3. EXISTING SHIP REPAIRING CAPACITY

Class (GT)	100 & Below	101 - 500	501 - 1,000	1,001 - 5,000	5,001 - 20,000	Total
Total (GT)	7,840	11,050	8,940	27,180	35,680	90,690
No. of docks/ slipways	86	27	9	11	3	136

Notes: 1. Docking total capacity installed — About 90,000 GT or About 1,200,000 GT/year
2. Average annual docking production (Total) — About 700,000 GT/year
3. Biggest floating dock capacity — 20,000 GT
4. Biggest slipway capacity — 1,200 GT

Source: Country report of Indonesia by Mr Sutito, March 1984

4. EXISTING SHIP REPAIRING FACILITIES

Facilities	Unit	Total Capacity (DWT)
Floating docks	14	84,000
Graving docks	12	18,500
Slipways	106	26,300
Side-Tracks	2	7,600
Repair basin	2	600
Total	136	137,000 DWT

Source: Country report of Indonesia by Mr Sutito, March 1984

Table ANX III-22

CAPACITY, PRODUCTION AND DEMAND OF NEW SHIPBUILDING

(Unit: BRT)

Class		1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
Up to 500 BRT	Capacity	27,660	30,955	30,955	33,741	36,440	39,173
	Production	4,014	4,460	4,953	18,355	20,406	22,720
	Demand	18,237	20,263	22,514	30,598	60,018	64,915
501 - 2,000 BRT	Capacity	23,940	26,600	27,400	28,994	31,314	36,662
	Production	3,771	4,190	4,656	15,773	17,536	19,524
	Demand	17,167	19,075	21,194	27,288	51,576	55,983
2,001 - 5,000 BRT	Capacity	39,150	43,500	43,500	47,415	51,208	55,019
	Production	8,069	8,965	9,951	25,804	28,677	31,928
	Demand	25,629	28,477	31,641	44,007	84,344	92,623
5,001 - 10,000 BRT	Capacity	30,150	33,500	33,500	36,515	39,436	42,394
	Production	5,360	5,360	5,360	19,864	22,084	24,585
	Demand	19,735	21,928	24,364	33,107	64,953	70,852
Total	Capacity	120,870	134,555	135,355	146,665	158,398	173,248
	Production	21,214	22,974	24,920	79,796	88,703	98,757
	Demand	80,768	89,743	99,713	135,000	260,891	284,373

Source: PENGEMBANGAN KADASTAS NASIONAL SECTOR INDUSTRI 1984 - 1987
DEPARTEMEN PERINDUSTRIAN EDISI 1984

Table ANX III-23

CAPACITY, REPAIR AND DEMAND OF SHIP REPAIR

(Unit: BRT)

Class		1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
Up to 500 BRT	Capacity	175,773	195,303	195,303	292,462	385,051	477,276
	Repair	149,382	165,980	184,422	248,763	319,592	372,509
	Demand	489,893	544,266	604,740	609,739	639,184	677,289
501 - 2,000 BRT	Capacity	156,547	173,941	173,941	253,611	330,004	417,082
	Repair	131,030	145,589	161,765	218,374	274,557	326,884
	Demand	412,510	458,344	509,217	539,620	549,134	594,335
2,001 - 5,000 BRT	Capacity	155,464	172,738	172,738	243,144	317,430	390,561
	Repair	130,123	144,581	160,646	206,672	263,467	304,561
	Demand	344,644	382,938	425,487	449,078	526,934	553,747
5,001 - 10,000 BRT	Capacity	102,236	113,595	113,595	173,553	222,470	275,147
	Repair	85,166	94,629	105,643	147,520	181,650	215,473
	Demand	188,036	208,929	232,143	410,805	369,300	391,769
10,001 - 30,000 BRT	Capacity	445,805	495,339	495,339	735,235	942,972	1,174,226
	Repair	374,646	416,273	462,525	626,650	782,667	925,568
	Demand	1,029,166	1,143,518	1,441,750	1,429,415	1,565,334	1,682,851
Total	Capacity	1,035,825	1,150,916	1,150,916	1,698,005	2,197,927	2,734,292
	Repair	870,347	967,012	1,075,001	1,447,979	1,821,933	2,144,995
	Demand	2,464,249	2,737,995	3,213,337	3,438,657	3,649,886	3,899,991

Source: PENGEMBANGAN KADASTAS NASIONAL SEKTOR INDUSTRI 1984 - 1987
DEPARTEMEN PERINDUSTRIAN EDISI 1984

PROTECTED DEMAND FOR DOMESTIC NEW VESSELS

(Unit: 1,000 BRT)

Year	Kind of Vessels	BRT 0 - 500	BRT 501 - 2,000	BRT 2,001 - 5,000	BRT 5,001 - 10,000	Total
1981	R.L.S	2.65	14.20	7.22	-	24.07
	L.S.	7.00	-	-	-	7.00
	P.S.	-	0.98	-	-	0.98
	N.O.	5.87	19.08	8.07	3.67	36.69
	T	-	2.00	12.00	11.00	25.00
	Sub-total	15.52	36.26	27.29	14.67	93.74
1982	R.L.S	2.81	15.05	7.65	-	25.51
	L.S.	7.20	-	-	-	7.20
	P.S.	0.45	-	-	-	0.45
	N.O.	6.35	20.65	8.74	3.97	39.71
	T	-	2.00	12.00	11.00	25.00
	Sub-total	16.81	37.70	28.39	14.97	97.87
1983	R.L.S	3.02	16.17	8.22	-	27.41
	L.S.	8.70	-	-	-	8.70
	P.S.	0.44	-	-	-	0.44
	N.O.	6.88	22.36	9.46	4.30	43.00
	T	-	2.00	12.00	11.00	25.00
	Sub-total	10.04	40.53	29.68	15.30	104.55
1984	R.L.S	3.30	17.70	9.00	-	30.00
	L.S.	10.10	-	-	-	10.10
	P.S.	-	0.54	-	-	0.54
	N.O.	7.45	24.21	10.24	4.65	46.55
	T	-	2.00	12.00	11.00	25.00
	Sub-total	20.85	44.45	31.24	15.65	112.19
1985	R.L.S	3.52	18.88	9.60	-	32.00
	L.S.	8.90	-	-	-	8.90
	P.S.	-	0.69	-	-	0.69
	N.O.	8.07	26.22	11.00	5.04	50.42
	T	-	2.00	12.00	11.00	25.00
	Sub-total	20.49	47.79	32.69	16.04	117.01
1986	R.L.S	4.00	20.24	13.02	-	37.26
	L.S.	17.40	-	-	-	17.40
	P.S.	-	0.91	-	-	0.91
	N.O.	8.74	28.41	12.02	5.46	54.63
	T	-	3.00	19.00	16.00	38.00
	Sub-total	30.14	52.56	44.04	21.46	148.20

(Unit: 1,000 BRT)

Year	Kind of Vessels	BRT 0 - 500	BRT 501 - 2,000	BRT 2,001 - 5,000	BRT 5,001 - 10,000	Total
1987	R.L.S	4.13	21.43	13.76	-	39.32
	L.S.	18.40	-	-	-	18.40
	P.S.	0.53	0.53	-	-	1.06
	N.O.	9.47	30.78	13.02	5.92	59.19
	T	-	3.00	19.00	16.00	38.00
	Sub-Total	32.53	55.74	45.78	21.92	155.97
1988	R.L.S	4.64	24.10	15.48	-	44.22
	L.S.	19.80	-	-	-	19.80
	P.S.	0.53	0.53	-	-	1.06
	N.O.	10.26	33.36	14.11	6.41	64.14
	T	-	3.00	19.00	16.00	38.00
	Sub-Total	35.23	60.99	48.59	22.41	167.22
1989	R.L.S	5.00	25.44	16.34	-	46.78
	L.S.	21.40	-	-	-	21.40
	P.S.	0.61	0.61	-	-	1.22
	N.O.	11.12	36.16	15.30	6.95	69.53
	T	-	3.00	19.00	16.00	38.00
	Sub-Total	38.13	65.21	50.64	22.95	176.93
1990	R.L.S	5.28	27.41	17.61	-	50.30
	L.S.	23.20	-	-	-	23.20
	P.S.	0.61	0.61	-	-	1.22
	N.O.	12.06	39.21	16.59	7.54	75.40
	T	-	3.00	19.00	16.00	38.00
	Sub-Total	41.15	70.23	53.20	23.54	188.12
1991	R.L.S	5.82	29.11	23.28	-	58.21
	L.S.	25.00	-	-	-	25.00
	P.S.	0.70	0.70			1.40
	N.O.	13.08	42.52	17.99	8.17	81.76
	T	-	4.00	20.00	19.00	43.00
	Sub-Total	44.60	76.33	61.27	27.17	209.37
1992	R.L.S	6.31	31.54	25.23	-	63.08
	L.S.	27.80	-	-	-	27.80
	P.S.	0.76	0.76	-	-	1.52
	N.O.	14.19	46.12	19.51	8.86	88.68
	T	-	4.00	20.00	19.00	43.00
	Sub-Total	49.06	82.42	64.74	27.86	224.08

(Unit: 1,000 BRT)

Year	Kind of Vessels	BRT 0 - 500	BRT 501 - 2,000	BRT 2,001 - 5,000	BRT 5,001 - 10,000	Total
1993	R.L.S	6.84	34.20	27.36	-	68.40
	L.S.	28.60	-	-	-	28.60
	P.S.	0.77	0.77	-	-	1.54
	N.O.	15.39	50.03	21.16	9.62	96.20
	T	-	4.00	20.00	19.00	43.00
	Sub-Total	51.60	89.00	68.52	28.62	237.74
1994	R.L.S	7.33	36.66	29.32	-	73.31
	L.S.	31.80	-	-	-	31.80
	P.S.	0.87	0.87	-	-	1.74
	N.O.	17.40	56.55	23.92	10.87	108.74
	T	-	4.00	20.00	10.00	43.00
	Sub-Total	57.40	98.08	73.24	29.87	258.59
1995	R.L.S	8.12	40.62	32.50	-	81.24
	L.S.	34.40	-	-	-	34.40
	P.S.	-	0.88	-	-	0.88
	N.O.	18.20	59.18	25.03	11.38	113.79
	T	-	4.00	20.00	19.00	43.00
	Sub-Total	60.72	104.68	77.53	30.38	273.31

Notes: R.L.S. = Regular Liner Service
L.S. = Local Shipping
P.S. = Pioneer Service
N.O. = Non-Oil Use
T = Tanker

Source: Development pattern of Indonesia's Shipbuilding Industry 1983

PROTECTED DEMAND OF SHIP REPAIR UP TO 30,000 BRT

(Unit: BRT)

Year	0-500 BRT	510-2,000 BRT	2,001-5,000 BRT	5,001-10,000 BRT	10,000-30,000 BRT	Total
1981	207.99	338.87	230.98	235.58	1,108.65	2,122.09
1982	214.23	360.55	247.03	255.11	1,180.80	2,257.75
1983	221.99	384.09	264.02	275.56	1,254.59	2,400.27
1984	232.37	409.97	288.91	296.97	1,330.09	2,558.32
1985	241.36	437.92	312.01	316.07	1,399.27	2,706.65
1986	258.64	454.87	354.56	344.41	1,492.75	2,905.25
1987	278.15	488.21	381.85	374.98	1,594.00	3,117.22
1988	299.53	525.23	411.17	405.90	1,685.67	3,327.52
1989	322.65	564.62	441.63	448.37	1,786.17	3,563.46
1990	347.58	607.33	474.09	466.40	1,877.77	3,773.18
1991	372.51	631.82	533.68	502.79	2.014.05	4,054.86
1992	402.69	686.13	561.47	535.32	2,153.64	4,339.25
1993	434.96	741.59	603.46	575.02	2,296.86	4,651.90
1994	464.12	803.48	648.65	623.85	2,444.02	4,984.15
1995	508.09	869.01	694.46	668.67	2,595.48	5,337.43

Source: Development pattern of Indonesia's Shipbuilding Industry 1983

CAPACITY, PRODUCTION AND DEMAND OF PLANT EQUIPMENT AND MACHINERY

	1982/1983	1983/1984	1984/1985	1985/1986	1986/1987	1987/1988
Copra processing plant 1/ -unit-						
Capacity	75	140	140	140	140	140
Production	30	30	32	100	127	127
Demand	50	50	100	100	122	130
Sugar plant 2/ -unit-						
Capacity	334	336	346	372	372	372
Production	250	251	337	362	362	364
Demand	253	255	341	362	362	364
Coffee processing plant 3/ -unit-						
Capacity	260	260	260	260	260	260
Production	108	130	130	180	225	260
Demand	108	105	160	210	260	300
Tee processing plant 4/ -unit-						
Capacity	240	250	250	250	250	250
Production	115	125	158	180	230	250
Demand	115	125	158	180	270	300
Water treatment plant -unit-						
Capacity	130	130	130	130	130	130
Production	11	50	80	110	120	130
Demand	80	80	140	210	230	250

Notes: 1/ Sterilizer, screw press, and effulent treatment plant.
2/ Cane table, cane cutter/shredder, mills (3 Roll), diffuser, sulphitator, juice clarifier, juice heaters, vacuum filters, vacuum pan, evaporator, crystallizer, condenser and centrifugal
3/ Coffee pump, huller, pulper and dryer
4/ Withering through, rotary roll breaker humidifier, dryer and rotary shifter

Source: PENGEMBANGAN KAPASITAS NASIONAL SEKTOR INDUSTRI 1984-1987, MOI, 1984

CAPACITY, PRODUCTION AND DEMAND OF COMPONENTS OF PROCESS PLANT

	1982/1983	1983/1984	1984/1985	1985/1986	1986/1987	1987/1988
Structural steel -ton-						
Capacity	52,850	52,850	52,850	52,850	52,850	52,850 1/
Production	11,299	25,000	32,000	40,000	50,000	50,000 2/
Demand	70,000	70,550	77,000	85,000	94,000	103,000 2/
Steel tank -ton-						
Capacity	16,000	16,000	16,000	16,000	16,000	16,000 1/
Production	10,000	10,000	11,300	13,600	16,000	16,000 1/
Demand	34,000	42,800	46,000	51,000	56,000	60,000
Boiler (below 20t/h) -unit- 3/						
Capacity	30	30	30	30	30	30
Production	5	20	23	30	30	30
Demand	150	165	180	200	220	250
Boiler (above 20t/h) -unit-						
Capacity	10	10	10	10	10	10
Production	5	4	6	8	10	10
Demand	8	6	8	10	14	16
Heat exchanger -ton-						
Capacity	-	-	-	- 1/	- 1/	- 1/
Production	-	-	-	-	-	-
Demand	8,000	9,000	10,000	11,000	13,000	15,000

Notes: 1/ Expected capacity increase in the future is deducted from the original figure.
2/ Revised by JICA team because original figure is unreasonably stated.
3/ There are number of boilers, capacity of which is below 5 ton/h.

Source: PENGEMBANGAN KAPASITAS NASIONAL SECTOR INDUSTRI 1984-1987, MOI, 1984

CAPACITY AND PRODUCTION OF DIESEL ENGINE (1982)

(Unit: Set)

	Firm	Capacity	Production
1.	Mesin Dan Paralan		
	Less 35HP	87,050	59,300
	31HP - 500HP	35,200	5,760
2.	Bahan Dan Barang Logan		
	Less 31HP	N.A	3,000
3.	P.T. Mesindo Agung Engineering		
	31HP - 500HP	3,900	94
4.	P.T. Yammar Diesel		
	Less 31HP	35,000	15,400
5.	P.T. Kubota		
	Less 31HP	28,000	10,669
6.	P.T. Boma Bisma Indra		
	HP: n.a.	11,000	380
7.	P.T. Tri Ratna Diesel		
	Less 31HP	18,000	1,000
8.	Cv. Wira Mustica Indah		
	HP: n.a.	9,600	550
	Total	227,750	96,153
	Less 31HP	177,650	89,369
	31HP-500HP	39,100	5,854
	Not specified	20,600	930

Source: Directory Basic Metal Industry 1982, Published by: BKS-ILLMA

Table ANX III-29

CAPACITY, PRODUCTION AND DEMAND OF DIESEL ENGINES

Item		1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
Diesel engine less 34HP	Capacity	93,400	93,400	93,400	93,400	93,400	93,400
	Production	57,235	51,575	63,200	72,000	83,000	93,000
	Demand	120,000	150,000	164,000	170,000	184,000	191,000
Diesel engine 31-5000HP	Capacity	6,500	6,500	6,500	6,500	6,500	6,500
	Production	947	1,200	1,500	2,500	4,000	6,500
	Demand	10,000	10,000	14,000	18,000	25,000	27,000
Diesel engine over 500Kw	Capacity	-	-	-	-	150	150
	Production	-	-	-	-	125	125
	Demand	-	-	200	200	200	200

Source: PENGEMBANGAN KAPASITAS NASIONAL SEKTOR INDUSTRI 1984-1987, MOI, 1984

Table ANX III-30

IMPORT OF ENGINES (1981 - 1984)

(Unit)

CCCN Code No.	Item	1981	1982	1983	1984
8406311	Engine for tractor - CKD	40,829	11,123	3,986	2
8406312	Engine for tractor - Built up	174	229	73	29
8406321	Engine for motor vehicle - CKD	2	217	-	888
8406322	Engine for motor vehicle - Built up	2,692	1,056	1,528	1,480
8406391	Engine for other - CKD	(1,404ton)	(1,495ton)	(3,152ton)	(3,823ton)
8406392	Engine for other - Built up	(1,115ton)	(735ton)	(756ton)	(507ton)
8406410	Outboard marine engine - CKD	42	5	829	501
8406420	Outboard marine engine - Built up	37,208	12,007	8,924	7,012
8406500	Marine propulsion engine	7,534	5,440	3,376	5,614
8406610	Engine for locomotive and train way	3	19	44	12
8406691	Other engine - CKD	40,969	18,015	16,212	1,164
8406692	Other engine - Built up	33,073	27,053	29,011	33,239

Total	1981	1982	1983	1984
Import total	194,186	99,824	100,113	85,571
No. of CKD	91,202	39,320	42,037	28,045
No. of Built up	102,984	60,504	58,076	57,526
Gosoline engine 1/	108,572	58,081	57,468	51,486
Diesel engine 1/	85,614	41,743	42,645	34,085
Less 34HP	70,170	32,656	35,303	25,614
31 - 400HP	15,444	9,087	7,342	8,471

Note: 1/ Diesel/Gasoline ratio is assumed as 30/70 for built up and 60/40 for CKD.

Source: IMPORT STATISTICS, BPS

Table ANX III-31

ESTIMATION OF CAPACITY AND DEMAND 1983/1984 - 1987/1988
IRRIGATION, INDUSTRIAL AND TURBINE PUMPS

Type of Pump	1983/84	1984/85	1985/86	1986/87	1987/88
	(unit)	(unit)	(unit)	(unit)	(unit)
Irrigation Pump					
Capacity	7,200	7,200	7,200	7,200	7,200
Production	3,065	5,000	5,500	6,000	7,200
Demand	3,500	6,000	8,000	9,500	11,000
Turbine Pump					
Capacity	-	400	400	400	400
Production	-	40	80	114	180
Demand	30	30	50	60	300
Industrial Pump					
Capacity	-	3,000	3,000	3,000	3,000
Production	-	1,000	1,500	2,500	3,000
Demand	8,500	9,600	10,000	12,000	13,000
Water Treatment Pump					
Capacity	130	130	130	130	130
Production	50	80	110	120	130
Demand	80	140	210	230	250
Total					
Capacity	7,330	10,730	10,730	10,730	10,730
Production	3,115	6,120	7,190	8,737	10,510
Demand	12,110	15,770	18,260	21,790	24,550

Source: PENGEMBANGAN KAPASITAS NASIONAL SECTOR INDUSTRI 1984-1987, MOI, 1984

Table ANX III-32

PRODUCTION CAPACITY/PRODUCTION/DEMAND OF METAL MATERIALS (1)

(1,000ton)

Item	1982/1983	1983/1984	1984/1985	1985/1986	1986/1987	1987/1988
	Capacity	Capacity	Capacity	Capacity	Capacity	Capacity
	Production	Production	Production	Production	Production	Production
	Demand	Demand	Demand	Demand	Demand	Demand
Pellet	-	-	-	-	-	-
	-	-	-	-	-	-
	430	770	924	1,320	1,540	1,760
Sponge iron	2,200	2,200	2,200	2,200	2,200	2,200
	391	541	912	1,200	1,400	1,600
	350.5	652	812	1,000	1,200	1,400
Steel slab	1,100	1,100	1,100	1,100	1,100	1,100
	-	108	342	460	550	620
	-	135	292	400	460	529
Ingot/billet	1,175	1,175	1,175	1,175	2,000	2,000
	693.5	882.6	1,014	1,170	1,340	1,800
	950	1,026	1,130	1,360	1,560	1,800
Hot coil	1,100	1,100	1,100	1,100	1,100	1,100
	10	127	326	407	470	815
	10	127	355	407	470	815
Cold rolled	-	-	-	-	850	850
sheet	-	-	-	-	225	425
	450	840	972	1,060	1,157	1,248
Tin plate	-	-	-	130	130	130
	-	-	-	-	78	85.8
	146.2	174	192	210	225	247.5
Bar/shape	1,200	1,200	1,200	1,200	2,000	2,000
	745	724.3	832.9	958	1,200	1,350
	743.8	575	832.9	958	1,200	1,350

Table ANX III-32 (Continued)

PRODUCTION CAPACITY/PRODUCTION/DEMAND OF METAL MATERIALS (2)

(1,000ton)

Item	1982/1983	1983/1984	1984/1985	1985/1986	1986/1987	1987/1988
	Capacity Production Demand	Capacity Production Demand	Capacity Production Demand	Capacity Production Demand	Capacity Production Demand	Capacity Production Demand
Wire rod	416 257.4 257.4	416 300 311	416 340 363	416 384 384	416 416 434	600 450 477.4
G I Sheet	490.8 329.5 329.5	490.8 419 419	490.8 474 474	490.8 490.8 535	650 530 604	650 560 654.4
Copper rod	33 33 20	33 33 26	51 33 30	51 40 35	51 47 39	51 51 42
Aluminium sheet/plate	34.3 9.6 28	34.3 8 30	34.3 17 32.3	34.3 21 34	36 36 36	36.2 38.2 38.2
Aluminium rod	- - -	34.8 34.8 7.9	34.8 8.6 8.6	34.8 11 9.2	34.8 17 17	34.8 21 21
Metal wire	38 7.6 42	38 9 50	38 14 50	38 25 70	40 37 70	40 38 84
Welded pipe	407 237.5 325.9	407 180.4 192.3	407 216 216	407 260 260	407 311 311	407 360 360
Spiral pipe	60 46.1 46.1	60 50 50	60 60 85	60 60 115	100 90 140	120 120 154
Seamless pipe	- - 113.75	- - 130	- - 150	- - 175	160 50 200	160 160 299

Source: PENGEMBANGAN KAPASITAS NASIONAL SECTOR INDUSTRI 1984-1987, MOI, 1984

Table ANX III-33

PRODUCTION CAPACITY OF STEEL PRODUCTS

Genre of Maker	Number of Establish-ment	Name of Company /(Kind of Products)	Production Capacity (1,000ton/y)									
			Sponge Iron	Slab	Billet/ Ingot	Hot Coil	Plate	Bar/ Shape	Wire rod /Mtl Wire	G I Sheet	Welded Pipe	Spiral Pipe
Iron/steel maker	1	PT Krakatau Steel	2,000	1,000	500	1,000		230	220			50
Steel maker (Elec. Furnace)	11	(Bar/shape/wire rod)			870			390	150			
Mill/MFG	22	(Bar/shape)						750				
	1	PT. Jaya Pari Steel					70					
	14	(G I)								400		
	21	(Welded pipe)									530	
Total of production capacity			2,000	1,000	1,370	1,000	70	1,370	370	400	530	50

Source: JICA Team Survey

Table ANX III-34

STEEL IMPORT, 1983

Products	Weight (MT)	Remarks
Wire rod	29,028	
Round bar	65,449	
Shape	147,196	
Plate	207,322	Thickness $\geq$ 3 mm
Sheet	766,004	Thickness < 3 mm
Tin plate	119,107	
G.I. Sheet	16,191	
Electrical sheet	3,052	
Other coated sheet	35,875	
Pipe	222,861	
Metal wire	11,551	
Secondary products	29,177	Wire mesh, nail, pin, etc.
Pipe fittings	14,111	
Total	1,666,924	(Steel product)

Source: IMPORT STATISTICS, 1984, BPS

ANNEX IV RESULTS OF QUESTIONNAIRE TO LARGE-SCALE INDUSTRY AND MEDIUM- AND SMALL-SCALE INDUSTRY

Province :

Number :

QUESTIONNAIRE SHEET

SURVEY FOR LINKAGE-TYPE INDUSTRIES DEVELOPMENT

PART I

(FOR LARGE INDUSTRIES)

JUNE - AUGUST, 1985

PREPARED BY:

DEPARTMENT OF INDUSTRY R.I.

IN COOPERATION WITH

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

This questionnaire sheet is addressed to large scale industries or parent companies who are currently or will be using sub-contracting small- and medium-scale industries as suppliers of component, raw material or other services.

The data collected here will be kept confidential and not be used for any other purposes than planning development strategies, creating better environment for and establishing technical and financial aid program for linkage-type industries.

Date : : _____, _____, 1985

Filled in by : _____,
(name)

_____
(position)

Telephone number: .....

I. GENERAL

1. Name of Company : _____

2. Address of head office: _____

_____

Factory : _____

3. Established in : _____ (year)

4. Background of Establishment :

- Initiated by :

☐ Government ☐ Local Company

☐ Foreign Company

- Previous Job of Local Entrepreneur :

_____

_____

5. (1) Paid-in Equity Capital Amount

Rp. _____ (million)

Local :- Government _____%

- Private _____%

Foreign : _____%

(2) Fixed Asset Amount (excluding land & building)

Rp. _____ (million)

6. Number of Employees : Total _____

- Engineer : _____
- Technician : _____

(please attach an organization chart and number of staffs assigned)

7. Category of Industry

☐ Machinery in general

☐ Electrical Machinery

☐ Transportation Machinery

☐ Others specify :

_____

_____

_____

II. PRODUCTS

1.

No.	Major Products	Quantity			Sales (million Rp) 1984
		Capacity (1984)	Actual Amount in 1984	Unit	

2. Total Annual Sales Amount (1984) :

Rp. _____ million

3. Over-all Capacity Utilization Rate : _____%

4. Major Client : _____

_____

_____

_____

III. COMPONENTS & RAW MATERIAL

* Please check (√) on

I : Import
S : Self-Production
L : Local Manufacturer

Major Component & Raw Material	Supplied by *			Monthly Average Amount (mill. Rp)
	I	S	L	

IV. OUTLINE OF SUB-CONTRACTING COMPANIES BEING USED

If your company is using local subcontractors, local manufacturers or local maintenance service companies mainly in the field of metal-working industries, please give their outlines on the attached sheets (one form for one company).

(Outline of Subcontracting Companies) number 1

1. Name of Company : _____

2. Address : _____

_____

Factory : _____

3. Number of Employees : _____ persons in total,

Number of engineers: _____

4. Amount of Capital : Rp. _____ million

5.

Supplied Component or Services	Quantity	Unit	Total Value (Rp/m)

6. Procurement : ☐ By order ☐ Constant procurement

7. Payment : ☐ By cash ☐ By credit ☐ month

8. Do you supply raw materials? ☐ Yes

☐ No

(Attachment number 1)

9. Kinds of Assistant your company provides :

(1) Financial: ☐ Equity (share) ☐ Loan

(2) Technical: ☐ Training ☐ Advisory ☐ Inspection

☐ Managerial

10. Major problems and obstacles for User :

(1) Quality: ☐ Good ☐ Fair ☐ Poor

(2) Quantity: ☐ Enough ☐ Short

(3) Delivery: ☐ Punctual ☐ Sometimes late ☐ Always late

(4) Technical Level of staff: ☐ High ☐ Middle ☐ Low

(5) Management: ☐ Good ☐ Fair ☐ Poor

(6) Entrepreneurship: ☐ Good ☐ Fair ☐ Poor

(Outline of Subcontracting Companies) number 2

1. Name of Company : _____

2. Address : _____

_____

Factory : _____

3. Number of Employees : _____ persons in total,

Number of engineers: _____

4. Amount of Capital : Rp. _____ million

5.

Supplied Component or Services	Quantity	Unit	Total Value (Rp/m)

6. Procurement : ☐ By order ☐ Constant procurement

7. Payment : ☐ By cash ☐ By credit ☐ month

8. Do you supply raw materials? ☐ Yes

☐ No

(Attachment number 2)

9. Kinds of Assistant your company provides :

(1) Financial: ☐ Equity (share) ☐ Loan

(2) Technical: ☐ Training ☐ Advisory ☐ Inspection ☐ Managerial

10. Major problems and obstacles for User :

(1) Quality: ☐ Good ☐ Fair ☐ Poor

(2) Quantity: ☐ Enough ☐ Short

(3) Delivery: ☐ Punctual ☐ Sometimes late ☐ Always late

(4) Technical Level of staff: ☐ High ☐ Middle ☐ Low

(5) Management: ☐ Good ☐ Fair ☐ Poor

(6) Entrepreneurship: ☐ Good ☐ Fair ☐ Poor

(Outline of Subcontracting Companies) number 3

1. Name of Company : _____

2. Address : _____

_____

Factory : _____

3. Number of Employees : _____ persons in total,

Number of engineers: _____

4. Amount of Capital : Rp. _____ million

5.

Supplied Component or Services	Quantity	Unit	Total Value (Rp/m)

6. Procurement : ☐ By order ☐ Constant procurement

7. Payment : ☐ By cash ☐ By credit ☐ month

8. Do you supply raw materials? ☐ Yes

☐ No

(Attachment number 3)

9. Kinds of Assistant your company provides :

(1) Financial: ☐ Equity (share) ☐ Loan

(2) Technical: ☐ Training ☐ Advisory ☐ Inspection

☐ Managerial

10. Major problems and obstacles for User :

(1) Quality: ☐ Good ☐ Fair ☐ Poor

(2) Quantity: ☐ Enough ☐ Short

(3) Delivery: ☐ Punctual ☐ Sometimes late ☐ Always late

(4) Technical Level of staff: ☐ High ☐ Middle ☐ Low

(5) Management: ☐ Good ☐ Fair ☐ Poor

(6) Entrepreneurship: ☐ Good ☐ Fair ☐ Poor

(Outline of Subcontracting Companies) number 4

1. Name of Company : _____

2. Address : _____

_____

Factory : _____

3. Number of Employees : _____ persons in total,

Number of engineers: _____

4. Amount of Capital : Rp. _____ million

5.

Supplied Component or Services	Quantity	Unit	Total Value (Rp/m)

6. Procurement : ☐ By order ☐ Constant procurement

7. Payment : ☐ By cash ☐ By credit ☐ month

8. Do you supply raw materials? ☐ Yes

☐ No

(Attachment number 4)

9. Kinds of Assistant your company provides :

(1) Financial: ☐ Equity (share) ☐ Loan

(2) Technical: ☐ Training ☐ Advisory ☐ Inspection

☐ Managerial

10. Major problems and obstacles for User :

(1) Quality: ☐ Good ☐ Fair ☐ Poor

(2) Quantity: ☐ Enough ☐ Short

(3) Delivery: ☐ Punctual ☐ Sometimes late ☐ Always late

(4) Technical Level of staff: ☐ High ☐ Middle ☐ Low

(5) Management: ☐ Good ☐ Fair ☐ Poor

(6) Entrepreneurship: ☐ Good ☐ Fair ☐ Poor

(Outline of Subcontracting Companies) number 5

1. Name of Company : _____

2. Address : _____

_____

Factory : _____

3. Number of Employees : _____ persons in total,

Number of engineers: _____

4. Amount of Capital : Rp. _____ million

5.

Supplied Component or Services	Quantity	Unit	Total Value (Rp/m)

6. Procurement : ☐ By order ☐ Constant procurement

7. Payment : ☐ By cash ☐ By credit ☐ month

8. Do you supply raw materials? ☐ Yes

☐ No

(Attachment number 5)

9. Kinds of Assistant your company provides :

(1) Financial: ☐ Equity (share) ☐ Loan

(2) Technical: ☐ Training ☐ Advisory ☐ Inspection ☐ Managerial

10. Major problems and obstacles for User :

(1) Quality: ☐ Good ☐ Fair ☐ Poor

(2) Quantity: ☐ Enough ☐ Short

(3) Delivery: ☐ Punctual ☐ Sometimes late ☐ Always late

(4) Technical Level of staff: ☐ High ☐ Middle ☐ Low

(5) Management: ☐ Good ☐ Fair ☐ Poor

(6) Entrepreneurship: ☐ Good ☐ Fair ☐ Poor

V. INCREASE OF DOMESTIC-MANUFACTURED COMPONENT

1. Please list those items currently imported but being planned or considered desirable to be procured from domestic manufacturers or suppliers.

No.	Name of Component Material & Services	Manufacturing Process	Number of Years Required for Domestic Procurement

VI. FUTURE PLAN

1. What is your future prospect of your company's product? What annual percentage your product's demand will be expected to be increased?

   In 5 years, _____%

   In 10 years, _____%

2. Do you have any plant expansion plan in the near future? If so, please explain :

   Product : _____

   Market : Domestic _____%

   Export _____%

   Investment : _____, in 19___.

3. What do you think you can help to develop sub-contracting or other linkage-type industries?

   Technical Assistance: ☐ Training ☐ Advisory

   ☐ Inspection ☐ Unable to help

4. Or do you have any request to the government for supporting program for linkage-type industries, which ultimately brings benefit? : ☐ Yes

   ☐ No

   If yes, which aspect?

   ☐ Technical ☐ Management ☐ Financial

   ☐ Marketing ☐ Others, specify:

   _____

   _____

   _____

5. If the government provides low-interest loan attached with technical, marketing and managerial assistance for linkage-type industries, do you think it will be effective for them and for your procurement?

☐ Effective ☐ Not effective

☐ It depends on the conditions of _____

_____

_____

_____

6. What do you expect from financial & technical aid from Japanese government?

_____

_____

_____

_____

Thank you for your cooperation. These data you provided will form a valuable basis to plan industrialization program of the Republic of Indonesia.

Province :

Number :

QUESTIONNAIRE SHEET

SURVEY FOR LINKAGE-TYPE INDUSTRIES

PART II

FOR MEDIUM AND SMALL LINKAGE-TYPE INDUSTRIES

JUNE - AUGUST, 1985

DEPARTMENT OF INDUSTRY R.I.

IN COOPERATION WITH

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

This questionnaire sheet is addressed to small and medium scale industries or subcontractors who are currently or will be taking sub-contracting works from large or parent companies.

The data collected here will be kept confidential and not be used for any other purposes than planning development strategies, creating better environment for and establishing technical and financial aid program for linkage-type industries.

Name of Interviewer : _____
(name)

_____
(position)

Name of Interviewer : _____
(name)

_____
(position)

Place and date of interview, _____, 1985

I. GENERAL

1. Name of Company : _____

2. Address Head Office: _____

   Factory : _____

3. Established in : _____

4. Previous Job of Entrepreneur (please check)

   ☐ Government Official ☐ State-owned company

   ☐ Foreign joint venture company

   ☐ Medium or small industry of other products

   ☐ Trader ☐ Technical Training Institution

   ☐ University ☐ Others, specify:

   _____

   _____

   _____

5. Capital

   (1) Fixed asset amount (excluding land & building)

   Rp. _____

   (2) Working Capital amount: Rp. _____

   (3) Ownership: Entrepreneur and family _____%

   Parent company _____%

   Others _____%

6. Number of Employees

   Total : _____ Engineers: _____

   Technician: _____ Accountant _____

   Bookkeeping : _____

7. Major Process: (Please)

☐ Casting ☐ Plating ☐ Heat Treatment

☐ Presswork ☐ Forging ☐ Machine Assembly

☐ Precision Machining ☐ Sheetwork & Welding

☐ Machining

☐ Others, specify

_____

_____

_____

8. Total Annual Sales in 1984: Rp. _____ million

II. PRODUCTS

1. Products made by order of Large/Parent Companies and government :

(in the year 1984)

No.	Name of Buyer	Kinds of Products	Unit	Quantity/ year	Unit Price (Rp)	Sales/y (Rp)
					Total	

2. Products made for general market & others :

No.	Market *	Name of Products	Unit	Quantity/ year	Unit Price (Rp)	Sales/y (Rp)
					Total	

* - Local
- Domestic
- Foreign (export)

3. Average capacity utilization rate (1984) : _____%

III. MATERIAL AND FACILITY

1. Components and Raw Material

Name of Components and Raw Material	Amount (Rp/month)		Name of Country (I) or Company (L)
	I*	L*	

* I = Import

L = Local

2. Major Machinery/Equipment

Name of Machinery/Equipment	Quantity	Purchase Price (Rp)	Its Age (Old)

IV. PROBLEMS AND CONDITIONS WITH PARENT COMPANY

1. Quality : ☐ Too complicated ☐ Not Complicated ☐ Easy
2. Quantity : ☐ Too much ☐ Not much ☐ Too little
3. Delivery schedule: ☐ Very strict ☐ Not strict
4. Payment Condition: ☐ Delay ☐ No delay
5. Financial Support: ☐ Yes ☐ No
6. Technical Support: ☐ Yes ☐ No

V. PROBLEMS FACED BY YOUR COMPANY

1. Production Aspect

(1) Is production capacity enough ?

☐ Yes ☐ No

If no, how much do you need to invest?

Rp. _____ (million)

(2) Is raw material easily obtained?

☐ Yes ☐ No

From where do you get?
- ☐ General market
- ☐ Company making orders
- ☐ Special supplier
- ☐ Others, specify: _____

(3) Do you make enough surplus fund to be invested in the future?

_____

_____

2. Technical Aspect

(1) How is your workers' technical level?

☐ High ☐ Middle ☐ Low

(2) What kind of technical improving support from government or parent company?

From Government ☐ Advisory ☐ Training ☐ Inspection
☐ Others _____

From Company ☐ Advisory ☐ Training ☐ Inspection
☐ Others _____

3. Financial Aspect

(1) Please list your sources of loan at present and in the past 5 years.

☐ State and Private Banks:

_____

_____

_____

_____

☐ State and Private Financial Institution:

_____

_____

_____

_____

☐ Other sources:

_____

_____

_____

_____

No.	Type of Loan	* Lender	I **	W **	Total Rp	Period		Annual Interest Rate	*** Type of Collateral
						From	To		
	K.I.K.								
	K.M.K.P.								
	KIB I (Kelayakan)								
1.									
2.									
	KIB II								
1.									
2.									
	KIB III								
1.									
2.									
	KIB IV								
1.									
2.									
	Others								
1.									
2.									

* *Name of Banks, financial institution and other informal financiers.*

** I = Investment capital

W = Working capital

*** Type of collateral (1. Land
(2. Building
(3. Machinery
(4. Others

(2) Please give your opinions to the present financial system.

A. State Banks

a. Interest: ☐ Acceptable ☐ Too high.... If so,

What is your desirable rate?

- For investment capital _____% per year
- For working capital _____% per year

b. Period: ☐ Acceptable ☐ Too short.... If so,

What is your desirable period?

- For investment capital _____ years
- For working capital _____ years

c. Amount: ☐ Enough ☐ Too smal If so,

What is your desirable amount?

- For investment capital: Rp. _____
- For working capital : Rp. _____

d. Collateral:

☐ Acceptable ☐ Too severe If so,

What is your desirable collateral amount?

_____% of loan amount.

B. Other Financial Institution

a. Interest rate: ☐ Acceptable ☐ Too high
b. Period : ☐ Acceptable ☐ Too short
c. Amount : ☐ Enough ☐ Too small
d. Collateral : ☐ Acceptable ☐ Too severe

C. Informal Lending

a. Interest rate: ☐ Acceptable ☐ Too high

b. Period : ☐ Acceptable ☐ Too short

c. Amount : ☐ Enough ☐ Too small

d. Collateral : ☐ Acceptable ☐ Too severe

VII. FUTURE PLAN

1. How much of demand-increase is expected for your product in :

   5 years, _____% each year

   10 years, _____% each year

2. Do you have a specific plan to expand your production?

   ☐ Yes ☐ No

   If "yes", please give details

   Total investment amount : Rp. _____ million

   of which self financing : Rp. _____ million

   Loan : Rp. _____ million

   When will it be implemented? in _____ years

3. List name of machinery required

Name of Machinery/Facility	Quantity	Approx. Price (Rp)

3. What do you request to large industries or parent company for improving inter-linkage with your company?

☐ Technical Support ☐ Financial Support

☐ Others, specify: _____

_____

_____

4. In order to increase contracts with large or parent companies, what do you request to the government to assist you?

☐ Financial support by "loan"

☐ Other financial support, specify : _____

☐ Technical training

☐ Managerial training

☐ Marketing support

☐ Others, specify: _____

Thank you for your cooperation. These data and comments you provided will be kept confidential and not be used other objects than planning industrialization program particularly for linkage-type industries in the Republic of Indonesia.

CODE	D E S C R I P T I O N		QUANTITY	%	VALIDITY
10000	BASIC INFORMATION				
10100	NOS. OF ANSWERS				55
	1 DKI JAKARTA		23	41.8	
	2 WEST JAWA		11	20.0	
	3 CENTRAL JAWA		2	3.6	
	4 EAST JAWA		10	18.2	
	5 SUMATRA		4	7.3	
	6 KALIMANTAN		2	3.6	
	7 SULAWESI		3	5.5	
		TOTAL	55	100.0	
10200	NOS. OF EMPLOYEES/COMPAMY				55
10201	ENGINEERS		8.6	1.8	
10202	TECHNICIANS		120.2	25.6	
10203	WORKERS & OTHERS		341.2	72.6	
		TOTAL	470.0	100.0	
10300	OWNERSHIP & OTHERS				
10301	PAID-UP SHARE CAPITAL -MMRP-		4792.7		53
10302	FIXED CAPITAL -MMRP-		7892.0		51

CODE	D E S C R I P T I O N		QUANTITY	%	VALIDITY
10303	STATUS OF THE COMPANY				54
	1 GOVERNMENTAL		15	27.8	
	2 LOCAL		39	72.2	
	3 JOINT VENTURE		17	31.5	
		TOTAL	71	131.5	
10304	ESTABLISHED IN -AVERAGE-		1969.9		54
10400	ANNUAL SALES/COMPANY		10817.0		44
10500	ANNUAL MATERIAL COST/COMPANY -MMRP-				32
10501	IMPORT(COMPONENT)		2477.0	47.5	
10502	IMPORT(MATERIAL)		1106.1	21.2	
10503	DOMESTIC(COMPONENT)		827.7	15.9	
10504	DOMESTIC(MATERIAL)		806.4	15.5	
		TOTAL	5217.2	100.0	

CODE	D E S C R I P T I O N	QUANTITY	%	VALIDITY
20000	PRODUCTION & RATIOS			
20100	CAPACITY UTILZATION -%-	59.6		40
20200	VALUE ADDED			31
20201	PER COMPANY -MMRP-	3681.2		
20202	PER EMPLOYEE -MRP-	6788.9		
20300	FIXED ASSETS/EMPLOYEE -MRP-	9972.2		51

CODE	D E S C R I P T I O N	QUANTITY	%	VALIDITY
30000	SIZE OF ENTERPRISES			
30100	NOS OF EMPLOYEES -COMPANIES-			55
1	BELOW 50	5	9.1	
2	50 TO 99	8	14.5	
3	100 TO 199	8	14.5	
4	200 TO 299	13	23.6	
5	300 TO 499	9	16.4	
6	500 TO 999	4	7.3	
7	1000 AND ABOVE	8	14.5	
	TOTAL	55	100.0	
30200	PAID-UP SHARE CAPITAL-COMPANIES(MMRP)-			53
1	BELOW 100	6	11.3	
2	100 TO 500	11	20.8	
3	500 TO 1000	8	15.1	
4	1000 TO 2000	2	3.8	
5	2000 TO 5000	12	22.6	
6	5000 TO 10000	7	13.2	
7	10000 ABOVE	7	13.2	
	TOTAL	53	100.0	
30300	FIXED ASSETS/COMPANY -COMPANIES-			51
1	BELOW 70 MMRP	1	2.0	
2	70 TO 100 MMRP	2	3.9	
3	100 TO 500 MMRP	12	23.5	
4	500 TO 1000 MMRP	6	11.8	
5	ABOVE 1000	30	58.8	
	TOTAL	51	100.0	

CODE	D E S C R I P T I O N	QUANTITY	%	VALIDITY
30400	FIXED ASSETS/EMPLOYEE-COMPANIES(MMRP)-			51
1	BELOW 0.64	1	2.0	
2	0.64 TO 1.00	2	3.9	
3	1.00 TO 10.00	32	62.7	
4	10.00 TO 50.00	14	27.5	
5	ABOVE 50.00	2	3.9	
	TOTAL	51	100.0	

CODE	DESCRIPTION	QUANTITY	%	VALIDITY
40000	PRODUCTS & MARKET			
40100	INDUSTRIAL CATEGORY -COMPANIES-			54
1	MACHINE TOOL	5	9.3	
2	AGRICULTURE M/C	7	13.0	
3	HEAVY.CONST. M/C	3	5.6	
4	PROCESS EQUIP	3	5.6	
5	ELECTRICAL M/C	9	16.7	
6	SHIP,BUDG M/C	9	16.7	
7	AUTOMOTIVE	17	31.5	
8	MOTORCYCLE	4	7.4	
9	OTHERS	16	29.6	
	TOTAL	73	135.2	
40200	MAJOR CLIENT			36
1	PUBLIC SECTOR	13	36.1	
2	SOLE AGENT/DEALR	16	44.4	
3	ASSEMBLER	7	19.4	
4	CONSUMER/RETAILR	13	36.1	
5	EXPORT	0	0.0	
	TOTAL	49	136.1	
40300	NOS. OF SUB-CONTRACTORS/COMPANY	4.9		37

CODE	D E S C R I P T I O N		QUANTITY	%	VALIDITY
50000	FUTURE PLAN				
50100	EXPANSION PLAN				25
	1 YES		23	92.0	
	2 NO		2	8.0	
		TOTAL	25	100.0	
50200	EXPECTED YEAR		1986.1		20
50300	ESTIMATED INVESTMENT -MMRS-		13725.4		19
50400	TARGET MARKET -COMPANIES-				22
	1 DOMESTIC		22	100.0	
	2 EXPORT		6	27.3	
		TOTAL	28	127.3	
50500	EXPECTED MARKET GROWTH				
50501	FIVE YEAR *AVERAGE* -%-		74.1		23
	1 BELOW 10%		0	0.0	
	2 10% TO 20%		3	13.0	
	3 20% TO 30%		7	30.4	
	4 30% TO 40%		0	0.0	
	5 40% ABOVE		13	56.5	
		TOTAL	23	100.0	
50502	TEN YEAR *AVERAGE* -%-		132.1		19
	1 BELOW 20%		0	0.0	
	2 20% TO 40%		3	15.8	
	3 40% TO 60%		4	21.1	
	4 60% TO 80%		3	15.8	
	5 80% ABOVE		9	47.4	
		TOTAL	19	100.0	

CODE	DESCRIPTION	QUANTITY	%	VALIDITY
50600	ASSISTANCE TO SUB-CON BY COMPANY			40
	1 TRANING	22	55.0	
	2 ADVISORY	32	80.0	
	3 INSPECTION	25	62.5	
	4 UNABLE	2	5.0	
	TOTAL	81	202.5	
50700	ASSISTANCE TO SUB-CON BY GOVERNMENT			34
	1 TECHNICAL	20	58.8	
	2 MANAGEMENT	16	47.1	
	3 FINANCIAL	29	85.3	
	4 MARKET	26	76.5	
	5 OTHERS	10	29.4	
	TOTAL	101	297.1	
50800	INSTITUTIONAL LOAN TO SUB-CON			39
	1 EFFECTIVE	37	94.9	
	2 NOT EFFECTIVE	1	2.6	
	3 WITH CONDITION	3	7.7	
	TOTAL	41	105.1	

CODE	D E S C R I P T I O N	QUANTITY	%	VALIDITY
60000	SUB-CON FROM PARENT COMPANY'S VIEW			
60100	NOS OF SUB-CONTRATORS	181		
60200	NOS OF EMPLOYEES *AVERAGE*	135.3		91
60300	NOS OF EMPLOYEES *DISTRIBUTION*			91
1	BELOW 5	1	1.1	
2	5 TO 19	24	26.4	
3	20 TO 49	22	24.2	
4	50 TO 99	12	13.2	
5	100 TO 199	8	8.8	
6	200 AND ABOVE	24	26.4	
	TOTAL	91	100.0	
60400	SIZE OF CAPITAL *AVERAGE* -MMRP-	879.8		57
60401	SIZE OF CAPITAL -DISTRIBUTION(MMRP)-			57
1	BELOW 70	28	49.1	
2	70 TO 100	2	3.5	
3	100 TO 500	16	28.1	
4	500 TO 1000	2	3.5	
5	ABOVE 1000	9	15.8	
	TOTAL	57	100.0	

CODE	DESCRIPTION	QUANTITY	%	VALIDITY
60500	LINKAGE			
60501	FIELD OF LINKAGE -COMPANIES-			163
1	CASTING	30	18.4	
2	FORGING/HEAT TR.	12	7.4	
3	SHEETWORK/WELD	63	38.7	
4	PLATING	13	8.0	
5	MACHINING	38	23.3	
6	PRESS WORK	46	28.2	
7	NON-METAL	43	26.4	
8	SERVICES	17	10.4	
	TOTAL	262	160.7	
60502	TYPE OF PROCUREMENT -COMPANIES-			166
1	BY-ORDER	100	60.2	
2	CONSTANT	66	39.8	
	TOTAL	166	100.0	
60503	PAYMENT METHOD -COMPANIES-			167
1	CASH	78	46.7	
2	CREDIT	90	53.9	
	TOTAL	168	100.6	
60504	RAW MATERIAL SUPPLY FROM P.COMPANY			165
1	YES	40	24.2	
2	NO	125	75.8	
	TOTAL	165	100.0	
60505	FINANCIAL ASSISTANT TO SUB-CON			32
1	EQUITY	5	15.6	
2	CREDIT	27	84.4	
	TOTAL	32	100.0	

CODE	DESCRIPTION	QUANTITY	%	VALIDITY
60506	TECHNICAL ASSISTANT TO SUB-CON			139
	1 TRAINING	32	23.0	
	2 ADVISORY	113	81.3	
	3 INSPECTION	88	63.3	
	4 MANAGEMENT	23	16.5	
	TOTAL	256	184.2	
60600	MAJOR PROBLEMS & OBSTACLES IN SUB-CON			
60601	QUALITY OF PRODUCTS			167
	1 GOOD	67	40.1	
	2 FAIR	97	58.1	
	3 POOR	3	1.8	
	TOTAL	167	100.0	
60602	PRODUCTION CAPABILITY (QUANTITY)			164
	1 ENOUGH	158	96.3	
	2 SHORT	6	3.7	
	TOTAL	164	100.0	
60603	DELIVERY OF PRODUCTS			163
	1 PUNCTUAL	89	54.6	
	2 SOMETIMES LATE	71	43.6	
	3 ALWAYS LATE	3	1.8	
	TOTAL	163	100.0	
60604	TECHNICAL LEVEL			154
	1 HIGH	59	38.3	
	2 MIDDLE	93	60.4	
	3 LOW	2	1.3	
	TOTAL	154	100.0	

CODE	DESCRIPTION	QUANTITY	%	VALIDITY
60605	MANAGEMENT CAPABILITY			149
	1 GOOD	46	30.9	
	2 FAIR	85	57.0	
	3 POOR	18	12.1	
	TOTAL	149	100.0	
60606	ENTREPRENEURSHIP			141
	1 GOOD	51	36.2	
	2 FAIR	80	56.7	
	3 POOR	10	7.1	
	TOTAL	141	100.0	

CODE	DESCRIPTION		QUANTITY	%	VALIDITY
10000	BASIC INFORMATION				
10100	NOS. OF ANSWERS				219
	1 DKI JAKARTA		48	21.9	
	2 WEST JAWA		61	27.9	
	3 CENTRAL JAWA		31	14.2	
	4 EAST JAWA		72	32.9	
	5 SUMATRA		3	1.4	
	6 KALIMANTAN		2	0.9	
	7 SULAWESI		2	0.9	
		TOTAL	219	100.0	
10200	NOS. OF EMPLOYEES/COMPAMY				217
10201	ENGINEERS		0.9	1.3	
10202	TECHNICIANS		7.2	10.1	
10203	WORKERS & OTHERS		63.1	88.6	
		TOTAL	71.2	100.0	
10300	ASSETS/COMPANY -MMRP-				201
10301	FIXED ASSETS		329.7	54.5	
10302	WORKING CAPITAL		275.7	45.5	
		TOTAL	605.3	100.0	

CODE	D E S C R I P T I O N	QUANTITY	%	VALIDITY
10400	ANNUAL SALES/COMPANY -MMRP-	803.8		210
10500	ANNUAL MATERIAL COST/COMPANY -MMRP-			149
10501	IMPORT(COMPONENT)	114.6	27.4	
10502	IMPORT(MATERIAL)	85.5	20.4	
10503	DOMESTIC(COMPONENT)	3.2	0.8	
10504	DOMESTIC(MATERIAL)	215.6	51.5	
	TOTAL	418.8	100.0	
10600	ESTABLISHED IN -AVERAGE-	1973.9		213

CODE	D E S C R I P T I O N	QUANTITY	%	VALIDITY
20000	PRODUCTION & RATIOS			
20100	CAPACITY UTILIZATION -%-	68.8		205
20200	VALUE ADDED			164
20201	PER COMPANY -MMRP-	414.8		
20202	PER EMPLOYEE -MRP -	3193.6		
20300	FIXED ASSETS/EMPLOYEE -MRP-			206
20301	FIXED ASSETS -MRP-	3415.4		
20302	TOTAL ASSETS -MRP-	6128.8		

CODE	D E S C R I P T I O N	QUANTITY	%	VALIDITY
30000	SIZE OF ENTERPRISES			
30100	NOS. OF EMPLOYEES -COMPANIES-			217
1	BELOW 5	6	2.8	
2	5 TO 19	69	31.8	
3	20 TO 49	59	27.2	
4	50 TO 99	40	18.4	
5	100 TO 199	24	11.1	
6	200 AND ABOVE	19	8.8	
	TOTAL	217	100.0	
30200	FIXED ASSETS/COMPANY -COMPANIES(MMRP)-			206
1	BELOW 70	120	58.3	
2	70 TO 100	20	9.7	
3	100 TO 500	51	24.8	
4	500 TO 1000	3	1.5	
5	ABOVE 1000	12	5.8	
	TOTAL	206	100.0	
30300	FIXED ASSETS/EMPLOYEE COMPANIES(MMRP)			206
1	BELOW 0.64	69	33.5	
2	0.64 TO 1.00	23	11.2	
3	1.00 TO 10.00	105	51.0	
4	10.00 TO 50.00	8	3.9	
5	ABOVE 50.00	1	0.5	
	TOTAL	206	100.0	

CODE	D E S C R I P T I O N	QUANTITY	%	VALIDITY
40000	ENTREPRENEUR			
40100	BACKGROUND OF OWNER -COMPANIES-			216
1	GOVERNMENT	7	3.2	
2	STATE COMPANY	7	3.2	
3	FOREIGN J/V	7	3.2	
4	S & M SCALE IND.	51	23.6	
5	TRADER	106	49.1	
6	TECH. INSTITUTE	5	2.3	
7	UNIVERSITY	18	8.3	
8	OTHERS	39	18.1	
	TOTAL	240	111.1	
40200	OWNERSHIP -COMPANIES-			216
1	ENTREPREN+FAMILY	198	96.1	
2	PARENT COMPANY	3	1.5	
3	OTHERS	40	19.4	
	TOTAL	241	117.0	

CODE	DESCRIPTION	QUANTITY	%	VALIDITY
50000	LINKAGE			
50100	MAJOR PROCESS USED -COMPANIES-			219
1	CASTING	61	27.9	
2	FORGING/HEAD TR.	52	23.7	
3	SHEETWORK/WELD.	102	46.6	
4	PLATING	68	31.1	
5	MACHINING	163	74.4	
6	PRESS WORK	89	40.6	
7	NON-METAL	0	0.0	
8	SERVICES	2	0.9	
	TOTAL	537	245.2	
50200	MARKET FOR THE COMPANY -MMRP/YR-			210
50201	DIRECT SALES TO LINKAGED COMPANY	271.7	33.8	
50202	SALES TO GENERAL MARKET	532.1	66.2	
	TOTAL	803.8	100.0	
50300	INDUSTRIAL CATEGORY FOR (50201)			76
1	MACHINE TOOL	2	2.6	
2	AGRICULTURE M/C	17	22.4	
3	HEAVY;CONST. M/C	7	9.2	
4	PROCESS EQUIP.	10	13.2	
5	ELECTRIC M/C	18	23.7	
6	SHIP;BLDG M/C	5	6.6	
7	AUTOMOTIVE	19	25.0	
8	MOTORCYCLE	7	9.2	
9	OTHERS	22	28.9	
	TOTAL	107	140.8	

CODE	DESCRIPTION		QUANTITY	%	VALIDITY
50400	INDUSTRIAL CATEGORY FOR (50202)				179
	1	MACHINE TOOL	5	2.8	
	2	AGRICULTURE M/C	23	12.8	
	3	HEAVY,CONST. M/C	7	3.9	
	4	PROCESS EQUIP.	11	6.1	
	5	ELECTRIC M/C	39	21.8	
	6	SHIP,BLDG M/C	4	2.2	
	7	AUTOMOTIVE	40	22.3	
	8	MOTORCYCLE	20	11.2	
	9	OTHERS	85	47.5	
		TOTAL	234	130.7	
50500	SEVERITY REQUIRED BY PARENT COMPANY				
50501	QUALITY -COMPANIES-				90
	1	SEVERE	7	7.8	
	2	ORDINARY	69	76.7	
	3	EASY	14	15.6	
		TOTAL	90	100.0	
50502	QUANTITY -COMPANIES-				87
	1	TOO MUCH	2	2.3	
	2	NOT MUCH	64	73.6	
	3	LITTLE	21	24.1	
		TOTAL	87	100.0	
50503	DELIVERY -COMPANIES-				86
	1	STRICT	24	27.9	
	2	ORDINARY	62	72.1	
		TOTAL	86	100.0	

CODE	DESCRIPTION	QUANTITY	%	VALIDITY
50504	PAYMENT -COMPANIES-			87
	1 DELAY	31	35.6	
	2 PUNCTUAL	56	64.4	
	TOTAL	87	100.0	
50600	ASSISTANCE PROVIDED BY PARENT COMPANY			
50601	FINANCIAL SUPPORT			87
	1 YES	28	32.2	
	2 NO	59	67.8	
	TOTAL	87	100.0	
50602	TECHNICAL ASSISTANCE			87
	1 YES	22	25.3	
	2 NO	65	74.7	
	TOTAL	87	100.0	

CODE	D E S C R I P T I O N	QUANTITY	%	VALIDITY
60000	OPERATION OF THE COMPANY			
60100	FACILITIES			
60101	LAND AREA (SQ.M)	4023.9		153
60102	FACTORY BLDG. AREA (SQ.M)	1298.5		169
60103	MACHINERY & EQUIPMENT -CONPANIES-			213
	1 WELL EQUIPPED	41	19.2	
	2 FAIR	115	54.0	
	3 POOR	57	26.8	
	TOTAL	213	100.0	
60104	PRODUCTION CAPACITY *ENOUGH*			211
	1 YES	116	55.0	
	2 NO	95	45.0	
	TOTAL	211	100.0	
60200	EXPECTED TECH.ASSISTANCE BY GOVERNMENT			177
	1 ADVISORY	136	76.8	
	2 TRAINING	49	27.7	
	3 INSPECTION	69	39.0	
	4 OTHERS	5	2.8	
	TOTAL	259	146.3	
60300	EXPECTED TECH.ASSISTANCE BY PARENT CO.			85
	1 ADVISORY	44	51.8	
	2 TRAINING	12	14.1	
	3 INSPECTION	58	68.2	
	4 OTHERS	5	5.9	
	TOTAL	119	140.0	

CODE	DESCRIPTION	QUANTITY	%	VALIDITY
60400	SKILL OF WORKERS -COMPANIES-			215
	1 HIGH	73	34.0	
	2 MIDIUM	129	60.0	
	3 LOW	13	6.0	
	TOTAL	215	100.0	
60500	OTHERS -COMPANIES-			
60501	BOOKKEEPING			206
	1 YES	155	75.2	
	2 NO	51	24.8	
	TOTAL	206	100.0	
60502	MATERIALS *AVAILABLE*			211
	1 YES	189	89.6	
	2 NO	22	10.4	
	TOTAL	211	100.0	
60503	OWN FUND *AVAILABLE*			193
	1 YES	72	37.3	
	2 NO	121	62.7	
	TOTAL	193	100.0	

CODE	D E S C R I P T I O N		QUANTITY	%	VALIDITY
70000	FUTURE PLAN				
70100	EXPANSION PLAN				219
	1 YES		159	72.6	
	2 NO		60	27.4	
		TOTAL	219	100.0	
70200	EXPECTED YEAR		1987.4		112
70300	CAPITAL REQUIREMENT (TOTAL)	-MMRP-			
70301	EXPECTED INVESTMENT		84038.9		121
70302	EXPECTED SELF FINANCE		8627.9	29.5	108
70303	EXPECTED LOAN		20585.5	70.5	111
70400	CAPITAL REQUIREMENT (AVERAGE)	-MMRP-			
70401	EXPECTED INVESTMENT		694.5		121
70402	EXPECTED SELF FINANCE		79.9	30.1	108
70403	EXPECTED LOAN		185.5	69.9	111

CODE	D E S C R I P T I O N	QUANTITY	%	VALIDITY
70500	EXPECTED MARKET GROWTH			
70501	FIVE YEAR *AVERAGE* -%-	51.5		165
1	BELOW 10%	1	0.6	
2	10% TO 20%	11	6.7	
3	20% TO 30%	46	27.9	
4	30% TO 40%	9	5.5	
5	40% ABOVE	98	59.4	
	TOTAL	165	100.0	
70502	TEN YEAR *AVERAGE* -%-	119.3		133
1	BELOW 20%	0	0.0	
2	20% TO 40%	0	0.0	
3	40% TO 60%	31	23.3	
4	60% TO 80%	21	15.8	
5	80% ABOVE	81	60.9	
	TOTAL	133	100.0	
70600	ASSISTANCE EXPECTED BY COMPANY			
70601	FROM PARENT COMPANY			163
1	TECHNICAL	94	57.7	
2	FINANCIAL	81	49.7	
3	OTHERS	71	43.6	
	TOTAL	246	150.9	
70602	FROM GOVERNMENT			192
1	SUPPORT BY LOAN	124	64.6	
2	ETC FIN. SUPPORT	32	16.7	
3	TECH. TRAINING	95	49.5	
4	MANAGE TRAINING	76	39.6	
5	MARKET SUPPORT	163	84.9	
6	OTHERS	20	10.4	
	TOTAL	510	265.6	

CODE	DESCRIPTION		KIK (INVEST)	KMKP (W / C)	KIB (INVEST)	OTHER (INVEST)	OTHER (W / C)	TOTAL
80000	FINANCIAL ASPECT							
80100	PRESENT BORROWINGS							
80101	NOS. OF BORROWERS		37	53	17	7	21	135
80102	BORROWINGS -MMRP-		443.5	777.0	9062.0	18108.0	9902.6	38293.1
		PERCENTAGE	1.2	2.0	23.7	47.3	25.9	100.0
80103	AVERAGED BORROWING -MMRP-		12.0	14.7	533.1	2586.9	471.6	3618.1
		PERCENTAGE	0.3	0.4	14.7	71.5	13.0	100.0
80104	INTEREST RATE -%-		12.0	12.0	12.0	19.5	33.3	
80105	COLLATERAL -COMPANIES-							
	1	LAND	25	41	9	2	8	85
	2	BUILDING	4	3	8	2	5	22
	3	MACHINERY	6	5	0	1	3	15
	4	OTHERS	2	4	4	2	6	18
		TOTAL	37	53	21	7	22	140
80106	BANK -NOS. OF BORROWERS-							
	1	BK. NEGARA INDO	23	42	3	4	2	74
	2	BK. DAGAN NEGARA	1	2	2	0	0	5
	3	BK. BUMI DAYA	2	2	5	0	4	13
	4	BK. RAKYAT INDO	2	3	2	0	0	7
	5	BK. EXIM INDO	0	0	0	0	0	0
	6	BK.PENBANG.INDO	1	0	0	0	0	1
	7	BK.PENBANG DAERA	1	0	0	0	0	1
	8	PRIVATE BANK	6	5	5	7	14	37
	9	OTHERS	0	0	0	0	5	5
		TOTAL	36	54	17	11	25	143

CODE	D E S C R I P T I O N	QUANTITY	%	VALIDITY
80200	ACCEPTABILITY OF PRESENT CODITIONS			
80201	STATE BANK (INTEREST RATE)			178
	1 YES	128	71.9	
	2 NO	50	28.1	
	TOTAL	178	100.0	
80202	STATE BANK (REPAYMENT RERIOD)			173
	1 YES	121	69.9	
	2 NO	52	30.1	
	TOTAL	173	100.0	
80203	STATE BANK (LENDING AMOUNT)			152
	1 YES	85	55.9	
	2 NO	67	44.1	
	TOTAL	152	100.0	
80204	STATE BANK (COLLATERAL)			173
	1 YES	132	76.3	
	2 NO	41	23.7	
	TOTAL	173	100.0	
80205	OTHER FINANCIAL (INTEREST RATE)			83
	1 YES	30	36.1	
	2 NO	53	63.9	
	TOTAL	83	100.0	
80206	OTHER FINANCIAL (RERAYMENT PERIOD)			78
	1 YES	36	46.2	
	2 NO	42	53.8	
	TOTAL	78	100.0	

CODE	DESCRIPTION	QUANTITY	%	VALIDITY
80207	OTHER FINANCIAL (LENDING AMOUNT)			73
	1 YES	46	63.0	
	2 NO	27	37.0	
	TOTAL	73	100.0	
80208	OTHER FINANCIAL (COLLATERAL)			79
	1 YES	34	43.0	
	2 NO	45	57.0	
	TOTAL	79	100.0	
80209	INFORMAL LENDING(INTEREST RATE)			80
	1 YES	11	13.7	
	2 NO	69	86.2	
	TOTAL	80	100.0	
80210	INFORMAL LENDING(REPAYMENT PERIOD)			80
	1 YES	23	28.7	
	2 NO	57	71.2	
	TOTAL	80	100.0	
80211	INFORMAL LENDING(LENDING AMOUNT)			78
	1 YES	43	55.1	
	2 NO	35	44.9	
	TOTAL	78	100.0	
80212	INFORMAL LENDING(COLLATERAL)			87
	1 YES	23	26.4	
	2 NO	64	73.6	
	TOTAL	87	100.0	

CODE	D E S C R I P T I O N		QUANTITY	%	VALIDITY
80301	INTEREST RATE (INVEST.)	-%-	9.2		39
80302	INTEREST RATE (W / C)	-%-	11.3		45
80303	REPAYMENT PERIOD (INVEST.)	-YEARS-	6.9		44
80304	REPAYMENT PERIOD (W / C)	-YEARS-	5.0		52
80305	LENDING AMOUNT (INVEST.)	-MMRP-	162.9		47
80306	LENDING AMOUNT (M / C)	-MMRP-	234.4		53
80307	COLLATERAL (INVEST.) % OF AMOUNT		62.8		36
80308	COLLATERAL (W / C) % OF AMOUNT		0.0		0
80400	DESIRABLE CONDITION(INVESTMENT)				
80401	INTEREST RATE				39
	1 BELOW 5%		4	10.3	
	2 5% TO 10%		16	41.0	
	3 10% TO 15%		16	41.0	
	4 15% ABOVE		3	7.7	
		TOTAL	39	100.0	
80402	REPAYMENT PERIOD				44
	1 BELOW 3YRS		0	0.0	
	2 3 TO 5YRS		1	2.3	
	3 5YRS ABOVE		43	97.7	
		TOTAL	44	100.0	

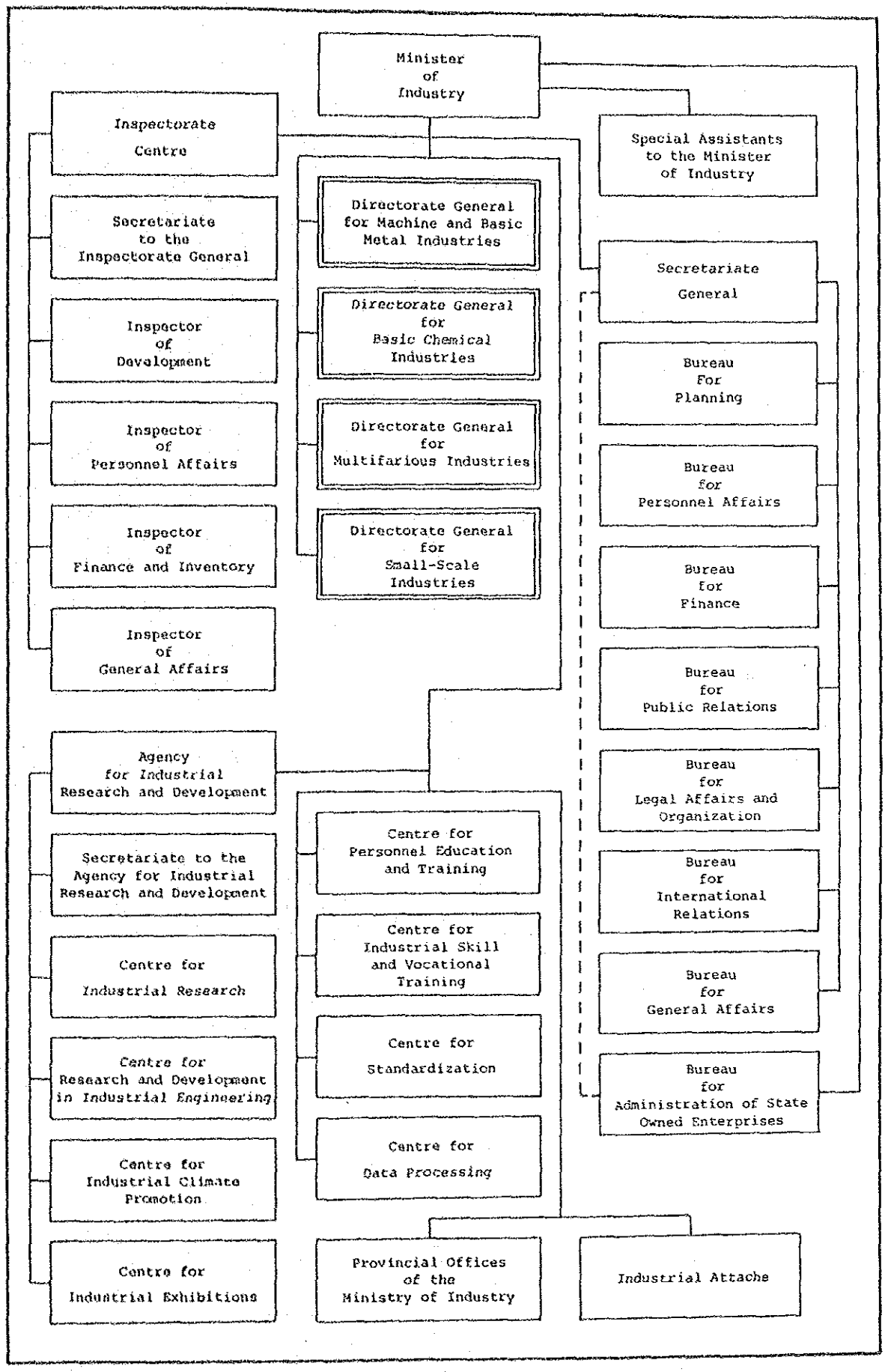
CODE	DESCRIPTION	QUANTITY	%	VALIDITY
80403	LENDING AMOUNT -MMRP-			47
	1 BELOW 50	21	44.7	
	2 50 TO 100	5	10.6	
	3 100 TO 150	3	6.4	
	4 150 TO 200	1	2.1	
	5 200 ABOVE	17	36.2	
	TOTAL	47	100.0	
80404	COLLATERAL			36
	1 BELOW 30%	14	38.9	
	2 30% TO 50%	1	2.8	
	3 50% TO 70%	6	16.7	
	4 70% ABOVE	15	41.7	
	TOTAL	36	100.0	
80500	DESIRABLE CONDITION(WORING COPITAL)			
80501	INTEREST RATE			45
	1 BELOW 5%	2	4.4	
	2 5% TO 10%	11	24.4	
	3 10% TO 15%	21	46.7	
	4 15% ABOVE	11	24.4	
	TOTAL	45	100.0	
80502	REPAYMENT PERIOD			52
	1 BELOW 3YRS	5	9.6	
	2 3 TO 5YRS	14	26.9	
	3 5YRS ABOVE	33	63.5	
	TOTAL	52	100.0	

CODE	D E S C R I P T I O N	QUANTITY	%	VALIDITY
80503	LENDING AMOUNT -MMRP-			53
	1 BELOW 50	27	50.9	
	2 50 TO 100	10	18.9	
	3 100 TO 150	3	5.7	
	4 150 TO 200	1	1.9	
	5 200 ABOVE	12	22.6	
	TOTAL	53	100.0	
80504	COLLATERAL			0
	1 BELOW 30%	0	0.0	
	2 30% TO 50%	0	0.0	
	3 50% TO 70%	0	0.0	
	4 70% ABOVE	0	0.0	
	TOTAL	0	0.0	

ANNEX V BACK DATA FOR DELETETION PROGRAM

Figure ANX V-1

ORGANIZATION CHART OF THE MINISTRY OF INDUSTRY



Note: See next page for sub-organization chart of the each Directorate General (D.G.).

Figure ANX V-2

ORGANIZATION CHART OF EACH DIRECTORATE GENERAL

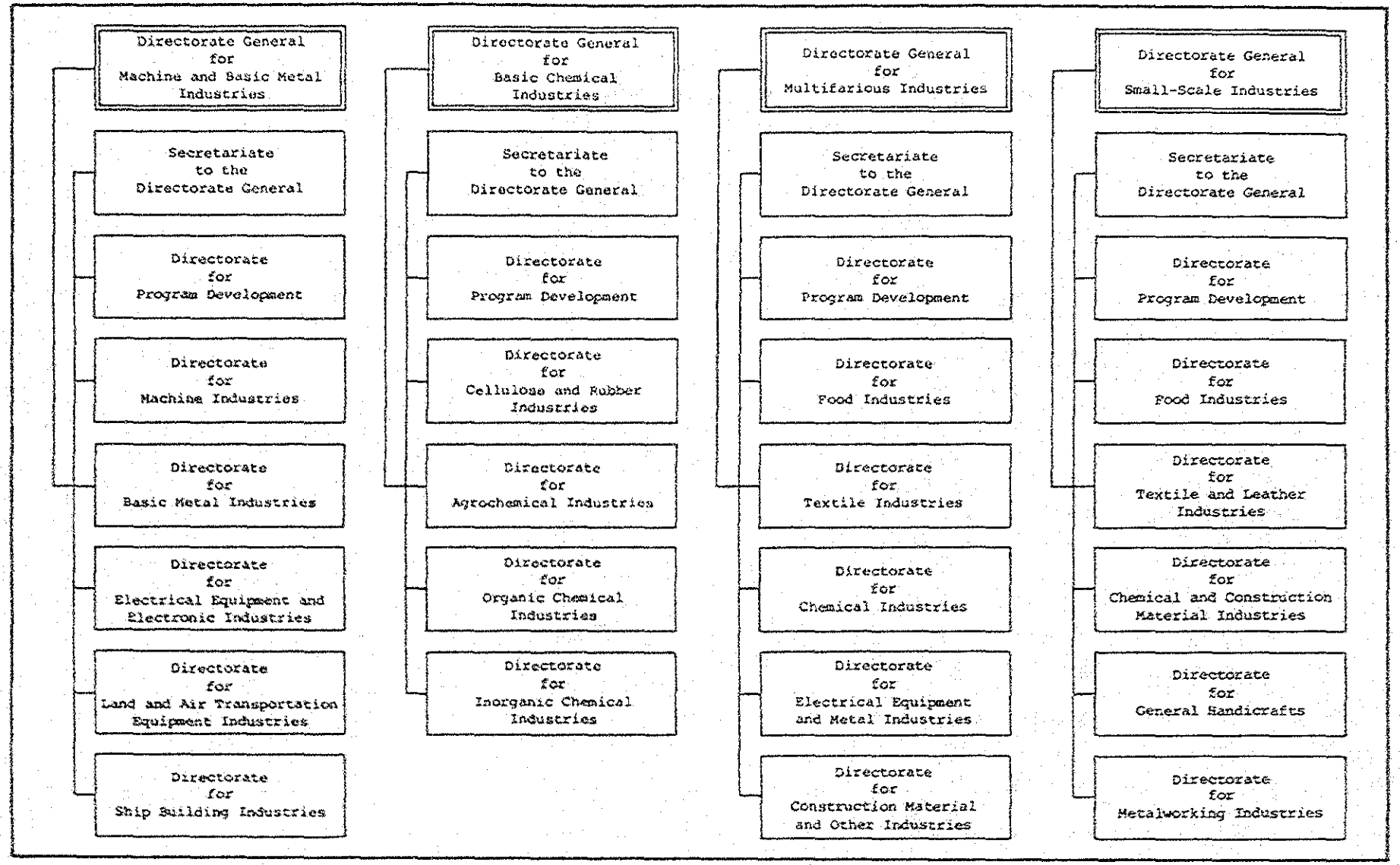


Table ANX V-1

LIST OF COMPANIES APPOINTED TO PRODUCE MACHINE TOOLS

No.	Names of Companies	Kinds of Machines	Maximum Specifications (mm, Ton)	Totals of Annual Production (Units)
1	PT (Persero) IMPI	Lathes	Centre distance 1500 Centre height 200	400
2	PT PIMSF	1. Drill combination fries machine,	Table size 240 x 600 Bit diameter 32	500
		2. Stationary drilling machine	Bit diameter 13	2,100
		3. Plate rolling machine	Plate size 2500 x 3	500
		4. Plate folding machine	Plate size 2500 x 2	400
		5. Shearing machine	Plate size 1270 x 2	400
		6. Punching machine	Pressure 3 Plate thickness 3	200
		7. Press folding machine	Pressure	100
		8. Column drilling machine	Bit diameter ø 30	200
3	PT SARANA IDEA UTAMA	1. Lathes	Centre distance 1500 Centre height 180	300
		2. Shearing machine	Plate size 1270 x 2	400
		3. Plate rolling machine	Plate size 2500 x 3	400
		4. Plate folding machine	Plate size 2500 x 2	400
		5. Pipe bending machine	Pipe size diameter 50	400
4	PT SUMBER BAHAGIA	1. Lathes	Centre distance 1500 centre height 180	300
		2. Stationary drilling machine	Bit diameter 13	600
		3. Forging machine	Pressure 30	100
		4. Punching machine	Pressure 3 Plate thickness 3	300
5	PT CIPTA KARYA	Stationary drilling machine	Bit diameter 13	400
6	PT MEDAN GERAK JAYA	1. Forging machine	Pressure 250	150
		2. Shearing machine	Plate size 250 x 5	150
		3. Stationary drilling machine	Bit diameter 13	500
		4. Press folding machine	Pressure 80	150
		5. Knee type freis machine	Size 250 x 1200	100
7	PT BINTANG MAS INDUSTRI	1. Forging machine	Pressure 250	1,000
		2. Lathes	Centre distance 150 Centre height 180	300
8	PT OYAHA	1. Sawing machine	Material diameter 180	750
		2. Surface grinding machine	Table size 220 x 500	50
		3. Column drilling machine	Bit diameter ø 30	75
9	PT TOOLS INDONESIA	1. Lathes	Centre distance 150 Centre height 180	300
		2. Shearing machine	Plate size 1270 x 2	300
		3. Stationary drilling machine	Bit diameter 13	1,200
		4. Plate folding machine	Plate size 2500 x 2	200
		5. Plate rolling machine	Plate size 2500 x 3	200
		6. Knee type Freis machine	Table size 250 x 1200	200
		7. Surface grinding machine	Table size 220 x 500	200
10	PT KARYA PRIMA	1. Sawing machine	Material diameter 180	100
		2. Stationary drilling machine	Bit diameter 13	200
		3. Forging machine	pressure 150	100
11	PT (Persero) PINDAD	1. Lathes	Centre distance 1500 Centre height 180	320
		2. Knee type Freis machine	Table size 2500 x 120	250
		3. Column drilling machine	Bit diameter 30	100
		4. Forging machine	Pressure 150	200

Source: Decree of the minister of industry No. 1/M/SK/1/1985 dated Jan. 4 1985

DELETION PROGRAM FOR MACHINE TOOLS (1)
(LATHE)

Center distance: less than 1600 mm, Center height: Max 180 mm

(1985) 1/
Leg Cover: Cabinet leg, Rear leg, Front leg, Chip pan, Sheet cover, Aluminium cover

(1986) 1/
Reverser rod, Driver: Lead screw, Bed, Racks, Feed rod, Rear support
Swivelling tool slide assy: Tool post slide, Tool holder
Others: Electro motor, Lever assy

(1987)
Transmission system: Speed gear, shafts, Reverser gears
Apron assy: Case, Saddle, Cross spindle
Headstock assy: Case gear
Tailstock assy: Case, Shaft, Racksgear
Others: Cooling system, Brake system, Copying attachment, Bearing, Bolt & nut, Screw, Spring, Coolant pump assy, Electric/electronic components

(Components importable until 1987)
Chuck assy, Main spindle for headstock assy

Note: 1/ The schedule is divided into first and second half of the year in the decree.

Source: The decree of the Minister of industry No. 28/M/SK/1/1985 dated January 21, 1985.

DELETION PROGRAM FOR MACHINE TOOL (2)
(KNEE TYPE PRESS MACHINE)

Table size: 1,200 mm x 250 mm

(1985) 1/

Column assy	:	Base, Cover
Main drive	:	Pulley
Feed drive	:	Case
Knee	:	Frame
Table	:	Table, Chiptray, Coolant tank
Other	:	Panel box

(1986) 1/

Main spindle	:	Supporting arm
Main drive	:	Electro motor
Feed drive	:	Extendable shaft
Knee	:	Guide slide
Cross	:	Saddle, Guide slide

(1987)

Main spindle	:	Gear assy
Main drive	:	Gear assy
Feed drive	:	Gear assy, Work gear assy
Others	:	Hydrauric component, Cooling system, Electric/electronic component, Bearing

(Components importable until 1987)
Spindle for main spindle, Coolant pump assy

Note: 1/ Same as Table A-5.2.

Source: Same as Table A-5.2

DELETION PROGRAM FOR MACHINE TOOL (3)
(SURFACE GRINDING MACHINE/COLUMN TYPE BORING MACHINE)

SURFACE GRINDING MACHINES (Table size : 220 mm x 500 mm)

(1985) 1/
Table, Leg, Sliding head, Coolant tank, Panel box

(1986) 1/
Electro motor, Column, Bearing

(1987)
Hydraulic component, Cooling system, Electric/electronic component

(Components importable until 1987)
Spindle, Coolant pump assy

COLUMN TYPE BORING MACHINE

(1985) 1/
Handle, Hand wheel, Lever, Bush, Pin, Cover, Pulley

(1986) 1/
Base, Table, Column, Electro motor

(1987)
Bearing, Electric/electronic component

(Components importable until 1987)
Spindle, Coolant pump assy

Note: 1/ Same as Table A-5.2.

Source: Same as Table A-5.2

MACHINE TOOLS' COMPONENT THAT CAN BE IMPORTED
(OTHER THAN LATHES, KNEE TYPE FREIS MACHINES, SURFACE GRINDING MACHINES AND COLUMN TYPE BORING MACHINE)

NO	Item	Specification	The Following Components Can Be Imported As Long As They Are Not Yet Locally Made.
1	Sawing machines	Size of objects: 180 mm	Electric component
2	Table type boring machines	Diameter of bits: 13 mm	Complete hydraulic components (Cooling pumps, Electric components, Bearings)
3	Plate folding machines	Width of plates: 2500 mm Thickness of plates: 2.5 mm	Hydraulic components Electric components
4	Pipe bending machines	Diameter of pipes: 25 mm	Hydraulic components Electric components
5	Forging machines	Work pressure: 250 ton	Complete hydraulic components, Electric components
6	Shearing machines	Width of plates: 1200 mm Thickness of plates: 2 mm	Complete hydraulic components, Bearing
7	Rolling machines	Length of plates: 2500 mm Thickness of plates: 2.5 mm	Electric components, Bearing
8	Punching machines	Pressure: 3 ton Thickness of plates: 3 mm	Electric components
9	Drill combination freis machines	Table size: 240 mm x 600 mm Diameter of bits: 32 mm	Electric components, Spindles, Bearings
10	Press brake machines	-	Electric components Hydraulic components

Source: Attachment to the decree of the Minister of industry No. 28/M/SK/1/1985 dated January 21, 1985

Table ANX V-6

DELETION PROGRAM FOR AGRICULTURE MACHINERY (1)
(HAND-OPERADTED TRACTOR)

(Since Sept. 1, 1983)
Frame and body: Hitch attachment (O), Front frame (I) , Fender (I), Belt cover and accessories (I), Connecting pipe (I), Handle frame (I), Guide-speed change (I), Steering handle (I), Handle Cover (I), Front weight (O)

Engine: Engine assy (O)

Wheel and brake system: Wheel complete (O), Tire (O), Brake assy (O)

Implement: Leveller (O), Cage wheel (O), Floating wheel (O), Iron wheel (O), Ridger (O), Harrowing wheel (O), Trial skid (O), Single flow (I)

Rotary: Rotary frame (I), Rotary cover (I), Rotary blade(I)

(Since Sept. 1, 1984)
Transmission: Pulley(O) - Shaft, main change, tension
Lever (O) - Stand control, Main change, Steering clutch, Dual shift, Main clutch

Rotary: Rotary transmission assy (I)

(Since Sept. 1, 1985)
Transmission: Transmission assy (I)

Note: (I) = In-House
(O) = Out-House

Source: Decree of the minister of industry No. 199/M/SK/6/1983 dated June 9, 1983

Table ANX V-7

DELETION PROGRAM FOR AGRICULTURE MACHINERY(2)
(MINI TRACTOR)

(Since Jan. 1, 1984)
Frame & body: Seat(O), Step(I), Hitch attachment(O), Towing attachment (O), Support frame(I), Front weight(O),Brackets(I)
Engine: Muffler(O), Fuel line(O), Battery(O)
Wheel & brake system: Tire(O), Wheel rim(O)
Hydraulic system and power lift: Hydraulic tank(O)
Electric wiring harness: Wire harness(O)
Implement: Lever(O), Bottom plow(O), Harrowing wheel(O), Ridger(O), Disk plow(O), Floating strake(O)
Rotary: Rotary frame(I), Rotary cover(I), Rotary blade (I)

(Since Jan. 1, 1985)
Frame & body: Bonnet (I), Side/back cover (I), Grill (I), Fender (I)
Engine: Engine assy(O), Radiator assy(O), Air clearner (O) Fuel filter (O), Fuel tank (O), Hose(O)
Wheel & Brake system: Wheel rim(O), Brake cover(O), Pressure piping(O), Break rod(O)
Hydraubic system & power Lift: Power lift(O)*

(Since Jan, 1, 1986)
Transmission & Rear drive axle: Transmission(I)*, Final drive axle(I)*, Final drive axle(I)*, Power take off(I)* Front axle(O)*, Track rod(O)*, Steering box(O)*, Steering wheel(O)*, Wheel bub(O)*, Knuckle & link arm(O)*
Wheel & Brake system: Brake shoes(O), Brake drum(O)
Hydraulic system & power lift: Piping(I), Control volve assy(I)*, Hydraulic pump assy(I)*

(Since Jan. 1, 1987)
Transmission and rear drive axle;
Machining shall be made to the following components as Out-House manufacturing;
-Transmission assy, Rear drive axle assy, Final drive assy, Power take off assy.

Note: (I) = In-House
(O) = Out-House
* = Assembling shall be the responsibility of the factory.

Source: Same as Table A-5.6

DELETION PROGRAM FOR CONSTRUCTION EQUIPMENT(1)
(CRAWLER BULDOZER)

(1984)		
Upper structure	:	Counter weight(O)
Attachment	:	Blade block(I)
Frame for attachment	:	Draw bar (O)
Guards & Covers	:	Gards(O), Bonnet & side cover(engine enc)(O), Sweeper(O)
Protective structure	:	Rops/Fops(O)
Others	:	Battery(O)
(1985)		
Upper structure	:	Under cover & floor plate(O)
Attachment	:	Ripper(fram & teeth)(O), Towing winch(O)
Frame for attachment	:	C frame(I), Frunnion(O), Arm & brace(O)
Tank	:	Fuel tank(O)
Guards & covers	:	Fenders(O)
Protective structure	:	Operators seat(O), Dash board(O)
Handle & linkage	:	Handle/Lever(O), Linkage(O)
Truck shoe	:	Swamp truck shoe(O)
Hydraulic system	:	Hoses(O), piping(Small)(O)
Others	:	Radiator & guards(O), Cable wiring(O), Fan & pulley(O), Muffler(O), Exhaust pipe(O)
(1986)		
Frame (under structure)	:	Equalizer bar (O)
Upper structure	:	Frame for operator seat (O)
Frame for attachment	:	Stay & yoke (O)
Truck frame	:	Cover (I)
Idler	:	Front idler (I), Idler support & guide (I), Idler rod /shaft (I), Pins & bushing (O)
Truck adjuster	:	Yoke (O), Pilot & cover (O), Shaft (O), Piston (O)
Truck roller	:	Carrier roller (O), Truck roller (O), Support (O)
Hydraulic system	:	Cylinders (O), Piping (large) (O)
Others	:	Filter & strainer (O), Air cleaner (O)
(1987)		
Attachment	:	Cutting edge, bracket & end bit for blade(O)
Truck frame	:	Frame(I), Truck roller guard(I)
Truck adjuster	:	Recoil spring(O)
Sprocket	:	Sprocket
Truck shoe	:	Truck shoe(O)
Truck link	:	Truck link(O)
Others	:	Control valve(O), Hydraulic tank & valve(O), Engine(O)
(1988)		
Frame(Under structure)	:	Main frame(I)
Power train	:	P.T.O.(O), Transmission(O), Torque flow/ converter/clutch(O), Gears(Steering/drive, final drive)(O)
Hydraulic system	:	Hydraulic pump(O)

Note: (I) = In-House
(O) = Out-House
The schedule is devided into first and second half of the year in the decree.

Source: Decree of the minister of industry NO. 138/M/SK/4/1984 dated April 23, 1984

Table ANX V-9

PRODUCTION CAPACITY OF THREE LICENSED COMPANIES

Construction Equipment \ Company	PT. Komatsu Indonesia	PT. Natra Raya	PT. Triguna Utama Machinery
Crawler bulldozer (100-320HP)	555 Unit	410 Unit	-
Hydraulic excavator (90-108HP)	75 Unit	-	350 Unit
Motor grader	90 Unit	165 Unit	-
Wheel loader (100-980HP)	75 Unit	160 Unit	-

Source: Informasi potensi Industri, periode OKTOBER 1984; MOI

Table ANX V-10

DELETION PROGRAM FOR ELECTRICAL EQUIPMENT (1)
(POWER GENERATOR UPTO 5 KVA)

(Since Apr. 1, 1984)

Rotor : Enamel wire (O), Armatur clampe (I), Washer (O)
Stator : Enamel wire (O), Protection cover (I), Grommet (O), Bolt & nut (O), Washer (O), Lebel (O)

(Since Apr. 1, 1985)

Rotor : Shaft & shaft key (O), Fan (O), Bearing flange (O)
Stator : Rangka/yoke (O), End bracket (O), Bearing cover (I), Brush (O), Rocker arm (O), Cotton/tetoron tape including for Rotor (O)

(Since Apr. 1, 1986)

Rotor : Rotor core (O), Slip ring (O), Commutator (O), Snap ring (O), Press board (O)
Stator : Stator core (O), Brush holder (O)

Note: (I) = In-House
(O) = Out-House

Source: Decree of the minister of industry No. 475/M/SK/9/1983

Table ANX V-11

DELETION PROGRAM FOR ELECTRICAL EQUIPMENT (2)
(ONE PHASE-CLASS 2KWH METER)

(Since July 1, 1984)

Rotor and registor: Rotor element, Sekrup Penguat untuk bantalan lincir atas, Sekrup penguat untuk bantalan lincir bawah, Light load adjusting plate, Peratatan penyetelan tak-tor daya

Meter box: Meter back box, Meter front box, Tutup terminal, Gesket, Jendela kaca, Sekrup dengan lobang segel, Papan nama, Diagram pengawatan, Cover fixing insert, Back plate, Riveting bracket, Retaining ring, Speed-nut/stopper-ring

Bagian block terminal: Block terminal, Terminal pengetesan, Batang hubung singkat, Terminal holder, Terminal plate, Sekrup dan washer untuk semua terminal

Laim-laim: Sekrup dan washer lainnya, Baut & mar

(Since July 1, 1985)

Rotor and registor: Sepatu maknit, Piringan rotor, Rangka elemen penggarak, Alat pen catat enersi listrik

(Since July 1, 1986)

Rotor and registor: Poros rotor, Pasak ulir (worm)

Source: Decree of the minister of Industry No. 140/M/SK/4/1984

DELETION PROGRAM FOR COMMERCIAL CAR

Category I: 3/4 - 1 ton
II: 2 - 2½ ton
III: 3½ - 5 ton
IV: Multi-purpose case car (Jeep)
V: Simple commercial car (KBNB)

(Since Jan. 1, 1978)
Decoration (I, II, III), Bus body (I, II, III)

(Since Jan. 1, 1979)
Oil/air filter (I, II, III), Plug (I, II, III)

(Since Jan. 1, 1980)
Tire, Paint, Battery, Shock absorber, Leaf spring, Safety glass, Radiator, Muffler, Tail pipe, Seat, Seat frame,

(Since Jan. 1, 1984)
Wheel rim, Rear body, Fuel tank, Cabin, Chassis and Frame,

(Since Apr. 1, 1984)
Rubber on body and chassis, Radiator hose, Air cleaner hose, Air filter hose, Bonnet cable, Throttle/acceleration cable, Hand throttle cable, Clutch cable, Head lining/Roof insulator, Door trim, Sun Visor, Mat floor, Label/Sticker/Name plate, Orna, Wiring harness, Mud gard, Grip assist, Brake tube (I, II, IV, V), Fuel tube (I, II, IV, V), Pull handle (I, II, IV, V), Bezel/cover door (I, II, IV, V)

(Since Jul. 1, 1984)
Brake drum, Axle/Propeller shaft (I, V)

(Since Sept. 1, 1984)
Grille of metal (I, V), Press parts (Brackets, Clips clamps, Reinforced and others) (I, II, V), Chassis parts (-do-) (I, II, IV), Lenses of rear combination lamps (I, V)

(Since Jan. 1, 1985)
Engine (Gasoline/Diesel), Axle/Propeller shaft (II, III, IV)

(Since Jul. 1, 1985)
Brake system

(Since Jan. 1, 1986)
Transmission, Steering system, Clutch system

Source: No. 307/M/SK/8/1976, No. 168/M/SK/9/1979,
No. 38/DJ-LD/Ed/1/1980, No. 1269/DJ-LD/X1/1983
No. 371/M/SK/9/1983, No. 1195/DJ-LD/X/1983

Table ANX V-13

NEW INVESTMENT FOR SECONDARY DELETION PROGRAM
(COMMERCIAL CAR)

Item	
Engine (Gasoline/diesel)	P.T. Toyota Engine Indonesia (Toyota) P.T. Colt Engine Mfg (Mitsubishi) P.T. Daihatsu Engine Mfg Indonesia (Daihatsu) P.T. Suzuki Engine Industry (Suzuki) P.T. Mesin Isuzu Indonesia (Isuzu) P.T. Hino Indonesia Mfg (Hino) P.T. Star Motor (Mercedes Benz)
Transmission	P.T. Wahana Eka Paramitra (Toyota Technical assist)
Axle/propeller shaft	P.T. Inti Ganda Perdana (Mitsubishi Technical assist) P.T. Spicer Indonesia (Spicer)
Steering system	Every Company : Arrangements in House Manufacturing
Clutch system	P.T. Darma Salana Purdana (Aishin Technical Assist)
	n.a. (Daikin Technical Assist)
Brake system	P.T. Tri Dharma Wisesa (Akebono Technical Assist)

DELETION PROGRAM FOR MOTOR CYCLE AND SCOOTER
(BODY AND ELECTRIC COMPONENTS)

1980	1981	1982	1982
Oil Measuring Cup/ Measuring Glass	Front Fork Side Cap	Head Lamp/Head Light	Speedo & Tachometer Holder
Fuel Filter	Bolts & Nuts	Stopper/Tail Lamp/ Rear Combination Lamp	Reflector
Under Seat Cover	Spokes & Nipples	Tail Light Unit/Tail Light Brake	Tail Lamp Bracket
Muffler Bracket	Mirror	Pillion Box Lamp/ Winker Indicator Lamp/Warning Lamp	Brake Shoe & Lining
Pillion Footrest Rubber /Rear Cover/Pillion	Air Filter	Flasher/Relay/Timer Switch	Seat Clamp
Step Rubber	Speedometer Cable	Switch (Main, Stop Lamp)	Air Cleaner Cap
Fuel Tank Side Packing	Tachometer Cable	Ignition Coil	Front Luggage Carrier Rod
Tire Flap	(7 Items)	Rectifier	Frame Grip/Side Grip Standing Handle
Front Engine Hanger	1982	Horn	Stripping Tapes/Graphic Set
Chassis Reinforcement	Rear Sprocket	Regulator	Emblem/Name Plate
Flap Packing	Front & Rear Wheel Panel	Speedometer Assy	Upper Cover L&R/Handle Bar cover/Handle Comp.
Ridge For Engine Bonnet	Handle Under Cover/ Handle Bar Housing, Lower Part/Handle Lower Cover	Tachometer Assy	Head Lamp Housing/ Steering Handle Comp.
Front & Rear Wheel Flange	Under Bracket/ Steering Stem	Lock Assy	Frontcenter Cover/ Front Panel
Bleading For Engine Bonnet	(35 Items)	Fuel Tank Cap With Lock	Steering Cap/Steering Dust Seal/Steering Head Dust Seal/Ball Race Cover
Spark Plug		Non Critical Rubber Parts	Simple Plastic Parts
(14 Items)		Stickers	Disc Caliper
		Signal Bulb	

Source: No. 651/M/SK/11/1981
No. 127/DJAI/SK/VIII/1982

Table ANX V-15

DELETION PROGRAM FOR MOTOR CYCLE AND SCOOTER ENGINE
(IN-HOUSE)

Components	1984	1985	1986	1987
Crank Case Cover	A	M	M+DC	M+DC
Crank Case	A	M	M+DC	M+DC
Cylinder Head	A	M	M+DC	M+DC
Cylinder Block	A	M	M+DC	M+DC
Piston	A	M	M+DC	M+DC
Piston Pin	A	A	M	M+F
Crank Shaft	A	A	M	M+F
Connecting Rod	A	A	M	M+F
Main Gears	A	A	M	M+F
Gear Shaft	A	A	M	M+F
Main Shaft	A	A	M	M+F
Counter Shaft	A	A	M	M+F
Sprocket	A	A	M	M+F
Kick Starter Complete	A	A	M	M+F
Crank Pin	A	A	M	M+F
Covers	A	M	M+DC	M+DC
Counter gears	A	A	M	M+F
Cylinder Sleeve	A	A	M	M+FC
Cam Shaft	A	A	M	M+F
Valves Assy	A	A	M	M+F
Fly Wheel	A	M	M+DC	M+DC

Note: A : Assembling
M : Machining
DC: Die Casting
FC: Ferro Casting
F : Forging

Source: No. 505/M/SK/12/1983

Table ANX V-16

DELETION PROGRAM FOR MOTOR CYCLE AND SCOOTER ENGINE
(OUT-HOUSE)

Components	1984	1985	1986	1987
Spark Plug	X	X	X	X
Drive Chain			X	X
Rubber Parts		X	X	X
Plastic Parts		X	X	X
Clutch				X
Piston Ring		X	X	X
Fuel Cock		X	X	X
Bolt & Nut (Standard)			X	X
Bolt & Nut (Hi-Tension)			X	X
Gasket			X	X
Generator Assy				X
Magneto coil				X
Lever and Switch			X	X
Cam Chain			X	X
Oil Filter		X	X	X
Cam Chain Tension			X	X
Screw, Pin, Washer		X	X	X
Contact Breaker			X	X
Spark Advancer			X	X
Oil Pump				X
Electric Starter				X

Note: X: Phase of use of components.

Source: No. 505/M/SK/12/1983

Table ANX V-17

THE NEW INVESTMENT FOR SECONDARY DELETION PROGRAM
MOTOR CYCLE AND SCOOTER

Item	
Engine (Gasoline)	P.T. Suzuki Engine Industry (Suzuki) P.T. Honda Astra Engine Mfg (Honda) P.T. Yamaha Harapan Motor Sakti (Yamaha) P.T. Dan Motors Vespa Indonesia (Vespa)

DELETION PROGRAM FOR ELECTRICAL EQUIPMENT (1)
(DIESEL MOTOR, 26KW TO 375KW)

(Since Oct. 1, 1983)
Filter group: Oil filter (O), Fuel filter (O), Air filter (O), Bracket (O)
Engine mounting: Engine mounting assy (O)
Piping group: Cooling water pipe (O), Fuel pressure pipe (I), Lubrication pipe (I), Exhaust Pipe connection (O), Protective pipe (I)
Components standard: Clamp (O), V-belt (O)
Miscellaneous: Accu (O), Muffler (O), Handling slug ( )

(Since Oct. 1, 1984)
Crank case: Oil fan (O), Dip Rod (O), Oil filter plug (O)
Crank shaft: Fly wheel (I)
Piston assy: Piston ring (O), Piston (O), Piston pin (I)
Connecting rod: Connecting rod (I)
Cylinder head: Support of rocker arm (I), Rocker arm ( ), Push rod (I)
Intake & exhaust pipe: Intake & exhaust pipe (I)
Electric equipment/panel engine: Electric equipment/engine panel assy (O)
Pully group: Crank shaft pully (I), Centrifugal pump pully (I), Tension pully (I), Fan drive pully (I), Alternator pully (I)
Components standard: Gasket (O)
Miscellaneous: Tools (O), Turning device (O), Plastic parts (O)

(Since Oct. 1, 1985)
Crank case: Cylinder liner (I), Counter balance (I), Front cover (I), Fly wheel housing (I)
Crank shaft: Counter weight (I), Cam shaft assy (I)
Cover group: Cover (I)
Cylinder head: Cylinder head (I), Cylinder head cover (I)
Indirect cooling: Indirect cooling assy (O)
Cooling system: Circulation cooling assy (O), Airduction assy (O)
Dynamo/alternator: Dynamo/alternator assy (O), Support assy (I)
Starter: Electric starter (O)

(Since Oct. 1, 1986)
Crank case: Crank case assy (I)
Crank shaft: Crank shaft (I)
Gear group: Crank shaft gear (I), Cam shaft gear (I), ring gear (I)
Centrifugal: Centrifugal pump assy (O)
Fan drive: Fan drive assy(O)
Blower: Blower assy (O)

(Since Oct. 1, 1987)
Oil gear pump: Oil gear pump complete (O)
Oil cooler: Oil cooler complete (O)

Notes: 1. In house work (I) is only machining, whereas Blanks is from outside.
2. Blanks from foundry/forging for the forging components can still be imported as long as said blanks have not been able domestically manufactured.
3. The exchanged components which can still be imported are ; Special Screw & Nut; Stud; Valve; Roller/Ball Bearing; Bushing/Bearing Bush; Speed Adjusting Control Device; Injection Pump Assy and Turbo Charger ; etc.
4. By not closing the possibility for the manufacturing companies to manufacture said components earliner than the stipulated schedule.
5. (I) = In-House work.
(O) = Out-House work.

Source: Decree of the minister of industry No. 202/M/SK/6/1983 dated June 9, 1983

DELETION PROGRAM FOR INDUSTRIAL BOILER
(MORE THAN 5 TON/H)

(Since July 1, 1985)
Import: Valves, Pipe fitting, Pump (Fuel, Feed water), Burner assy, End plate, Soot remover, Gage and control device, Not yet manufactured Raw materials (Steel plate, Pipe)
Local: Frame and support, Boiler drum, Tube shell/ Tube bundle, Fireproofing material, Control panel, Common component (bolt, nut, rebet, others), Fan/Blower, Electric boiler, Insulation work, Construction work/welding, Assembling, Installation)

(Since July 1, 1986)
Valves, Pipe fitting and pumps (Full & feed water) shall be transferred to local manufacturing.

(Since July 1, 1987)
End plate and Burner assy shall be transferred to local manufacturing.

Source: Decree of the minister of industry No. 73/M/SK/2/1985 dated February 23, 1985