

#### 付編 4 工業標準化と品質管理に関する製造業調査要約

## **CHAPTER I**

### **1.1. Objectives of the Survey**

The objective of Industrial Standardization and Quality Control Promotion Survey are to understand the nature of each industrial sector designated in product standardization, quality assurance and quality control aspects. Other objective is to comprehend the quality awareness and many standard category ensued by each company sampled.

The survey is undertaken to ensure that adequate information is gathered to :

- display the present situation of standardization and quality control activities in the industries.
- facilitate adequate information to allow comprehensive analysis of these industries' needs for standardization and quality assurance programs.

### **1.2 Scope of Survey**

The sample of the survey is designed to include industrial classification as follows :

- Electrical appliances and machinery
- Electronic appliances
- Automobile components
- Agricultural machinery
- Metal working
- Ceramic building materials

It covers regional within the Java Island :

- Jabotabek area.

Jabotabek is the acronym of Jakarta, Bogor, Tangerang and Bekasi describing the Greater Jakarta Metropolitan Area. The area covers some 2,500 square kilometers and has a population of more than 17 million. By 2010, the World Bank estimates a population of 30 millions. The greater Jakarta region consists of Jakarta in the Center, Bogor to the south, and plains west around Tangerang and Bekasi to the east.

- West Java Province is centralized in Bandung and its surrounding area.
- Central Java Province is defined as surrounding area around Semarang
- DI Yogyakarta.
- East Java Province is centralized in Surabaya, Malang and its surrounding area.
- North Sumatera

Around 1,000 establishments are selected from directories at random. These directories include, but not limited to :

- Indonesian Manufacturer Directory, PT. Capricorn Indonesia Consult Inc.
- Standard Trade and Industry Directory, PT. Kompasindo
- Directory of State Owned Business Enterprise and Its Affiliated Companies, PT. Capricorn Indonesia Consult Inc.
- Top 300 National Private Business Group, PT. CISI Raya Utama.

The sample of questionnaires is presented in appendix I.

### **1.3. Methodology**

The survey was conducted part as a registered mail survey. To facilitate the respondents, a return envelope with pre-printed return address and affixed with adequate stamps was provided. In order to expedite replies from the respondents, a follow up telephone calls was conducted as well as a 3 (three) months free subscription of "Usahawan" Magazine for every returned questionnaire. Each filled-out questionnaires was inspected for unanswered questions, and telephone calls were undertaken to complete the unanswered questions.

Selected field survey in several major cities has been conducted by a joint Study Team staffs from Lembaga Management and UNICO International Corporation (Japan) and PUSTAN/BAPPENAS officials. Those cities include Jabotabek area, Yogyakarta, Semarang and Surabaya. Each team represents official from UNICO's Study Team, PUSTAN/BAPPENAS and Lembaga Management. The duration of each field survey was around 2 weeks excluding Saturdays and Sundays. During the survey the team visited 2 (two) to 3 (three) respondents per day. 50% of the object was respondents that has filled out the questionnaire, and the rest are of those who does not reply. To come up with a minimum response, a follow-up survey was conducted by the Team of Lembaga Management for approximately 4 weeks.

### **1.5. Number of Questionnaire Mailed Out and Rate of Response**

Around 1,200 questionnaires were mailed out and 192 fulfilled questionnaires had been collected. For the purpose further analysis only 180 questionnaire is used. Appendix II will show the listing of the selected companies by province.

## CHAPTER II

### SURVEY RESULTS

#### 1. Company Profiles

##### 1.1. Distribution of Respondents by Sub-sectors

Industry	Number of Respondents	
<b>1. Electronics/electrical</b>	<b>50</b>	<b>27.8%</b>
• Consumer products	15	8.3%
• Industrial products	5	2.8%
• Components	9	5.0%
• Electric machinery	19	10.6%
• Others	2	1.1%
<b>2. Automobile components</b>	<b>33</b>	<b>18.3%</b>
• Metal type components	23	12.8%
• Plastic type components	10	5.6%
• Other type components	---	---
<b>3. Agricultural machinery</b>	<b>15</b>	<b>8.3%</b>
• Agricultural machinery assembly	6	3.3%
• Irrigation pumps	2	1.1%
• Diesel or fuel engine	7	3.9%
• Others	---	---
<b>4. Metal working</b>	<b>54</b>	<b>30.0%</b>
• Foundry	9	5.0%
• Stamping	5	2.8%
• Forging	10	5.6%
• Metal fabrication	11	6.1%
• Mold and die	1	0.6%
• Others	18	10.0%
<b>5. Ceramics building materials</b>	<b>25</b>	<b>13.9%</b>
• Floor/wall tile	15	8.3%
• Glazed roof tile	2	1.1%
• Non-glazed roof tile	2	1.1%
• Others	6	3.3%
<b>6. Others</b>	<b>3</b>	<b>1.7%</b>
<b>7. Grand total</b>	<b>180</b>	<b>100.0%</b>

All industrial groups are represented in the survey result, though the distribution of respondents for each industrial group is not equal. Companies with main business of metal working are the biggest sample (30% of the total sample), and agricultural machinery assembly is the smallest sample (8.3%).

## 1.2. Company status

	Foreign Investment	Domestic Investment	Joint Venture	Others	No Answer	Total	
Electronic/electrical	10	19	11	9	1	50	27.8%
Automobile components	5	14	7	7		33	18.3%
Agricultural machinery	3	6	3	3		15	8.3%
Metal working	5	28	4	17		54	30.0%
Ceramic building materials	3	17	1	3	1	25	13.9%
Others		1		2		3	1.7%
Total	26 14.4%	85 47.2%	26 14.4%	41 22.8%	2 1.1%	180	

Most of the investment permit issued has been domestic investment permit (PMDN) which accounted for 47.2% of the total sample, followed by other type of investment permit which accounted for 22.8% of the total sample.

## 2. Business Unit Profile

### 2.1. Location

	Jabotabek	West Java	Central Java	East Java	Yogyakarta	Total	
Electronic/electrical	25	12		13		50	27.8%
Automobile components	15	10	3	5		33	18.3%
Agricultural machinery	5	4	2	3	1	15	8.3%
Metal working	27	10	7	10		54	30.0%
Ceramic building materials	15	6		4		25	13.9%
Others	3					3	1.7%
Total	90 50.0%	42 23.3%	12 6.7%	35 19.4%	1 0.6%	180	

50% of the respondents are companies from Jabotabek area (Jakarta and its surrounding cities), followed by West Java (23.3%) and East Java (19.4%). There is only one company (its main business is agricultural machinery) from Yogyakarta, a well-known tourism area in Indonesia. The distribution of respondents corresponds to the concentration of industries in Jabotabek, West Java and East Java. Questionnaires were also distributed to companies in North Sumatera (Medan), but there was no response.

### 2.2. Year of Establishment

	< 1961	1961 - 1970	1971 - 1980	1981 - 1990	> 1990	No Answer	Total	
Electronic/electrical		7	8	20	5	10	50	27.8%
Automobile components	3	2	12	11	2	3	33	18.3%
Agricultural machinery	1		7	6		1	15	8.3%
Metal working	1	2	20	21	7	3	54	30.0%
Ceramic building materials	3		7	6	4	5	25	13.9%
Others				2		1	3	1.7%
Total	8 4.4%	11 6.1%	54 30.0%	66 36.7%	18 10.0%	23 12.8%	180	

Majority of the respondents (66.7%) were established in the 1970's and 1980's. Specifically, 36.7% of the respondents were established between 1981 to 1990, and 30.0% were established between 1971 to 1980. Despite the fact that 18 companies were built after 1990, there are 19 companies that were built prior to 1970.

### 2.3. Number of Employee

	< 500	501 – 1,000	1,001 – 1,500	1,501 – 2,000	> 2,000	No Answer	Total	
Electronic/electrical	32	7	3	3	3	2	50	27.8%
Automobile components	21	6	2		2	2	33	18.3%
Agricultural machinery	14	1					15	8.3%
Metal working	36	10	2		4	2	54	30.0%
Ceramic building materials	11	6	4	2	2		25	13.9%
Others	1			1	1		3	1.7%
Total	115 63.9%	30 16.7%	11 6.1%	6 3.3%	12 6.7%	6 3.3%	180	

Around 80% of the respondents had less than 500 or between 501 to 1,000 employees, although there are 6.7% of the respondents that had more than 2,000 employees. There is no significant difference about the number of employee among the industrial groups involved, with the exception of agricultural machinery industry.

### 2.4. Total Assets as of End 1993

	< 0.1 Billion	0.1 – 0.5 Billion	0.5 – 1.0 Billion	1.0 – 5.0 Billion	> 5.0 Billion	No Answer	Total	
Electronic/electrical	2	5	1	9	28	5	50	27.8%
Automobile components	1	4		10	18		33	18.3%
Agricultural machinery		2		4	8	1	15	8.3%
Metal working	2	3	4	7	37	1	54	30.0%
Ceramic building materials		1		2	18	4	25	13.9%
Others				1	2		3	1.7%
Total	5 2.8%	15 8.3%	5 2.8%	33 18.3%	111 61.7%	11 6.1%	180	

61.7% of the respondents having total assets of more than Rp 5.0 billion (more than US\$ 2,3 million), and 18.3% of the respondents had total assets of Rp 1.0 to 5.0 billion. Apparently most of the respondents, according to Indonesian Standard, can be classified as "big" companies. There is no significant difference about total assets as of end 1993 among the industrial groups involved.

## 2.5. New Investment in 1993

	< 0.1 Billion	0.1 - 0.5 Billion	0.5 - 1.0 Billion	1.0 - 5.0 Billion	> 5.0 Billion	No Answer	Total	
Electronic/electrical	3	13	2	12	10	10	50	27.8%
Automobile components	10	4	2	5	9	3	33	18.3%
Agricultural machinery	5	2	3	1	1	3	15	8.3%
Metal working	14	6	6	14	10	4	54	30.0%
Ceramic building materials	4	2		1	10	8	25	13.9%
Others		1			2		3	1.7%
Total	36 20.0%	28 15.6%	13 7.2%	33 18.3%	42 23.3%	28 15.6%	180	

Although around 60% of the respondents had total assets of more than Rp 5.0 billion, respondents with new investment of Rp 1.0 to 5.0 billion and more than Rp 5.0 billion are only 18.3% and 23.3% respectively. There are 20.0% of the respondents with new investment of less than Rp 100 million and 15.6% of the respondents with new investment of Rp 0.1 to 0.5 billion. 10 out of 25 (40.0%) ceramic building materials companies have new investment of more than Rp 5.0 billion, while for the other industrial groups the figure is only around 25%.

## 2.6. Total Sales For the Year 1993

	< 0.5 Billion	0.5 - 1.0 Billion	1.0 - 5.0 Billion	5.0 - 10.0 Billion	> 10 Billion	No Answer	Total	
Electronic/electrical	3	3	4	7	26	7	50	27.8%
Automobile components	2	4	6	3	16	2	33	18.3%
Agricultural machinery	3		2		9	1	15	8.3%
Metal working	4	2	9	10	27	2	54	30.0%
Ceramic building materials	2	1	6	5	7	4	25	13.9%
Others		1			2		3	1.7%
Total	14 7.8%	11 6.1%	27 15.0%	25 13.9%	87 48.3%	16 8.9%	180	

About 60% of the respondents are companies with total sales of more than Rp 5.0 billion (around US\$ 2.3 million). To be precise, there are 48.3% of the respondents with total sales of more than Rp 10.0 billion, and 13.9% of the respondents with total sales between Rp 5.0 to 10.0 billion.



## 2.7. Percentage of Sales For the Year 1993 to Export

	None	< 25%	26 – 50%	51 – 75%	> 75%	No Answer	Total	
Electronic/electrical	25	11	7	1	5	1	50	27.8%
Automobile components	13	12	5	2		1	33	18.3%
Agricultural machinery	7	7	1				15	8.3%
Metal working	24	22	4		4		54	30.0%
Ceramic building materials	5	12	2		2	4	25	13.9%
Others	2		1				3	1.7%
Total	76 42.2%	64 35.6%	20 11.1%	3 1.7%	11 6.1%	6 3.3%	180	

Nearly half of the respondents (42.2%) sell their products to domestic market. There are 35.6% of the respondents with export of less than 25% of total sales, and 11.1% with export between 26 – 50% of total sales. Only 6.1% of respondents with export of more than 75% of total sales. The pattern is also true for the industrial groups involved.

## 2.8. Percentage of Sales For the Year 1993 to Domestic Market as Final Products

	None	< 25%	26 – 50%	51 – 75%	> 75%	No Answer	Total	
Electronic/electrical	3	7	1	6	33		50	27.8%
Automobile components	5	1	4	3	17	3	33	18.3%
Agricultural machinery			1		14		15	8.3%
Metal working	8	11	4	8	22	1	54	30.0%
Ceramic building materials	1	3		1	19	1	25	13.9%
Others		1		1	1		3	1.7%
Total	17 9.4%	23 12.8%	10 5.6%	19 10.6%	106 58.9%	5 2.8%	180	

58.9% of the respondents that sold all or part of their products to domestic market sold it as final products, while on the other end 9.4% of the respondents did not sell their products as final products at all. Between these two ends of the scale, other respondents had various levels of products sold as final products.

## 2.9. Percentage of Sales For the Year 1993 to Domestic Market as Manufacturing Materials for Domestic Market Products

	None	< 25%	26 - 50%	51 - 75%	> 75%	No Answer	Total	
Electronic/electrical	31	9	3	2	3	2	50	27.8%
Automobile components	15	13	1		1	3	33	18.3%
Agricultural machinery	8	5	1	1			15	8.3%
Metal working	28	17	3	1	2	3	54	30.0%
Ceramic building materials	8	1	1			15	25	13.9%
Others	2	1					3	1.7%
Total	92	46	9	4	6	23	180	
	51.1%	25.6%	5.0%	2.2%	3.3%	12.8%		

Most of the respondents (51.1%) did not sell their products as manufacturing materials for Domestic Market development. While around 36% of the respondents sold their products as manufacturing materials for Domestic market products, 25.6% of the respondents sold less than 25% as manufacturing materials.

## 2.10. Raw Materials from Direct Import

	None	< 25%	26 - 50%	51 - 75%	> 75%	No Answer	Total	
Electronic/electrical	4	12	14	11	8	1	50	27.8%
Automobile components	12	2	10	5	4		33	18.3%
Agricultural machinery	3	4	2	4	2		15	8.3%
Metal working	15	14	12	9	4		54	30.0%
Ceramic building materials	2	12	4	2	1	4	25	13.9%
Others	1	1	1				3	1.7%
Total	37	45	43	31	19	5	180	
	20.6%	25.0%	23.9%	17.2%	10.6%	2.8%		

On the procurement of raw materials, 20.6% of the respondents indicated that they did not import them directly from abroad. Apart from 2.8% of the respondents that refused to answer, the remaining indicated getting raw materials from abroad, but at a varying degree.

## 2.11. Imported Raw Materials from Domestic Channels

	None	< 25%	26 – 50%	51 – 75%	> 75%	No Answer	Total	
Electronic/electrical	16	24	3	3	2	2	50	27.8%
Automobile components	7	20	4	1	1		33	18.3%
Agricultural machinery	5	7	3				15	8.3%
Metal working	13	26	7	4	2	2	54	30.0%
Ceramic building materials	3	11	3			8	25	13.9%
Others	2		1				3	1.7%
Total	46 25.6%	88 48.9%	21 11.7%	8 4.4%	5 2.8%	12 6.7%	180	

Most of the respondents (48.9%) indicate that they purchased less than 25% of raw materials from domestic channels or importers, followed by 25.6% of the respondents did not buy from domestic channels or importers at all.

## 2.12. Raw Materials from Domestic Sources

	None	< 25%	26 – 50%	51 – 75%	> 75%	No Answer	Total	
Electronic/electrical		17	15	10	8		50	27.8%
Automobile components		10	6	8	9		33	18.3%
Agricultural machinery		3	4	2	6		15	8.3%
Metal working	3	11	12	12	16		54	30.0%
Ceramic building materials		2	4	8	11		25	13.9%
Others			1	1	1		3	1.7%
Total	3 1.7%	43 23.9%	42 23.3%	41 22.8%	51 28.3%	-- --	180	

Apart from 1.7% of the total respondents that did not procure raw materials from domestic sources, approximately one-fourth each of the rests obtained their supplies from domestic sources.

### 2.13. Affiliation with Foreign Companies

	Yes	No	Total	
Electronic/electrical	36	14	50	27.8%
Automobile components	20	13	33	18.3%
Agricultural machinery	9	6	15	8.3%
Metal working	20	34	54	30.0%
Ceramic building materials	6	19	25	13.9%
Others		3	3	1.7%
Total	91	89	180	
	50.6%	49.4%		

Although, in general, 50.6% of the respondents did have affiliation with foreign companies, the differences among the industrial groups were quite significant. While more than 60% of electronics/electrical, automobile components and agricultural machinery companies did have affiliation with foreign companies, less than 40% of metal working and ceramic building materials companies did not have foreign company affiliation.

### 2.14. Affiliation on Capital Investment and Countries

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• USA and Canada	2	1	1	2			6	3.3%
• EEC Countries	4			1	1		6	3.3%
• Japan	9	9	3	6	2		29	16.1%
• China								
• RD Korea	1				1		2	1.1%
• Taiwan	2	1					3	1.7%
• Hong Kong								
• ASEAN Countries	2						2	1.1%
• Other Countries	1						1	0.6%
• No Answer	29	22	11	45	21	3	131	72.8%
Total	50	33	15	54	25	3	180	
	27.8%	18.3%	8.3%	30.0%	13.9%	1.7%		

Japan seems to be the most prominent country for capital investment tie-ups, followed by the USA and Canada, and EEC countries. Japanese interests were quite significant in the electronics and automobile components industry.

## 2.15. Affiliation on Technical and Countries

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• USA and Canada	3	2		4			9	5.0%
• EEC Countries	7		1	3	1		12	6.7%
• Japan	13	14	4	8	4		43	23.9%
• China								
• RD Korea	1				1		2	1.1%
• Taiwan	3	1					4	2.2%
• Hong Kong								
• ASEAN Countries	1						1	0.6%
• Other Countries	1						1	0.6%
• No Answer	21	16	10	39	19	3	108	60.0%
Total	50	33	15	54	25	3	180	
	27.8%	18.3%	8.3%	30.0%	13.9%	1.7%		

Most of the respondents that did have technical affiliations with foreign companies, had technical tie-ups with Japanese firms, followed by companies from EEC countries, the USA and Canada. Common industries affiliated with Japan were electronics and automobile components.

## 2.16. Affiliation on Sales and Countries

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• USA and Canada	2	1			1		4	2.2%
• EEC Countries	3	2		2			7	3.9%
• Japan	3	2		6	2		13	7.2%
• China								
• RD Korea		1			1		2	1.1%
• Taiwan								
• Hong Kong	1						1	0.6%
• ASEAN Countries								
• Other Countries	2						2	1.1%
• No Answer	39	27	15	46	21	3	151	83.9%
Total	50	33	15	54	25	3	180	
	27.8%	18.3%	8.3%	30.0%	13.9%	1.7%		

Again, Japan seems to be the most popular countries for affiliation on sales, followed by EEC countries, the USA and Canada.

### 3. Industrial Standard

#### 3.1. Industrial Standards used in Company Products

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
<b>Total Sample</b>	50	33	15	54	25	3	180
<b>Product Standard</b>							
• Indonesian standard	58.0%	57.6%	60.0%	38.9%	56.0%	66.7%	52.2%
• In-company standard	22.0%	27.3%	6.7%	31.5%	40.0%	33.3%	27.2%
• Foreign/regional standard	60.0%	66.7%	53.3%	63.0%	44.0%	66.7%	59.4%
• International standard	58.0%	24.2%	26.7%	14.8%		33.3%	27.8%
<b>Method Standard</b>							
• Indonesian standard	36.0%	42.4%	20.0%	24.1%	40.0%	33.3%	32.8%
• In-company standard	14.0%	18.2%	13.3%	25.9%	24.0%	33.3%	20.0%
• Foreign/regional standard	44.0%	60.6%	46.7%	50.0%	36.0%	66.7%	48.3%
• International standard	54.0%	24.2%	20.0%	14.8%	4.0%	33.3%	26.7%
<b>Basic Standard</b>							
• Indonesian standard	28.0%	36.4%	13.3%	24.1%	44.0%		28.9%
• In-company standard	16.0%	18.2%	13.3%	20.4%	20.0%	33.3%	18.3%
• Foreign/regional standard	28.0%	51.5%	26.7%	46.3%	36.0%	33.3%	38.9%
• International standard	40.0%	21.2%	20.0%	16.7%	12.0%	33.3%	23.9%

Foreign/regional standard seems to be the most popular standard for company products. This was true for object of application on product standard (59.4%), method standard (48.3%) and basic standard (38.9%). International standard mostly used by electronics industry, for example, for product standard (58.0%), method standard (54.0%) and basic standard (40.0%). While more than 50% of the respondents used Indonesian standard for product standard, only 38.9% of metal working industry use Indonesian standard for product standard.

### 3.2. Industrial Standards used for Raw Materials Purchased

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
<b>Total Sample</b>	50	33	15	54	25	3	180
<b>Product Standard</b>							
• Indonesian standard	34.0%	42.4%	46.7%	46.3%	28%	33.3%	39.4%
• In-company standard	18.0%	15.2%	20.0%	24.1%	56.0%	100.0%	26.1%
• Foreign/regional standard	58.0%	66.7%	66.7%	70.4%	16.0%	33.3%	57.8%
• International standard	40.0%	18.2%	6.7%	22.2%		33.3%	22.2%
<b>Method Standard</b>							
• Indonesian standard	26.0%	33.3%	13.3%	22.2%	12.0%		22.8%
• In-company standard	18.0%	15.2%	13.3%	22.2%	56.0%	33.3%	23.9%
• Foreign/regional standard	48.0%	57.6%	46.7%	48.1%	20.0%	33.3%	45.6%
• International standard	36.0%	18.2%	6.7%	13.0%		33.3%	18.3%
<b>Basic Standard</b>							
• Indonesian standard	20.0%	30.3%	6.7%	24.1%	12.0%		20.6%
• In-company standard	18.0%	15.2%	6.7%	18.5%	52.0%	33.3%	21.7%
• Foreign/regional standard	34.0%	48.5%	33.3%	35.2%	24.0%	33.3%	35.6%
• International standard	26.0%	18.2%	13.3%	13.0%	4.0%	33.3%	16.7%

A similar scenario is noticed for respondents procuring raw materials, auxiliary materials and components or parts. Most of the respondents were using foreign/regional standard for product standard (57.8%), method standard (45.6%) and basic standard (35.6%). Majority of the ceramics building materials companies claimed using their own company standard for product standard (56.0%), method standard (56.0%) and basic standard (52.0%).

### 3.3. Industrial Standards used for Machinery/Equipment/Spare Parts Purchased

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
<b>Total Sample</b>	50	33	15	54	25	3	180
<b>Product Standard</b>							
• Indonesian standard	22.0%	27.3%	33.3%	16.7%		33.3%	19.4%
• In-company standard	12.0%	15.2%	6.7%	16.7%	16.0%	33.3%	14.4%
• Foreign/regional standard	34.0%	66.7%	53.3%	57.4%	76.0%	33.3%	54.4%
• International standard	20.0%	21.2%	20.0%	13.0%		33.3%	15.6%
<b>Method Standard</b>							
• Indonesian standard	10.0%	21.2%	6.7%	11.1%			10.6%
• In-company standard	10.0%	15.2%	13.3%	14.8%	16.0%		13.3%
• Foreign/regional standard	24.0%	54.5%	40.0%	38.9%	72.0%	33.3%	42.2%
• International standard	16.0%	21.2%	13.3%	11.1%		33.3%	13.3%
<b>Basic Standard</b>							
• Indonesian standard	12.0%	18.2%	6.7%	11.1%			10.6%
• In-company standard	12.0%	9.1%	13.3%	16.7%	16.0%		13.3%
• Foreign/regional standard	22.0%	42.4%	20.0%	31.5%	72.0%	33.3%	35.6%
• International standard	18.0%	18.2%	13.3%	11.1%		33.3%	13.3%

Foreign/regional standard is especially used by companies procuring machinery, equipment and spare parts. It is used by 54.4% of the respondents for product standard, 42.2% for method standard and 35.6% for basic standard.

### 3.4. Basis of Company Standard

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
<b>Total Sample</b>	50	33	15	54	25	3	180
• SNI/SII	10	6	5	7	7	1	36
	20.0%	18.2%	33.3%	13.0%	28.0%	33.3%	20.0%
• International standards	8	8	1	11	4	1	33
	16.0%	24.2%	6.7%	20.4%	16.0%	33.3%	18.3%
• Customer specifications	18	11	2	19	7	2	59
	36.0%	33.3%	13.3%	35.2%	28.0%	66.7%	32.8%
• Foreign standards	7	8	5	18	5	1	44
	14.0%	24.2%	33.3%	33.3%	10.0%	33.3%	24.4%
• Own experience	9	3	5	11	10	1	39
	18.0%	9.1%	33.3%	20.4%	40.0%	33.3%	21.7%
• Others	7	3		1	1		12
	14.0%	9.1%		1.9%	4.0%		6.7%

For those who mentioned that in-company standards are used, 32.8% of them claimed that customer specification is the basis of their respective in-company standards. Other important



factors for the basis for in-company standard are foreign standard (24.4%) and their own experience (21.7%).

### 3.5. Difficulty in Obtaining Standards

	Easy	Difficult	No Need	No Answer	Total	
<b>SII</b>						
• Electronic/electrical	24	7	7	12	50	27.8%
• Automobile components	16	4	9	4	33	18.3%
• Agricultural machinery	10	1	1	3	15	8.3%
• Metal working	25	10	9	10	54	30.0%
• Ceramic building materials	16	4	3	2	25	13.9%
• Others	1	1	1		3	1.7%
<b>Total</b>	92 51.1%	27 15.0%	30 16.7%	31 17.2%	180	
<b>Foreign Standards</b>						
• Electronic/electrical	19	15	3	13	50	27.8%
• Automobile components	16	8	2	7	33	18.3%
• Agricultural machinery	8	3	2	2	15	8.3%
• Metal working	28	13	4	9	54	30.0%
• Ceramic building materials	12	5	3	5	25	13.9%
• Others	1			2	3	1.7%
<b>Total</b>	84 46.7%	44 24.4%	14 7.8%	38 21.1%	180	
<b>International Standards</b>						
• Electronic/electrical	21	14	2	13	50	27.8%
• Automobile components	12	9	4	8	33	18.3%
• Agricultural machinery	3	4	5	3	15	8.3%
• Metal working	17	13	8	16	54	30.0%
• Ceramic building materials	13	6	3	3	25	13.9%
• Others	1	1	1		3	1.7%
	86 47.8%	30 16.7%	24 13.3%	40 22.2%	180	

Most of the respondents indicated that it was easy for them to obtain SII (51.1%), foreign standards (46.7%) and international standards (47.8%). However, there are companies who claimed the difficulties in obtaining SII (15.0%), foreign standards (24.4%) and international standards (16.7%).

### 3.6. Difficulty in Obtaining Information Relating to Standards

	Easy	Difficult	No Need	No Answer	Total	
<b>SII</b>						
• Electronic/electrical	29	5	3	13	50	27.8%
• Automobile components	13	6	6	8	33	18.3%
• Agricultural machinery	9	1	2	3	15	8.3%
• Metal working	21	11	9	13	54	30.0%
• Ceramic building materials	13	6	3	3	25	13.9%
• Others	1	1	1		3	1.7%
<b>Total</b>	86 47.8%	30 16.7%	24 13.3%	40 22.2%	180	
<b>Foreign Standard</b>						
• Electronic/electrical	23	11	3	13	50	27.8%
• Automobile components	14	9	2	8	33	18.3%
• Agricultural machinery	8	3	2	2	15	8.3%
• Metal working	26	15	2	11	54	30.0%
• Ceramic building materials	13	4	2	6	25	13.9%
• Others	1			2	3	1.7%
<b>Total</b>	85 47.2%	42 23.3%	11 6.1%	42 23.3%	180	
<b>International Standard</b>						
• Electronic/electrical	24	11	1	14	50	27.8%
• Automobile components	10	11	2	10	33	18.3%
• Agricultural machinery	2	4	5	4	15	8.3%
• Metal working	16	13	6	19	54	30.0%
• Ceramic building materials	3	4	1	17	25	13.9%
• Others	1			2	3	1.7%
<b>Total</b>	56 31.1%	43 23.9%	15 8.3%	66 36.7%	180	

Although at a lower percentage, most of the respondents claimed that it was easy for them to get information regarding SII (47.8%), foreign standards (47.2%) and international standards (31.3%). On the contrary, those who mentioned that it was difficult to obtain information concerning standards, particularly foreign and international standards, are slightly higher in percentage. There are 16.7% of the respondents who claimed that it was difficult to get information relating to SII, for foreign and international standards the figures are 23.3% and 23.9% respectively.

## 4. Certification

### 4.1. Products applicable to the SII mark certification

	Yes	No	Don't Know	No Answer	Total	
Electronic/electrical	23	5	20	2	50	27.8%
Automobile components	20	5	8		33	18.3%
Agricultural machinery	6	1	7	1	15	8.3%
Metal working	24	3	27		54	30.0%
Ceramic building materials	13	3	8	1	25	13.9%
Others			3		3	1.7%
Total	86 47.8%	17 9.4%	73 40.6%	4 2.2%	180	

In spite of the fact that there are 47.8% of the respondents who have products that were applicable to the SII mark certification, there are 40.6% of the respondents who did not know whether their products were applicable to the SII mark certification. Only 9.4% of the respondents who did not have any products applicable to the SII mark certification.

### 4.2. Certified Manufacturer of SII Mark Certified Products

	Yes	No	Don't Know	No Answer	Total	
Electronic/electrical	10	28	10	2	50	27.8%
Automobile components	15	15	3		33	18.3%
Agricultural machinery	7	4	3	1	15	8.3%
Metal working	14	24	14	2	54	30.0%
Ceramic building materials	6	15	3	1	25	13.9%
Others		2	1		3	1.7%
Total	52 28.9%	88 48.9%	34 18.9%	6 3.3%	180	

Although nearly half of the respondents did have products applicable to the SII mark certification, nearly half of them (48.9%) were not certified manufacturers of SII mark certified products. Only 28.9% of the respondents were certified manufacturers of SII mark certified products.

#### 4.3. Reasons for not Applying for the SII Mark Certification

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
<b>Total Sample</b>	50	33	15	54	25	3	180
• Do not guarantee any good result	1 2.0%	3 9.1%	1 6.7%	1 1.9%	3 12.0%		9 5.0%
• Customer do not ask	26 52.0%	18 54.5%	5 33.3%	31 57.4%	11 44.0%	1 33.3%	92 51.1%
• Preparation for application is costly	1 2.0%	1 3.0%		2 3.7%			4 2.2%
• Requirement is too complicated	1 2.0%	1 3.0%	1 6.7%	3 5.6%			6 3.3%
• Product quality does not conform to the standard				2 3.7%			2 1.1%
• Others	9 18.0%	4 12.1%	4 26.7%	7 13.0%	6 24.0%		30 16.7%

A single most important reason for not applying for the SII mark certification is that the majority of Indonesian customer do not ask for it, and this reason was indicated by 51.1% of the respondents.

#### 4.4. Raw Materials Applicable to the SII Mark Certification

	Yes	No	Don't Know	No Answer	Total	
Electronic/electrical	13	14	19	4	50	27.8%
Automobile components	16	7	9	1	33	18.3%
Agricultural machinery	8	1	5	1	15	8.3%
Metal working	26	13	14	1	54	30.0%
Ceramic building materials	4	10	10	1	25	13.9%
Others		1	1	1	3	1.7%
<b>Total</b>	68 37.8%	46 25.6%	58 32.2%	8 4.4%	180	

Only 37.8% of the respondents claimed that they had any raw materials, components or auxiliary materials which applicable to the SII mark certification. Respondents who did not know or did not have raw materials, components or auxiliary materials which applicable to the SII mark certification are 32.2% and 25.6% respectively.

#### 4.5. Requests Suppliers to Apply for the SII Mark Certification

	Yes	No	Partly Yes	No Answer	Total	
Electronic/electrical	6	32	8	4	50	27.8%
Automobile components	3	20	8	2	33	18.3%
Agricultural machinery	3	8	3	1	15	8.3%
Metal working	4	33	16	1	54	30.0%
Ceramic building materials	4	17	3	1	25	13.9%
Others	1	2			3	1.7%
Total	21 11.7%	112 62.2%	38 21.1%	9 5.0%	180	

The majority of the respondents (62.2%) did not request their supplier to apply for the SII mark certification. Only 11.7% of the respondents that insistent on this requirement.

#### 4.6. Registered Firm for the ISO 9000 Series Certification

	Yes	No	Don't Know	No Answer	Total	
Electronic/electrical	9	36	2	3	50	27.8%
Automobile components	4	24	2	3	33	18.3%
Agricultural machinery	3	8	3	1	15	8.3%
Metal working	7	40	6	1	54	30.0%
Ceramic building materials	1	18	5	1	25	13.9%
Others		3			3	1.7%
Total	24 13.3%	129 71.7%	18 10.0%	9 5.0%	180	

Only 24 of the 180 respondents (13.3%) were registered firm for the ISO 9000 series certification, while 71.7% were not.

#### 4.7. Reasons not to Apply for ISO 9000 series Certification

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
<b>Total Sample</b>	<b>50</b>	<b>33</b>	<b>15</b>	<b>54</b>	<b>25</b>	<b>3</b>	<b>180</b>
• Do not guarantee any good result	1 2.0%	1 3.0%		1 1.9%	2 8.0%		5 2.8%
• Customer do not ask	12 24.0%	15 45.5%	4 26.7%	20 37.0%	10 40.0%	2 66.7%	63 35.0%
• Do not know how to apply	3 6.0%	3 9.1%		11 20.4%	4 16.0%	1 33.3%	22 12.2%
• Preparation for application is costly	2 4.0%	2 6.1%	1 6.7%		2 8.0%		7 3.9%
• Expenses to get ISO 9000 is costly	3 6.0%	5 15.2%	3 20.0%	4 7.4%	3 12.0%		18 10.0%
• Requirements are too complicated		1 3.0%		3 5.6%	3 12.0%		7 3.9%
• Product quality does not conform to the standard	10 20.0%	6 18.2%	4 26.7%	9 16.7%	3 12.0%	1 33.3%	33 18.3%
• Others	13 26.0%	5 15.2%		8 14.8%	4 16.0%		30 16.7%

The fact that "our customer do not ask us to get the ISO 9000 series certification" again was the most important reason, indicated by 35.0% of the respondents. Non-conformity of product quality to the standard is the second most important reason (18.3%), while the third reason was they did not know how to apply for the ISO 9000 certification (12.2%).

#### 4.8. Request Suppliers to Apply for the ISO 9000

	Yes	No	No Answer	Total	
Electronic/electrical	11	35	4	50	27.8%
Automobile components	2	29	2	33	18.3%
Agricultural machinery	3	7	5	15	8.3%
Metal working	9	40	5	54	30.0%
Ceramic building materials	2	20	3	25	13.9%
Others		3		3	1.7%
<b>Total</b>	<b>27</b> 15.0%	<b>134</b> 74.4%	<b>19</b> 10.6%	<b>180</b>	

Most of the respondents (74.4.2%) did not request their supplier to apply for the SII mark certification. Only 15.0% of the respondents that requested their supplier to apply for the SII mark certification.

## 5. Quality Control/Management

### 5.1. QC Activities Implemented or Planned to be Implemented

#### 5.1.1. QC Activity : Product Inspection

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	47	2		1	50	27.8%
Automobile components	31	1		1	33	18.3%
Agricultural machinery	12	2		1	15	8.3%
Metal working	51			3	54	30.0%
Ceramic building materials	23		1	1	25	13.9%
Others	3				3	1.7%
Total	167 92.8%	5 2.8%	1 0.6%	7 3.9%	180	

Nearly all of the respondents (92.8%) had implemented product inspection as a means for their quality control activity.

#### 5.1.2. QC Activity : Inspection in Process

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	44	3		3	50	27.8%
Automobile components	31	2			33	18.3%
Agricultural machinery	13	1		1	15	8.3%
Metal working	51			3	54	30.0%
Ceramic building materials	23		1	1	25	13.9%
Others	3				3	1.7%
Total	165 91.7%	6 3.3%	1 0.6%	8 4.4%	180	

Again, nearly all of the respondents (91.7%) had implemented inspection in process as a means for their quality control activity.

### 5.1.3. QC Activity : Statistical QC

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	32	6	6	6	50	27.8%
Automobile components	21	9		3	33	18.3%
Agricultural machinery	9	2	1	3	15	8.3%
Metal working	25	18	3	8	54	30.0%
Ceramic building materials	16	4	4	1	25	13.9%
Others	1	1	1		3	1.7%
Total	104 57.8%	40 22.2%	15 8.3%	21 11.7%	180	

57.8% of the respondents had implemented statistical quality control as a means for quality control activity. Statistical quality control was less popular in the metal working industry since it was used only by 25 out of 54 respondents (46.3%), while in other industries the figure is about 60.0%. However the biggest proportion of companies that planned to use this method in the future are companies that belongs to the metal working industry.

### 5.1.4. QC Activity : Establishment of QC Department

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	38	6	2	4	50	27.8%
Automobile components	25	3	1	4	33	18.3%
Agricultural machinery	9	2	1	3	15	8.3%
Metal working	33	9	7	5	54	30.0%
Ceramic building materials	18	3	3	1	25	13.9%
Others	1		2		3	1.7%
Total	124 68.9%	23 12.8%	16 8.9%	17 9.4%	180	

To ensure a continuous implementation of quality control, 68.9% of the respondents added quality control departments in their organization, while 12.8% has planned to do so.



### 5.1.5. QC Activity : Documentation of Quality Practice

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	33	9	2	6	50	27.8%
Automobile components	24	3	3	3	33	18.3%
Agricultural machinery	10	2	1	2	15	8.3%
Metal working	32	12	4	6	54	30.0%
Ceramic building materials	18	3	3	1	25	13.9%
Others	1		2		3	1.7%
Total	118 65.6%	29 16.1%	15 8.3%	18 10.0%	180	

Documentation of quality practice is a technique used by 65.6% of the respondents, and 16.1% of the respondents planned to use this method in the future.

### 5.1.6. QC Activity : ISO 9000 Series

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	5	27	10	8	50	27.8%
Automobile components	3	21	4	5	33	18.3%
Agricultural machinery	2	4	6	3	15	8.3%
Metal working	6	22	17	9	54	30.0%
Ceramic building materials		13	11	1	25	13.9%
Others		1	2		3	1.7%
Total	16 8.9%	88 48.9%	50 27.8%	26 14.4%	180	

ISO 9000 Series, the most recent method in quality control activity, was only used by 8.9% of the respondents. Although 48.9% of the respondents had planned to implement this method, nevertheless there are 27.8% of the respondents that did not know about ISO 9000 Series.

#### 5.1.7. QC Activity : Using Quality Consultant

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	12	9	19	10	50	27.8%
Automobile components	5	11	10	7	33	18.3%
Agricultural machinery	4	1	7	3	15	8.3%
Metal working	14	13	17	10	54	30.0%
Ceramic building materials	4	4	16	1	25	13.9%
Others		3			3	1.7%
Total	39 21.7%	41 22.8%	69 38.3%	31 17.2%	180	

Quality consultant seems to be the least popular method in quality control, despite the fact that 22.8% of the respondents had planned to use quality consultant.

#### 5.1.8. QC Activity : Developing In-company Standard

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	21	11	8	10	50	27.8%
Automobile components	19	9	2	3	33	18.3%
Agricultural machinery	6	4	3	2	15	8.3%
Metal working	19	20	7	8	54	30.0%
Ceramic building materials	19	2	3	1	25	13.9%
Others	1	2			3	1.7%
Total	85 47.2%	48 26.7%	23 12.8%	24 13.3%	180	

Developing in-company standard is common in the ceramic building materials industry. It was used by 76.0% of total sample in the ceramic building materials industry, compare to the average for all industry of 47.2%.

### 5.1.9. QC Activity : Activating QC Circle

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	21	15	5	9	50	27.8%
Automobile components	23	6		4	33	18.3%
Agricultural machinery	8	2	1	4	15	8.3%
Metal working	25	20	2	7	54	30.0%
Ceramic building materials	11	9	4	1	25	13.9%
Others		3			3	1.7%
Total	88 48.9%	55 30.6%	12 6.7%	25 13.9%	180	

48.9% of the respondents had implemented quality control circle as a means for quality control. Apparently quality control circle is a preferred method for automobile components industry, since it was used by 69.7% of total sample of this industry.

### 5.1.10. QC Activity : Employee Suggestion System

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	36	6	1	7	50	27.8%
Automobile components	27	4		2	33	18.3%
Agricultural machinery	12		1	2	15	8.3%
Metal working	34	13	2	5	54	30.0%
Ceramic building materials	16	5	2	2	25	13.9%
Others	3				3	1.7%
Total	128 71.1%	28 15.6%	6 3.3%	18 10.0%	180	

Employee suggestion system was used by 71.1% of the respondents, and it was used more by companies in the automobile components and agricultural machinery industry.

#### 5.1.11. QC Activity : Seven Tools for QC

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	21	9	11	9	50	27.8%
Automobile components	20	5	2	6	33	18.3%
Agricultural machinery	6	2	3	4	15	8.3%
Metal working	17	17	9	11	54	30.0%
Ceramic building materials	10	6	7	2	25	13.9%
Others	1		2		3	1.7%
Total	75 41.7%	39 21.7%	34 18.9%	32 17.8%	180	

41.7% of the respondents implemented seven tools for quality control as a means for their quality control activity, and 21.7% of the respondents had planned to do so.

#### 5.1.12. QC Activity : Activating Five (5) S

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	22	7	14	7	50	27.8%
Automobile components	23	2	1	7	33	18.3%
Agricultural machinery	6	2	2	5	15	8.3%
Metal working	24	11	10	9	54	30.0%
Ceramic building materials	10	5	8	2	25	13.9%
Others	1		2		3	1.7%
Total	86 47.8%	27 15.0%	37 20.6%	30 16.7%	180	

Although 47.8% of the respondents had implemented and 15.0% of the respondents had planned to implement this method, however 20.6% of the respondents that did not know about five (5) S is quite high.

### 5.1.13. QC Activity : Implementing QC Training

	Imple- mented	Planned	Don't Know	No Answer	Total	
Electronic/electrical	36	7	3	4	50	27.8%
Automobile components	23	6		4	33	18.3%
Agricultural machinery	10	1	1	3	15	8.3%
Metal working	28	16	3	7	54	30.0%
Ceramic building materials	16	5	2	2	25	13.9%
Others	1	2			3	1.7%
Total	114 63.3%	37 20.6%	9 5.0%	20 11.1%	180	

The importance of human resources is acknowledged by more than 80% of the respondents, since quality control training was implemented by 63.3% of the respondents, and 20.6% of the respondents had planned to implement in the near future.

## 5.2. Major Reasons of Quality Problems

### 5.2.1. Ignorance by Management

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
Total Sample	50	33	15	54	25	3	180
• Priority Scale 1	6.0%	6.1%		3.7%			3.9%
• Priority Scale 2		3.0%					0.6%
• Priority Scale 3	4.0%	3.0%			4.0%		2.2%
• Priority Scale 4			13.3%	3.7%			2.2%
• Priority Scale 5	4.0%			1.9%			1.7%
• Priority Scale 6	2.0%	3.0%		9.3%	4.0%		4.4%
• Priority Scale 7	2.0%			1.9%			1.1%
• Priority Scale 8	2.0%	12.1%		11.1%	8.0%	33.3%	7.8%
• Priority Scale 9				1.9%			0.6%
• No Answer	80.0%	72.7%	86.7%	66.7%	84.0%	66.7%	75.6%

Ignorance by management was not an important reason of quality problems. This notion seems consistent to the fact that numerous method had been implemented or planned to be implemented by the management to promote quality control in their company.

### 5.2.2. Apathy of Employees

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
<b>Total Sample</b>	<b>50</b>	<b>33</b>	<b>15</b>	<b>54</b>	<b>25</b>	<b>3</b>	<b>180</b>
• Priority Scale 1	22.0%	6.1%		18.5%	28.0%	33.3%	17.2%
• Priority Scale 2	10.0%	6.1%	6.7%	5.6%	4.0%		6.7%
• Priority Scale 3		6.1%	20.0%	5.6%	8.0%		5.6%
• Priority Scale 4	2.0%	6.1%		7.4%			3.9%
• Priority Scale 5	10.0%	6.1%		5.6%			3.3%
• Priority Scale 6							
• Priority Scale 7	14.0%	3.0%		7.4%		33.3%	4.4%
• Priority Scale 8							
• Priority Scale 9							
• No Answer	60.0%	66.7%	73.3%	50.0%	60.0%	33.3%	58.9%

Apathy of employee is quite an important reason of quality problem, since it was indicated by 17.2% of the respondents as priority scale 1. Training in quality control seems to be the right answer to reduce quality problems caused by unconcerned employee.

### 5.2.3. Lack of Knowledge in QC Methods

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
<b>Total Sample</b>	<b>50</b>	<b>33</b>	<b>15</b>	<b>54</b>	<b>25</b>	<b>3</b>	<b>180</b>
• Priority Scale 1	22.0%	42.4%	6.7%	35.2%	28.0%	33.3%	29.4%
• Priority Scale 2	12.0%	12.1%	26.7%	18.5%	16.0%	33.3%	16.1%
• Priority Scale 3	10.0%	9.1%	20.0%	7.4%			8.3%
• Priority Scale 4		3.0%		3.7%			1.7%
• Priority Scale 5		6.1%		3.7%			2.2%
• Priority Scale 6	4.0%				4.0%	33.3%	2.2%
• Priority Scale 7							
• Priority Scale 8				1.9%			0.6%
• Priority Scale 9							
• No Answer	52.0%	27.3%	46.7%	29.6%	52.0%		39.4%

Lack of knowledge in quality control was an important reason for quality problems, because it was indicated by 53.8% as priority scale 1, 2 and 3. Again, training is a good answer to increase knowledge in quality control.

#### 5.2.4. Lack of Staff to Introduce QC

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
Total Sample	50	33	15	54	25	3	180
• Priority Scale 1	12.0%	6.1%	40.0%	11.1%	4.0%	33.3%	12.2%
• Priority Scale 2	22.0%	24.2%	20.0%	40.7%	20.0%	33.3%	27.8%
• Priority Scale 3	10.0%	12.1%	6.7%	9.3%	12.0%	33.3%	10.6%
• Priority Scale 4	6.0%	12.1%		5.6%	4.0%		6.1%
• Priority Scale 5	2.0%						0.6%
• Priority Scale 6		3.0%					0.6%
• Priority Scale 7		3.0%					0.6%
• Priority Scale 8							
• Priority Scale 9							
• No Answer	48.0%	39.4%	33.3%	33.3%	60.0%		41.7%

About half of the respondents mentioned that lack of staff to introduce quality control was the reason for quality problems in their companies, either as priority scale 1, 2 or 3. This fact indicates the need of qualified quality consultants to help them in introducing quality control.

#### 5.2.5. Lack of Time to Carry Out QC Activities

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
Total Sample	50	33	15	54	25	3	180
• Priority Scale 1	6.0%	6.1%	6.7%	7.4%	4.0%		6.1%
• Priority Scale 2	2.0%	3.0%	6.7%	7.4%	4.0%		4.4%
• Priority Scale 3	8.0%	6.1%	6.7%	16.7%	8.0%	33.3%	10.6%
• Priority Scale 4	12.0%	3.0%		13.0%	8.0%		8.9%
• Priority Scale 5	2.0%	9.1%	6.7%	1.9%	4.0%		3.9%
• Priority Scale 6		6.1%		3.7%			2.2%
• Priority Scale 7		6.1%		1.9%			1.7%
• Priority Scale 8							
• Priority Scale 9							
• No Answer	70.0%	60.6%	73.3%	48.2%	72.0%	66.7%	62.2%

Time was not important reason for quality problems, because only 10.6% indicated lack of time (as priority scale 3) as the reason for quality problems in their companies.

### 5.2.6. Unconcern of Customers

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
<b>Total Sample</b>	<b>50</b>	<b>33</b>	<b>15</b>	<b>54</b>	<b>25</b>	<b>3</b>	<b>180</b>
• Priority Scale 1	6.0%	3.0%	20%	9.3%	4.0%	33.3%	7.2%
• Priority Scale 2	10.0%	3.0%		3.7%			5.0%
• Priority Scale 3	2.0%	3.0%			4.0%		1.7%
• Priority Scale 4		3.0%	6.7%	5.6%			2.8%
• Priority Scale 5				7.4%	4.0%		2.8%
• Priority Scale 6	4.0%	6.1%		5.6%			3.9%
• Priority Scale 7		3.0%		7.4%	4.0%		3.3%
• Priority Scale 8	2.0%	6.1%		3.7%			2.8%
• Priority Scale 9							
• No Answer	76.0%	72.7%	73.3%	57.4%	84.0%	66.7%	70.6%

Most of the respondents indicated that customers had nothing to do with quality problems in their companies.

### 5.2.7. Cost Increase

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
<b>Total Sample</b>	<b>50</b>	<b>33</b>	<b>15</b>	<b>54</b>	<b>25</b>	<b>3</b>	<b>180</b>
• Priority Scale 1	2.0%	9.1%				33.3%	2.2%
• Priority Scale 2		3.0%	6.7%	1.9%	4.0%		2.2%
• Priority Scale 3	2.0%	9.1%		7.4%	4.0%		5.0%
• Priority Scale 4	4.0%	3.0%		5.6%			3.9%
• Priority Scale 5	6.0%	3.0%	6.7%	5.6%	4.0%		5.0%
• Priority Scale 6		3.0%		7.4%			2.8%
• Priority Scale 7	6.0%	3.0%		11.1%	8.0%		6.7%
• Priority Scale 8				1.9%			0.6%
• Priority Scale 9	2.0%						0.6%
• No Answer	78.0%	66.7%	86.7%	59.3%	80.0%	66.7%	71.1%

Cost was not an important reason for quality problems.



### 5.2.8. Job Hopping

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
<b>Total Sample</b>	<b>50</b>	<b>33</b>	<b>15</b>	<b>54</b>	<b>25</b>	<b>3</b>	<b>180</b>
• Priority Scale 1		3.0%					0.6%
• Priority Scale 2		3.0%		1.9%	4.0%		1.7%
• Priority Scale 3		3.0%		3.7%	4.0%		2.2%
• Priority Scale 4		3.0%					0.6%
• Priority Scale 5		3.0%		7.4%		33.3%	3.3%
• Priority Scale 6	4.0%			5.6%	4.0%		3.3%
• Priority Scale 7		3.0%		1.9%			1.1%
• Priority Scale 8	6.0%			11.1%	4.0%		5.6%
• Priority Scale 9							
• No Answer	90.0%	81.8%	100.0%	68.5%	84.0%	66.7%	81.7%

Job hopping was not an important reason for quality problems.

### 5.2.9. Others

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total
<b>Total Sample</b>	<b>50</b>	<b>33</b>	<b>15</b>	<b>54</b>	<b>25</b>	<b>3</b>	<b>180</b>
• Priority Scale 1	4.0%	3.0%	6.7%	1.9%	32.0%		7.2%
• Priority Scale 2	2.0%	3.0%			4.0%		1.7%
• Priority Scale 3				1.9%			0.6%
• Priority Scale 4							0.6%
• Priority Scale 5				1.9%			
• Priority Scale 6							
• Priority Scale 7							
• Priority Scale 8							
• Priority Scale 9		3.0%		1.9%	4.0%		5.0%
• No Answer	94.0%	91.9%	93.3%	92.6%	60.0%	100.0%	88.3%

There are no other important reason for quality problems.

### 5.3. Quality Inspection in Receiving Raw Materials, Components and Other Auxiliary Materials

#### 5.3.1. Inspection by the Company on All Items

	Priority Scale 1	Priority Scale 2	Priority Scale 3	No Answer	Total Sample
Electronic/electrical	23			27	50
Automobile components	15			18	33
Agricultural machinery	10			5	15
Metal working	31			23	54
Ceramic building materials	12			13	25
Others				3	3
Total	91 50.6%			89 49.4%	180

Half of the respondents had done quality inspection in receiving raw materials, components and other auxiliary materials by themselves.

#### 5.3.2. Sampling Inspection by the Company

	Priority Scale 1	Priority Scale 2	Priority Scale 3	No Answer	Total Sample
Electronic/electrical	29	2		19	50
Automobile components	20	5		8	33
Agricultural machinery	7			8	15
Metal working	26	2		26	54
Ceramic building materials	21			4	25
Others	3				3
Total	106 58.9%	9 5.0%		65 36.1%	180

Sampling inspection seems to be the most preferred method in receiving raw materials, since it was indicated by 58.9% of the respondents.

### 5.3.3. Acceptance Using Supplier's Data and Information

	Priority Scale 1	Priority Scale 2	Priority Scale 3	No Answer	Total Sample
Electronic/electrical	13		2	35	50
Automobile components	5		1	27	33
Agricultural machinery	2	2		11	15
Metal working	15			39	54
Ceramic building materials	3	1		21	25
Others	2			1	3
Total	40 22.2%	3 1.7%	3 1.7%	134 74.4%	180

Only 22.2% of the respondents used suppliers' data and information as a primary consideration in receiving raw materials, components and other auxiliary materials.

### 5.3.4. Acceptance Using Third Party's Data and Information

	Priority Scale 1	Priority Scale 2	Priority Scale 3	No Answer	Total Sample
Electronic/electrical	5			45	50
Automobile components	2		1	30	33
Agricultural machinery				15	15
Metal working	8			46	54
Ceramic building materials	3			22	25
Others				3	3
Total	18 10.0%		1 0.6%	161 89.4%	180

Only 10.0% of the respondents rely upon third parties' data and information in receiving raw materials, components and other auxiliary materials.

### 5.3.5. No Inspection or Inspection Not Necessary

	Priority Scale 1	Priority Scale 2	Priority Scale 3	No Answer	Total Sample
Electronic/electrical				50	50
Automobile components				33	33
Agricultural machinery				15	15
Metal working	1			53	54
Ceramic building materials	1			24	25
Others				3	3
Total	2 1.1%			178 98.9%	180

Nearly all of the respondents did not agree to the statement that inspection is not necessary in receiving raw materials, components and other auxiliary materials.

#### 5.3.6. Others

	Priority Scale 1	Priority Scale 2	Priority Scale 3	No Answer	Total Sample
Electronic/electrical	3			47	50
Automobile components	1			32	33
Agricultural machinery				15	15
Metal working				54	54
Ceramic building materials				25	25
Others				3	3
Total	4 2.2%			178 98.9%	180

Only 2.2% of the respondents indicated other way of quality inspection in receiving raw materials, components and other auxiliary materials.

#### 5.4. Use of Outside Laboratories for Testing and/or Calibration

	Yes	No	No Answer	Total Sample
Electronic/electrical	30	18	2	50
Automobile components	18	13	2	33
Agricultural machinery	9	6		15
Metal working	36	16	2	54
Ceramic building materials	21	4		25
Others	2	1		3
Total	116 64.4%	58 32.2%	6 3.3%	180

Most of the respondents (64.4%) indicated that they used outside laboratories for testing and calibration.

## 5.5. Testing Frequency of Each Area of Test

### 5.5.1. Calibration

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• Once a year	16	9	3	17	11	1	57	31.7%
• 2 to 5 times per year	6	1	1	5	1		14	7.8%
• 6 to 10 times per year				1			1	0.6%
• 11 to 15 times per year								
• > 15 times per year								
• Any time needed	3	3	4	1	4	2	15	8.3%
• No answer	25	20	7	30	9	3	93	51.7%
Total	50 27.8%	33 18.3%	15 8.3%	54 30.0%	25 13.9%	3 1.7%	180	

“Once a year” is the most prevalent answer for frequency of calibration test, claimed by 31.7% of the respondents. There are 8.3% of the respondents that indicated they did calibration test any time needed.

### 5.5.2. Mechanical

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• Once a year	2	1	1		1		5	2.8%
• 2 to 5 times per year	1			9	1		11	6.1%
• 6 to 10 times per year				2			2	1.1%
• 11 to 15 times per year		1					1	0.6%
• > 15 times per year								
• Any time needed	8	8	6	12	5		39	21.7%
• No answer	39	23	8	31	18	3	122	67.8%
Total	50 27.8%	33 18.3%	15 8.3%	54 30.0%	25 13.9%	3 1.7%	180	

21.7% of the respondents indicated that they did mechanical test as the need arises. For metal working industry, 2 to 5 times per year was also a common answer.

### 5.5.3. Electrical

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• Once a year	3			1			4	2.2%
• 2 to 5 times per year	1			2			3	1.7%
• 6 to 10 times per year								
• 11 to 15 times per year		1					1	0.6%
• > 15 times per year								
• Any time needed	12		2	3			17	9.4%
• No answer	34	32	13	48	25	3	155	86.1%
Total	50	33	15	54	25	3	180	
	27.8%	18.3%	8.3%	30.0%	13.9%	1.7%		

Again, "any time needed" seems to be the most common answer for frequency of electrical testing, and 12 out 16 who selected this answer were companies from the electronics/electrical industry.

### 5.5.4. Chemical

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• Once a year		1		2	2		5	2.8%
• 2 to 5 times per year	2			6	6	1	15	8.3%
• 6 to 10 times per year				2			2	1.1%
• 11 to 15 times per year	1	1					2	1.1%
• > 15 times per year			1	1			2	1.1%
• Any time needed	2	8	1	6	9		26	14.4%
• No answer	45	23	13	37	8	2	128	71.1%
Total	50	33	15	54	25	3	180	
	27.8%	18.3%	8.3%	30.0%	13.9%	1.7%		

Two preferred choice for the chemical testing frequency are "any time needed" (14.4%) and "2 to 5 times per year" (8.3%). Majority of the companies who that had chosen the two choices were dominated by the metal working and ceramic building materials industry.

### 5.5.5. Physical

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• Once a year	1				1		2	1.1%
• 2 to 5 times per year	1			1	1	1	4	2.2%
• 6 to 10 times per year				1	1		2	1.1%
• 11 to 15 times per year		1		1			2	1.1%
• > 15 times per year				1			1	0.6%
• Any time needed		5	1	3	4		13	7.2%
• No answer	48	27	14	47	18	2	156	86.7%
Total	50 27.8%	33 18.3%	15 8.3%	54 30.0%	25 13.9%	3 1.7%	180	

7.2% of the respondents indicated that they did the physical testing according to the need.

### 5.5.6. Others

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• Once a year	2						2	1.1%
• 2 to 5 times per year					1		1	0.6%
• 6 to 10 times per year				2			2	1.1%
• 11 to 15 times per year								
• > 15 times per year		1					1	0.6%
• Any time needed	1	3	2	2			8	4.4%
• No answer	47	29	13	50	24	3	166	92.2%
Total	50 27.8%	33 18.3%	15 8.3%	54 30.0%	25 13.9%	3 1.7%	180	

There was no single significant answer for frequency of other type of test.

## 5.6. Dissatisfaction in Using Outside Laboratories

### 5.6.1. Calibration

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• Sampling the tested components	1						1	0.6%
• Difficult to fulfill the terms	1			1		1	3	1.7%
• Testing period too long	11	6	4	9	1		31	17.2%
• Expensive testing cost	4	2	1	7	1		15	8.3%
• Others	3	1	1	1	1		7	3.9%
• No answer	30	24	9	36	22	2	123	68.3%
Total	50 27.8%	33 18.3%	15 8.3%	54 30.0%	25 13.9%	3 1.7%	180	

Those who used outside laboratories for calibration test annoyed by the fact that the testing period was too long (17.2%). Another companies (8.3%) felt that the testing cost was too expensive.

### 5.6.2. Mechanical

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• Sampling the tested components								
• Difficult to fulfill the terms		1					1	0.6%
• Testing period too long	3	6	2	9			20	11.1%
• Expensive testing cost	4	1	2	6			13	7.2%
• Others	1		1	2	1		5	2.8%
• No answer	42	25	10	37	24	3	141	78.3%
Total	50 27.8%	33 18.3%	15 8.3%	54 30.0%	25 13.9%	3 1.7%	180	

The duration of mechanical test was also dissatisfied 11.1% of the respondents, and followed by the cost of mechanical test (7.2%)



### 5.6.3. Electrical

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• Sampling the tested components	1						1	0.6%
• Difficult to fulfill the terms								
• Testing period too long	6	1		2			9	5.0%
• Expensive testing cost	3			2			5	2.8%
• Others	3		1				4	2.2%
• No answer	37	32	14	50	25	3	161	89.4%
Total	50	33	15	54	25	3	180	
	27.8%	18.3%	8.3%	30.0%	13.9%	1.7%		

Nine companies, six of them are electronics/electrical industry, mentioned that they felt unsatisfied by the duration of electrical test.

### 5.6.4. Chemical

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• Sampling the tested components		1					1	0.6%
• Difficult to fulfill the terms								
• Testing period too long	3	3	1	8	4	1	20	11.1%
• Expensive testing cost				2			2	1.1%
• Others				1	1		2	1.1%
• No answer	47	29	14	43	20	2	155	86.1%
Total	50	33	15	54	25	3	180	
	27.8%	18.3%	8.3%	30.0%	13.9%	1.7%		

Again, 11.1% of the respondents were displeased by the duration of chemical test.

### 5.6.5. Physical

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• Sampling the tested components								
• Difficult to fulfill the terms								
• Testing period too long		1		1	1	1	4	2.2%
• Expensive testing cost		3		2			5	2.8%
• Others								
• No answer	50	29	15	51	24	2	171	95.0%
Total	50 27.8%	33 18.3%	15 8.3%	54 30.0%	25 13.9%	3 1.7%	180	

Only 9 companies answered to this question, and the answer were distributed for "testing period too long" and "expensive testing cost".

### 5.6.6. Others

	Electr.	Auto.	Agri.	Metal	Ceramic	Others	Total	
• Sampling the tested components								
• Difficult to fulfill the terms								
• Testing period too long	1			2			3	1.7%
• Expensive testing cost		1		1			2	1.1%
• Others			1	1			2	1.1%
• No answer	49	32	14	50	25	3	173	96.1%
Total	50 27.8%	33 18.3%	15 8.3%	54 30.0%	25 13.9%	3 1.7%	180	

Only seven companies responded to this question, and the answer were distributed in three options.



**Questionnaire**

**STUDY ON INDUSTRIAL STANDARDIZATION  
AND QUALITY CONTROL PROMOTION**

Sponsored by :  
Pusat Standardisasi Industri (PUSTAN), Department of Industry R.I.  
with  
Japan International Cooperation Agency (JICA) Japan



LEMBAGA MANAGEMENT  
FAKULTAS EKONOMI  
UNIVERSITAS INDONESIA

**UNICO**  
INTERNATIONAL CORP.  
TOKYO, JAPAN

Please send the fulfilled questionnaire to : Mr. Aditiawan Chandra, PhD., Project Leader of Industrial Study, Lembaga Management FEUI, Jl. Salemba Raya No. 4, Jakarta 10430 (Fax: 331610), please send back before November 10th 1994. Stamped return envelope attached for your convenience.

Data Correction Officer:	Follow Up Office :	Tabulator Officer :	Data Input Officer :

## COMPANY RESPONDENT INFORMATION

Name of company : \_\_\_\_\_  
 \_\_\_\_\_  
 Address : \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ Post Code : \_\_\_\_\_  
 Telephone : \_\_\_\_\_ Facsimile : \_\_\_\_\_  
 Name of person in charge, in case of contact:  
 Name : \_\_\_\_\_  
 Designation : \_\_\_\_\_  
 Name : \_\_\_\_\_  
 Designation : \_\_\_\_\_

*Guideline to answer: Please answer the questionnaire or give "X" sign in the available bracket [ ]*

[this column will  
be filled by  
LMFBU]

### Section A: Company Profile

A.1. Respondent Number : \_\_\_\_\_ (Leave it Blank)

1[6]

A.2. Please tick appropriate industrial group and specify your major products when indicated below:

(A21) Electrical/electronics

2[1] —

- [ ]1 Consumer Product : \_\_\_\_\_  
(Please specify your major products, eg: Video, Audio, Electrical Home Appliance)
- [ ]2 Business/industrial products : \_\_\_\_\_  
(eg: Telecommunication, Data Processing, Office equipment, Medical Equipment)
- [ ]3 Component: \_\_\_\_\_  
(eg: Electric Component, Electronic Parts, parts for electrical equipment)
- [ ]4 Electric Machinery/Equipment: \_\_\_\_\_  
(eg: Generator, Transformer, Switch Board)
- [ ]5 Others: \_\_\_\_\_

(A22) Automobile Components

3[1] —

- [ ]1 Metal type Components
- [ ]2 Plastic type component
- [ ]3 Others types of components: \_\_\_\_\_

(A23) Agricultural machinery

4[1] —

- [ ]1 Agricultural Machinery Assembly
- [ ]2 Pumps for irrigations
- [ ]3 Diesel or fuel engine

(A24) Metal Working

- ☐ ]1 Foundry  
☐ ]2 Stamping  
☐ ]3 Forging  
☐ ]4 Metal Fabrication  
☐ ]5 Mold and Die  
☐ ]6 Others (please specify): \_\_\_\_\_

5[1] \_\_\_\_\_

(A25) Ceramic Building Material

- ☐ ]1 Floor / wall tile  
☐ ]2 Glazed roof tile  
☐ ]3 Non-glazed roof tile  
☐ ]4 Others (Please specify): \_\_\_\_\_

6[1] \_\_\_\_\_

(A26) Others (Please specify): \_\_\_\_\_

7[1] \_\_\_\_\_

A.3. Company status by laciness/ownership

- ☐ ]1 Foreign Capital    ☐ ]3 Joint Venture  
☐ ]2 Domestic Capital   ☐ ]4 Others : \_\_\_\_\_

8[1] \_\_\_\_\_

Section B : Business Unit Profile

B.1. Location of factory(ies)

(B11) Address : \_\_\_\_\_

Province : \_\_\_\_\_

Established in the year of : \_\_\_\_\_

9[1] \_\_\_\_\_

10[2] \_\_\_\_\_

(B12) Address : \_\_\_\_\_

Province : \_\_\_\_\_

Established in the year of : \_\_\_\_\_

11[1] \_\_\_\_\_

12[2] \_\_\_\_\_

B.3. Number of total worker/employees (fixed and/or unfixed salary)  
as of September 1994 :

Total : \_\_\_\_\_ people

13[3] \_\_\_\_\_

B.4. (B41) Total assets until the end of 1993

- ☐ ]1 Below Rp 100 Million                      ☐ ]4 Rp 1 Billion - Rp 5 Billion  
☐ ]2 Rp 101 Million - Rp 500 Million        ☐ ]5 Above Rp 5 Billion  
☐ ]3 Rp 501 Million - Rp 1 Billion

14[1] \_\_\_\_\_

B.4. (B42) Total new investment in the 1993

- ☐ ]1 Below Rp 100 Million                      ☐ ]4 Rp 1 Billion - Rp 5 Billion  
☐ ]2 Rp 101 Million - Rp 500 Million        ☐ ]5 above Rp 5 Million  
☐ ]3 Rp 501 Million - Rp 1 Billion

15[1] \_\_\_\_\_

**B.5. Total sales in the 1993** 16[1] —  
☐ ]1 Under Rp 500 Million ☐ ]4 Rp 5 Million - Rp 10 Million  
☐ ]2 Rp 501 Million - Rp 1 Billion ☐ ]5 Above Rp 10 Billion  
☐ ]3 Rp 1 Billion - Rp 5 Billion

**B.6. From the total sales in 1993, How many percentage sales to export** 17[1] —  
 (please indicate approximate percentage out of sales)  
☐ ]1 Nothing ☐ ]4 51% - 75%  
☐ ]2 Below 25% ☐ ]5 75% - 100%  
☐ ]3 26% - 50%

**B.7. From the total product to domestic market :**

**(B71) Percentage sold as final products ?** 18[1] —  
☐ ]1 Nothing ☐ ]4 51% - 75%  
☐ ]2 below 25% ☐ ]5 75% - 100%  
☐ ]3 26% - 50%

**(B72) Percentage sold as manufacturing materials for domestic markets products ?** 19[1] —  
☐ ]1 Nothing ☐ ]4 51% - 75%  
☐ ]2 below 25% ☐ ]5 75% - 100%  
☐ ]3 26% - 50%

**(B73) Percentage sold as manufacturing materials for export products ?** 20[1] —  
☐ ]1 None ☐ ]4 51% - 75%  
☐ ]2 Below 25% ☐ ]5 75% - 100%  
☐ ]3 26% - 50%

**B.8. Please indicate approximate percentage of purchase of raw material from:**

**(B81) Sources abroad (direct import)** 21[1] —  
☐ ]1 None ☐ ]4 51% - 75%  
☐ ]2 Below 25% ☐ ]5 75% - 100%  
☐ ]3 26% - 50%

**(B82) Imported materials through domestic channels** 22[1] —  
☐ ]1 None ☐ ]4 51% - 75%  
☐ ]2 Below 25% ☐ ]5 75% - 100%  
☐ ]3 26% - 50%

**(B83) Domestic sources** 23[1] —  
☐ ]1 None ☐ ]4 51% - 75%  
☐ ]2 Below 25% ☐ ]5 75% - 100%  
☐ ]3 26% - 50%

**B9. (B91) Do you have any kind of tie ups/affiliation with foreign firm(s)** 24[1] —  
☐ ]1 Yes  
☐ ]2 No  
 if yes, please continue. If no, please go to section C.

(B92) if yes, please tell the type of tie-up/affiliation (give sign X in the bracket), and tell the countries of the partner ?

[ ] 1 Affiliation on capital investment

The countries of the partner : \_\_\_\_\_

[ ] 2 Affiliation on Technical

The countries of the partner: \_\_\_\_\_

[ ] 3 Affiliation on Sales

The countries of the partner: \_\_\_\_\_

[ ] 4 Others affiliation

(a) \_\_\_\_\_

(b) \_\_\_\_\_

(c) \_\_\_\_\_

[ ] 5 With Country :

25[2] \_\_\_\_\_

26[2] \_\_\_\_\_

27[2] \_\_\_\_\_

28[2] \_\_\_\_\_

29[2] \_\_\_\_\_

30[2] \_\_\_\_\_

31[2] \_\_\_\_\_

32[2] \_\_\_\_\_

33[2] \_\_\_\_\_

34[1] \_\_\_\_\_

35[1] \_\_\_\_\_

36[1] \_\_\_\_\_

[37] \_\_\_\_\_

[38] \_\_\_\_\_

[39] \_\_\_\_\_

## Section C : Industrial Standards

C.1. Please indicate name of industrial standards are used in your company for products you sell :

Example : 1. For Indonesian standard: SII, SP, SLI, SPI, etc.

2. For foreign/regional standard: BS, JIS, DIN, ASTM, ASME, EU, etc.

3. For international standard: ISO, IEC, etc.

Application Object	Standard Name :			
	Indonesian standard	your-in company standard	foreign/regional standard	International standard
product standard	40	41	42	43
method standard (method of testing/sampling)	44	45	46	47
Basic standard (terms/vocabulary /nomenclature)	48	49	50	51

40 [1] \_\_\_\_\_

41 [1] \_\_\_\_\_

42 [1] \_\_\_\_\_

43 [1] \_\_\_\_\_

44 [1] \_\_\_\_\_

45 [1] \_\_\_\_\_

46 [1] \_\_\_\_\_

47 [1] \_\_\_\_\_

48 [1] \_\_\_\_\_

49 [1] \_\_\_\_\_

50 [1] \_\_\_\_\_

51 [1] \_\_\_\_\_



**C.2. Please indicate name of industrial standards are used in your company for raw materials/auxiliary materials/intermediates/component parts of products you procure**

Example : 1. For Indonesian standard: SII, SP, SLI, SPI, etc.  
2. For foreign/regional standard: BS, JIS, DIN, ASTM, ASME, EU, etc.  
3. For international standard: ISO, IEC, etc.

Application Object	Standard Name :				
	Indonesian standard	your-in company standard	foreign/regional standard	International standard	
product standard	52	53	54	55	52 [1] — 53 [1] — 54 [1] — 55 [1] —
method standard (method of testing/sampling)	56	57	58	59	56 [1] — 57 [1] — 58 [1] — 59 [1] —
Basic standard (terms/vocabulary /nomenclature)	60	61	62	63	60 [1] — 61 [1] — 62 [1] — 63 [1] —

**C.3. Please indicate the name of industrial standards are used in your company for machinery/equipment/spare parts of products you procure**

Example : 1. For Indonesian standard: SII, SP, SLI, SPI, etc.  
2. For foreign/regional standard: BS, JIS, DIN, ASTM, ASME, EU, etc.  
3. For international standard: ISO, IEC, etc.

Application Object	Standard Name :				
	Indonesian standard	your-in company standard	foreign/regional standard	International standard	
product standard	64	65	66	67	64 [1] — 65 [1] — 66 [1] — 67 [1] —
method standard (method of testing/sampling)	68	69	70	71	68 [1] — 69 [1] — 70 [1] — 71 [1] —
Basic standard (terms/vocabulary /nomenclature)	72	73	74	75	72 [1] — 73 [1] — 74 [1] — 75 [1] —

C.4. For those who mentioned that company standards are used; what is the basis of your in company standard ?

76[2] \_\_\_\_\_

- |  |  |
|--|--|
| <input type="checkbox"/> ]1 SII (SNI)              | <input type="checkbox"/> ]4 foreign standard         |
| <input type="checkbox"/> ]2 International standard | <input type="checkbox"/> ]5 Own experience           |
| <input type="checkbox"/> ]3 Customer specification | <input type="checkbox"/> ]6 Others (please specify): |

\_\_\_\_\_  
\_\_\_\_\_

C.5. Please indicate the standard you think necessary to be established in the future, if any?

77[2] \_\_\_\_\_

- [a]1 \_\_\_\_\_  
[b]2 \_\_\_\_\_  
[c]3 \_\_\_\_\_

C.6. Can you obtain the following standards and relating information easily ?

(C61) Standards:

- |                          |                                  |                                       |                                     |
|--------------------------|----------------------------------|---------------------------------------|-------------------------------------|
| - SII                    | <input type="checkbox"/> ]1 easy | <input type="checkbox"/> ]2 difficult | <input type="checkbox"/> ]3 no need |
| - foreign standard       | <input type="checkbox"/> ]1 easy | <input type="checkbox"/> ]2 difficult | <input type="checkbox"/> ]3 no need |
| - international standard | <input type="checkbox"/> ]1 easy | <input type="checkbox"/> ]2 difficult | <input type="checkbox"/> ]3 no need |

78[1] \_\_\_\_\_

79[1] \_\_\_\_\_

80[1] \_\_\_\_\_

(C62) Relating information:

- |                          |                                  |                                       |                                     |
|--------------------------|----------------------------------|---------------------------------------|-------------------------------------|
| - SII                    | <input type="checkbox"/> ]1 easy | <input type="checkbox"/> ]2 difficult | <input type="checkbox"/> ]3 no need |
| - foreign standard       | <input type="checkbox"/> ]1 easy | <input type="checkbox"/> ]2 difficult | <input type="checkbox"/> ]3 no need |
| - international standard | <input type="checkbox"/> ]1 easy | <input type="checkbox"/> ]2 difficult | <input type="checkbox"/> ]3 no need |

81[1] \_\_\_\_\_

82[1] \_\_\_\_\_

83[1] \_\_\_\_\_

## Section D : Certification

D.1. Do you have any products applicable to the SII mark certification ?

84[1] \_\_\_\_\_

- ☐ ]1 Yes  
☐ ]2 no  
☐ ]3 don't know

D.2. Are you a certified manufacturer of the above SII mark certified product(s) ?

85[1] \_\_\_\_\_

- ☐ ]1 Yes  
☐ ]2 no  
☐ ]3 don't know

D.3. What are the reasons why your company does not apply for the SII mark certification?

86[1] \_\_\_\_\_

- ☐ ]1 Do not guarantee any good result by the SII mark  
☐ ]2 Our customers do not ask us to get the SII mark  
☐ ]3 Preparation for application is costly  
☐ ]4 Requirement is too complicated  
☐ ]5 Our product quality does not conform with the standard  
☐ ]6 Others, please specify

\_\_\_\_\_  
\_\_\_\_\_

**D.4. Do you have any raw materials, components, or auxiliary materials which are applicable to the SII mark ?**

87[1] —

- ☐ ]1 Yes
- ☐ ]2 No
- ☐ ]3 Don't know

**D.5. Have you requested your supplies to apply for the SII mark ?**

88[1] —

- ☐ ]1 Yes
- ☐ ]2 No
- ☐ ]3 Partly Yes, partly No

**D.6. About the System Quality, or known as the certification system for ISO 9000 series.**

**(D61) Are you a registered firm for the ISO 9000 series certification:**

89[1] —

- ☐ ]1 Yes
- ☐ ]2 No (please go to question No. D62 & D63)
- ☐ ]3 Don't Know ISO 9000 (please directly go to Section E.)

**(D62) What are the reasons your company does not apply for registration under the ISO 9000 series certification:**

90[2] —

- ☐ ]1 No need because ISO 9000 do not guarantee any good result
- ☐ ]2 Our Customer do not ask us to get the ISO9000
- ☐ ]3 We don't know how to apply to get certification
- ☐ ]4 Preparation for application is costly
- ☐ ]5 Expenses to get ISO 9000 is costly
- ☐ ]6 Requirement is too complicated
- ☐ ]7 We think our product quality does not conform with the standard to get the certification
- ☐ ]8 Others (please specify):  
\_\_\_\_\_  
\_\_\_\_\_

**(D63) Have you requested your suppliers to apply for the ISO 9000 ?**

91[1] —

- ☐ ]1 Yes
- ☐ ]2 No

## Section E : Quality Control / Management

**E.1. Please indicate the activities currently implemented or being planned to be implemented in your company for quality control :**

Quality Control Activities :	Implemented	Planned	Don't Know	
Product inspection	[ ]1	[ ]2	[ ]3	92[1] —
Inspection in process	[ ]1	[ ]2	[ ]3	93[1] —
SQ (Statistical QC)	[ ]1	[ ]2	[ ]3	94[1] —
Establishment of QC Department	[ ]1	[ ]2	[ ]3	95[1] —
Documentation of Quality practice	[ ]1	[ ]2	[ ]3	96[1] —
ISO 9000 Series	[ ]1	[ ]2	[ ]3	97[1] —
Using Quality Consultant	[ ]1	[ ]2	[ ]3	98[1] —
Developing in-company standards	[ ]1	[ ]2	[ ]3	99[1] —
Activating QC Circle	[ ]1	[ ]2	[ ]3	100[1] —
Employee suggestion system	[ ]1	[ ]2	[ ]3	101[1] —
Seven tools for QC	[ ]1	[ ]2	[ ]3	102[1] —
Activating Five (5) S	[ ]1	[ ]2	[ ]3	103[1] —
Implementing QC Training	[ ]1	[ ]2	[ ]3	104[1] —

**E.2. Please indicate major reasons of quality problems in your company ?**  
(Based on priority scale : No. 1 is the highest reason, 2, 3, etc. in appropriate brackets)

- [ ]1 Ignorance by management 105[2] —
  - [ ]2 Apathy of employees
  - [ ]3 Lack of knowledge in QC methods
  - [ ]4 Lack of staff to introduce QC
  - [ ]5 Lack of time to carry out QC activities
  - [ ]6 Unconcern of customers
  - [ ]7 Cost increase
  - [ ]8 Job hopping
  - [ ]9 Others, please specify :
- 
- 

**E.3. Please indicate how your company carry out the quality inspection in receiving raw materials, components and other auxiliary materials.**

- [ ]1 Inspection by your company on all items 106[2] —
  - [ ]2 Sampling inspection by your company
  - [ ]3 Acceptance using supplier's data and information
  - [ ]4 Acceptance using third party's data and information
  - [ ]5 No inspection or inspection not necessary
  - [ ]6 Others, please specify :
- 
-

## Section F : Testing and Calibration Facility

**F.1. Do your company use any outside laboratories (including overseas) for testing and/or calibration ?**

107[1] —

[ ]1 Yes (please go to questions No.F2 & F3 & F4)

[ ]2 No (please stop, thank you)

**F.2. Please indicate area of test, test types and name of laboratories :**

Area of Test	Testing Types	Laboratories Name	
Calibration	(a) _____ (b) _____	_____	108[1] —
Mechanical	(a) _____ (b) _____	_____	109[1] —
Electrical	(a) _____ (b) _____	_____	110[1] —
Chemical	(a) _____ (b) _____	_____	111[1] —
Physical	(a) _____ (b) _____	_____	112[1] —
Others	(a) _____ (b) _____	_____	113[1] —

**F.3. Please indicate the testing frequencies of each area of test :  
(Choose the appropriate alphabet)**

Area of Test	Testing Frequencies						
Calibration	a	b	c	d	e	f	114[1] —
Mechanical	a	b	c	d	e	f	115[1] —
Electrical	a	b	c	d	e	f	116[1] —
Chemical	a	b	c	d	e	f	117[1] —
Physical	a	b	c	d	e	f	118[1] —
Others :	a	b	c	d	e	f	119[1] —

**Notes :**

(a) once a year	(d) 11 - 15 times per year
(b) 2 to 5 times per year	(e) more than 15 times per year
(c) 6 to 10 times per year	(f) Any time needed

**F.4. Please indicate in which aspect do you find unsatisfactory when you use these outside laboratories if any ?**

Area of test	Reason (choose the appropriate answer)					
Calibration	1	2	3	4	5	120[1] ———
Mechanical	1	2	3	4	5	121[1] ———
Electrical	1	2	3	4	5	122[1] ———
Chemical	1	2	3	4	5	123[1] ———
Physical	1	2	3	4	5	124[1] ———
Others	1	2	3	4	5	125[1] ———

Notes : (1) Sampling the tested component (4) Expensive testing cost  
 (2) Difficult to fulfill the terms (5) Others, please specify :  
 (3) Testing period too long

**F.5. Please indicate the area of test that you like to be provided by outside laboratories, including that of overseas ?**

Area of test	Please specify	
Calibration :	_____	126[1] ———
Mechanical :	_____	127[1] ———
Electrical :	_____	128[1] ———
Chemical :	_____	129[1] ———
Physical :	_____	130[1] ———
Others :	_____	131[1] ———
	_____	
	_____	

*Thank you for your participation in the study*











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