
15	Sep.1, 2000	<BANDUNG>	Hashida, Nonaka, Suzuki, Homma, Kibe, Abdurahim, Sjaifudin, Dedi	
15-1	31	<BANDUNG> Bara Multi Metalika		3rd Visit
15-2	32	<BANDUNG> Indo Pattern Lestari		
16	Sep.8, 2000	<BANDUNG>	Hashida, Nonaka, Suzuki, Yasui, Homma, Kibe, Sjaifudin, Dedi, Bimo	
16-1	33	<BANDUNG> Bara Multi Metalika		4th Visit
16-2	34	<BANDUNG> Indo Pattern Lestari		2nd Visit
17	Nov.16, 2000	<BANDUNG> Indo Pattern Lestari	Nonaka, Homma, Nagafuchi, Dedi	3rd Visit
18	Nov.24, 2000	<BANDUNG>	Hashida, Nonaka, Homma, Nagafuchi, Sopar, Hadi, Dadang, Dedi	
18-1	36	<BANDUNG> Indo Pattern Lestari		4th Visit
18-2	37	<BANDUNG> Bara Multi Metalika		5th Visit
19	Dec.6, 2000	<SUKABUMI>	Yasui, Homma, Hashida, Suzuki, Nagafuchi, Hadi, Sjaifudin, Juanda	
19-1	38	<SUKABUMI> Logam Makmur Saluyu		
19-2	39	<SUKABUMI> Aghnia Kreasi Maju Bersama		
20	Jan.24, 2001	<BANDUNG> Pindad	Obata, Shiraishi, Furqon, Agus	2nd Visit

RECORD OF SERVICES TO INDUSTRIES

MIDC/JICA Project on Supporting Industries Development for Casting Technology in Indonesia (5 / 7)
 as of November 12, 2001

III. EXTENTION SERVICES (VISIT TO INDUSTRIES) (3/5)

No.	Date	Name of Companies / Organizations	Project Staff visited	Remarks
21	Mar.19, 2001	<BEKASI> Bakrie Tosanjaya	Ichiki, Yamanaka, Nonaka, Homma, Obata, Hadi, Sopar, Dedi	2nd Visit
22	Mar.23, 2001	<BANDUNG>	Ichiki, Yamanaka, Hashida, Nonaka, Obata, Achmad, Dedi, Idis	
22-1	42	<BANDUNG> Bara Multi Metalika		6th Visit
22-2	43	<BANDUNG> Indo Pattern Lestari		5th Visit
23	Mar.28, 2001	<BANDUNG> Bara Multi Metalika	Yamanaka, Hashida, Obata, Bimo	7th Visit
24	Mar.29, 2001	<BANDUNG>	Yamanaka, Hashida, Obata, Shiraishi, Agus	
24-1	45	<BANDUNG> Baninusa Indonesia		2nd Visit
24-2	46	<BANDUNG> Pindad		3rd Visit
25	Mar.30, 2001	<BANDUNG> Hanco	Yamanaka, Hashida, Nonaka, Obata, Dadang, Dedi	2nd Visit
26	Apr.22-26, 2001	<EAST JAVA: SURABAYA / PASURUAN / GERSIK / MALANG / SIDOARJO>	Sakakibara, Homma, Nonaka, Suzuki, Saito, Sopar, Furgon, Wilson	
26-1	48	<SURABAYA> Balai Industri Surabaya		2nd Visit
26-2	49	<PASURUAN> Aneka Banusakti		
26-3	50	<PASURUAN> Berlin		
26-4	51	<PASURUAN> Boma Bisma Indra		
26-5	52	<SURABAYA> Madju Warna Steel		
26-6	53	<GERSIK> Barata Indonesia		2nd Visit
26-7	54	<GERSIK> Agrindo		2nd Visit
26-8	55	<MALANG> Bumi Brake Drum		2nd Visit
26-9	56	<SIDOARJO> Pakarti Riken		2nd Visit
26-10	57	<SIDOARJO> Koperasi Waru Buana Putra		2nd Visit
27	May 13-16, 2001	<CENTRAL JAVA: CEPER / KLATEN / YOGYAKARTA>	Sakakibara, Hashida, Nonaka, Homma, Furqon	
27-1	58	<CEPER> Ceper Laboratorium		2nd Visit
27-2	59	<CEPER> Baja Tunggal		
27-3	60	<CEPER> Mitra Rekutama Mandiri		
27-4	61	<KLATEN> Itokoh Ceperindo		
27-5	62	<CEPER> Baja Kurnia		2nd Visit
27-6	63	<CEPER> Aneka Adhi Logam Karya		
27-7	64	<CEPER> Persuda		2nd Visit
27-8	65	<CEPER> Suyuti Sido Maju		
27-9	66	<YOGYAKARTA> Karya Hidup Sentosa (KHS)		2nd Visit

RECORD OF SERVICES TO INDUSTRIES
MIDG/ JICA Project on Supporting Industries Development for Casting Technology in Indonesia (6 / 7)

as of November 12, 2001

No.	Date	Name of Companies / Organizations	Project Staff visited	Remarks
28	Jun.13, 2001	<BANDUNG> <BANDUNG> Bara Multi Metalika <BANDUNG> Indo Pattern Lestari	Nonaka, Toyoshima, Dedi, (Kanamori)	8th Visit 6th Visit
29	Aug.13, 2001	<TANGERANG / BEKASI> <TANGERANG> Alcorindo Sejahtera <BEKASI> Bakrie Tosanjaya	Maeda, Hashida, Homma, Kajiwara, Furqon, Dadang	3rd Visit
30	Aug.15, 2001	<BANDUNG> <BANDUNG> Bara Multi Metalika <BANDUNG> Indo Pattern Lestari	Maeda, Sakakibara, Hashida, Nonaka, Kajiwara, Dedi, Hadi(F/S)	9th Visit 7th Visit
31	Aug.19-25, 2001	<EAST JAVA: SURABAYA / PASURUAN / GERSIK / MALANG>	Maeda, Hashida, Nonaka, Furqon, Agus	3rd Visit 3rd Visit 3rd Visit 2nd Visit 4th Visit
31-1	Aug.20, 2001	<PASURUAN> Aneka Banusakti		10th Visit
31-2	Aug.21, 2001	<GERSIK> Agrindo		
31-3	Aug.21, 2001	<GERSIK> Barata Indonesia		
31-4	Aug.22, 2001	<MALANG> Bumi Brake Drum		
31-5	Aug.23, 2001	<PASURUAN> Aneka Banusakti		
32	Sep.3, 2001	<BANDUNG> Bara Multi Metalika	Maeda, Hashida, Nagafuchi, Adi	
33	Sep.5-6, 2001	<BEKASI>		
33-1	Sep.5, 2001	<BEKASI> Bakrie Tosanjaya	Maeda, Hashida, Dadang, Adi	4th Visit
33-2	Sep.6, 2001	<BEKASI> Bakrie Tosanjaya		5th Visit
34	Sep.11-15, 2001	<EAST JAVA: SURABAYA / PASURUAN / GERSIK / MALANG>	Maeda, Hashida, Furqon, Agus	4th Visit 5th Visit
34-1	Sep.12, 2001	<GERSIK> Agrindo		
34-2	Sep.13, 2001	<PASURUAN> Aneka Banusakti		
34-3	Sep.14, 2001	<MALANG> Bumi Brake Drum		

III. EXTENTION SERVICES (VISIT TO INDUSTRIES) (5/5)

No.	Date	Name of Companies / Organizations	Project Staff visited	Remarks
35	Sep.16-19, 2001	<CENTRAL JAVA: CEPER / KLATEN / YOGYAKARTA>	Maeda, Homma, Sopar, Hadi, Juanda, Bimo, Dadang, Adi	3rd Visit
35-1	Sep.17, 2001	<CEPER> Ceper Laboratorium		
35-2	Sep.17, 2001	<CEPER> Mulya Jaya		
35-3	Sep.17, 2001	<CEPER> Baja Tunggal		2nd Visit
35-4	Sep.18, 2001	<CEPER> Teknik Utama		
35-5	Sep.18, 2001	<KLATEN> Itokoh Ceperindo		3rd Visit
35-6	Sep.18, 2001	<YOGYAKARTA> Karya Hidup Sentosa (KHS)		3rd Visit
35-7	Sep.19, 2001	<YOGYAKARTA> Karya Hidup Sentosa (KHS)		4th Visit
36	Oct.30, 2001	<JAKARTA>	Hashida, Furqon, Agus	
36-1	91	<Jakarta> Shinwa Engineering Indonesia		
36-2	92	<Jakarta> Daikin Clutch Indonesia		
37	Nov.11-13, 2001	<MEDAN>	Homma, Suyono, Furqon	
37-1	93	<Medan> Multi Mineral		
37-2	94	<Medan> Karya Deli Steelindo		
37-3	95	<Medan> Balai Logam (Balai Industri Medan)		
37-4	96	<Medan> Baja Pertiwi Industri		

Target Companies (10 in total)

- Bandung: (1) Bara Multi Metalika, (2) Indo Pattern Lestari
- Surabaya and Surroundings in Eas Java: (1) Aneka Banusakti, (2) Agrindo, (3) Bumi Brake Drum
- Ceper and Surroundings in Central Java and Yogyakarta: (1) Karya Hidup Sentosa, (2) Baja Tunggal, (3) Ceper Laboratorium
- JABOTABEK: (1) Bakrie Tosanjaya
- Sukabumi: (1) Logam Makmur

**SCHEDULE OF PATTERN MAKING TRAINING
JULY 9 - JULY 27, 2001**

No	Jam	Tanggal											
		9 Jul	10 Jul	11 Jul	12 Jul	13 Jul	16 Jul	17 Jul	18 Jul	19 Jul	20 Jul	21 Jul	
1	08.00-08.45	Pembukaan	GT	SST	PR	TC	P1	P1	P1	P1	P1	P1	P1
2	08.45-09.30	O	GT	SST	PR	PL	P1	P1	P1	P1	P1	P1	P1
3	09.30-10.15	O	DRT	SST	PA	PL	P1	P1	P1	P1	P1	P1	P1
4	10.15-10.30	FC	DRT	DST	PA	PL	P1	P1	P1	P1	P1	P1	P1
5	10.30-11.15	FC	DRT	DST	SOP	PL	P1	P1	P1	P1	P1	P1	P1
6	11.15-12.00												
7	12.00-12.45												
8	12.45-13.30	SM	DRT	PK	SOP	PU	P1	P1	P1	P1	P1	P1	P1
9	13.30-14.15	SM	SST	PK	TC	PU	P1	P1	P1	P1	P1	P1	P1
10	14.15-14.30	GT	SST	PK	TC	P1	P1	P1	P1	P1	P1	P1	P1
11	14.30-15.15	GT	SST	PK	TC	P1	P1	P1	P1	P1	P1	P1	P1
12	15.15-16.00												

Remarks:

- O : Orientation in Foundry Shop
- PC : Introduction of Casting Process Technology : Metal Casting Processes (Agus Hermawan)
- SM : Introduction of Casting Process Technology : Material Selection (Agus Hermawan)
- GT : Basic of Casting Making : Technical Drawing (Purbaja Adi Putra)
- DRT : Basic of Casting Making : Basic Principle of Gating System (Purbaja Adi Putra)
- SST : Gating System : Parameter Calculation of Gating System (Sri Bimo Pratomo)
- DST : Gating System Design (Sri Bimo Pratomo)
- PK : Technique of Pattern Making : Technique of Pattern Making with Wooden Basic Material (Dedi Supriatna/Staff)
- PR : Technique of Pattern Making : Technique of Resin Pattern Making (Dedi Supriatna/Staff)
- PA : Technique of Pattern Making : Introduction of Equipment and Machines (Dedi Supriatna/Staff)
- SOP : Technique of Pattern Making : Standard Operation Procedure (Dedi Supriatna/Staff)
- TC : Technique of Mould Making (Juanda)
- PL : Technique of Melting (Dadang Supriatna)
- PU : Casting Dimension Inspection (Sri Bimo Pratomo)
- P1 : Practice of Pattern Making (Pattern Shop)
- P2 : Practice of Mould Making (Moulding Group)
- P3 : Practice of Melting (Melting Group)
- P4 : Practice of Casting Dimension Inspection (Engineering Group)
- EP : Evaluation and Closing Ceremony

No	Jam	Tanggal											
		19 Jul	20 Jul	23 Jul	24 Jul	25 Jul	26 Jul	27 Jul					
1	08.00-08.45	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1
2	08.45-09.30	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1
3	09.30-10.15	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1
4	10.15-10.30												
5	10.30-11.15	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1
6	11.15-12.00	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1
7	12.00-12.45												
8	12.45-13.30	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1
9	13.30-14.15	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1
10	14.15-14.30												
11	14.30-15.15	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1
12	15.15-16.00	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1

Keterangan:

- O : Orientasi Di Bengkel Cor
- PC : Pengantar Teknologi Proses Cor: Proses-Proses Pengecoran Logam (Ir Agus H)
- SM : Pengantar Teknologi Proses Cor: Seleksi Material (Ir Agus H)
- GT : Dasar Pembuatan Casting : Gambar Teknik (Ir. Purbaja Adi)
- DRT : Dasar Pembuatan Casting :Prinsip Dasar Rancangan Tuang (Ir Purbaja Adi)
- SST : Sistem Saluran Tuang: Penghitungan Parameter Sistem Saluran Tuang (Ir Sri Bimo P)
- DST : Desain Sistem Saluran Tuang (Ir Sri Bimo P)
- PK : Teknik Pembuatan Pola : Teknik Pembuatan Pola Dengan Bahan Dasar Kayu (Dedi S/Staff)
- PR : Teknik Pembuatan Pola : Teknik Pembuatan Pola Resin (Dedi S/Staff)
- PA : Teknik Pembuatan Pola : Pengenalan Alat dan Mesin(Dedi S/Staff)
- SOP : Teknik Pembuatan Pola : Standart Operation Procedure (Dedi S/Staff)
- TC : Teknik Pembuatan Cetakan (Juanda)
- PL : Teknik Peleburan Logam (Ir Dadang S)
- PU : Pemeriksaan Ukuran Casting (Ir Sri Bimo P)
- P1 : Praktek Pembuatan Pola (Pattern Shop)
- P2 : Praktek Pembuatan Cetakan(Moulding Group)
- P3 : Praktek Peleburan(Melting Group)
- P4 : Praktek Pemeriksaan Ukuran Casting (Engineering Group)
- EP : Evaluasi dan Penutupan

NO.	NAMA	NAMA ALAMAT PERUSAHAAN /INSTANSI	TANDA TANGAN
11	Hidayat Yulianto	Lab. Ceper	0 TH
12	Andi Suhendar	CV. Widya Teknik	0 TH
13	Oma Wijaya	CV. Prima Jl. Rajawali 117 Majalaya	2 TH
14	Porkas M. Nasution	CV. Akur Terus Jaya Jl. Selajambe Cibaraja Cisaat, Sukabumi	—
15	Rochman	PT. Unggul Semesta	0 TH
16	Nur Hasdianto	PT. Unggul Semesta	0 TH
17	Aditya Nugraha	PT. Karya Mulya Teknindo	0 TH

MM

AB