

**COMPANY PROFILE**  
**&**  
**QC PLANS & PROCEDURES**



**GSonic**  
**Technology**  
**Incorporation**

**A Subsidiary of MPI Groups**  
**An ISO 9002:2000 Certified Company**

# COMPANY PROFILE

1. Establishment Aug. 2001
2. Capital USD \$ 1,500,000
3. Annual turn over USD \$8,000,000
4. President Mr. Charles Tang
5. General manager Mr. Hoover Cheng
6. Employees Taiwan  
Direct – 100  
In-direct – 20
7. Ref. Bank International bank of Taipei
8. Address. No. 17 Lane 8, Cheng-Tian Road, Tucheng City, Taipei county,  
Factory & Office Taiwan R.O.C.
9. Factory space Factory  
2300 M<sup>2</sup>
10. Main product Switching Power Supply, CCFL driving inverter, EL driving inverter,  
Battery charger, DC to DC converter, Motor Speed controller, OEM &  
ODM product.
11. Key Customer
12. Policy Our goal is “ Do It Right at The First Time” to achieve Zero Defect  
target, we always emphasize quality and reliability to meet the  
customers’ requirement, and most of all, to carry on our brand name if  
front of others.
13. Quality System ISO 9000: 2000 Certified
14. Web Site MPI.: <http://www.mpi-master.com/>  
G-Sonic: <http://www.gsonic-tech.com/>

## EQUIPMENTS AND FACILITIES

NO.	DESCRIPTION	MFR. & MODEL	Q'TY
1	Solder paste distributor	Panasonic SPCEP	1
2	SMD	Panasonic MKIC	1
3	SMD universal	TDK	1
4	SMD infared reflow		1
5	Auto-insertion	Panasonic A type	2
6	Auto- insertion	Panasonic R type	1
7	Coordnate programer	AOS500	1
8	In-circuit tester	Okano 510ZIIS	3
9	Soldering machine	Der Pan TSK300F Double Wave	2
10	Assembly line		5
11	Hi-Pot tester / Insulation resistance	Good Will 5005T / 515A / 515AD	3
12	Power Meter	Top Ward	5
13	Power Analyzer	Lutron DW-6090	1
14	Digital storage scope	TEK TDS-210, TDS2014	5
15	Analog scope 20MHz / 2CH	Good Will	5
16	Active load 4CH	Pro-Digit	2
17	DC regulated power supply	Good Will	5
18	Temperature control oven		1
19	DMM 4 1/2 digits	Fluke 45	3
20	DMM 3 1/2 digits	APPA	5
21	VTVM	KIKUSUI	2
22	Frequency counter		2
23	LCR Meter	CHEN WHA	2
24	Digital caliper	150 mm,200mm / Mitsutoyou	2
25	Analog caliper	300 mm / Mitsutoyou	2
26	IC forming maching		1
27	Forming maching – Axial lead / taping		1
28	Forming maching – Radial lead		1
29	Electroinc micro scope	X20, X40	1
30	SMD Rework Station	HAKO	1
31	Personal computer		10

# QC PLANS & PROCEDURES

Criteria: The quality goes in before GS name goes in.

## 1. Objectives:

1-1 To assure various parts in high quality.

1-2 To set up a perfect system for maintaining & arise our quality level, which could meet customers' requirement.

## 2. Organization (Attachment I)

## 3. Procedures (Attachment II)

### 3-1 Incoming QC (Attachment III)

#### A. Raw Material Inspection:

Material received from suppliers shall be inspected in compliance with specification and meet quality level before sending to material stock or production line. If rejected, returning to suppliers for rework or sorting.

#### B. Vendor Quality Assurance;

Vendor survey and assistance giver to suppliers' QC system, then make grade classification to help Purchasing Department for selecting reference. The grade classification is based on:

Monthly Customer Complaint Lots

\_\_\_\_\_ X 100

Monthly Shipping Lots

98.1 – 100	Outstanding
95.1 - 98	Excellent
90.1 - 95	Good
Under 90	Bad

### **3-2 In-Process Inspection (Attachment IV)**

#### **A. In-Process Inspection:**

Before mass production, In Process Inspection will check a few pieces of parts from each machine and operators to make sure that the parts are conformed to specification. Inspectors should periodically make a sampling inspection on critical items to insure the processes are under control. The records on IPQC Test Record and keep for analysis. Defect, if any, will be fed back to production line.

#### **B. Pilot Run Analysis:**

In-Process test the first manufactured units to see if the product can meet specification & performance requirement. And from where quality spots will be found for tooling and processing correction prior to mass production. All information will be sent to Eng./Production for corrective action.

### **3-3 Quality Assurance (attachment V)**

#### **A. Out-Going Inspection:**

In accordance with MIL-STD-105D Sampling Plan and Electrical Mechanical Test result; only finished products meeting specification can be shipped. Defective lots are segregated and returned to manufacturing for salvage, rework or scrap.

#### **B. Reliability Test and Correlation:**

To make sure the production units can meet reliability test specification. QC person should 2 to 4 weeks make use of Eng. Lab. Equipments to perform temperature and humidity test.

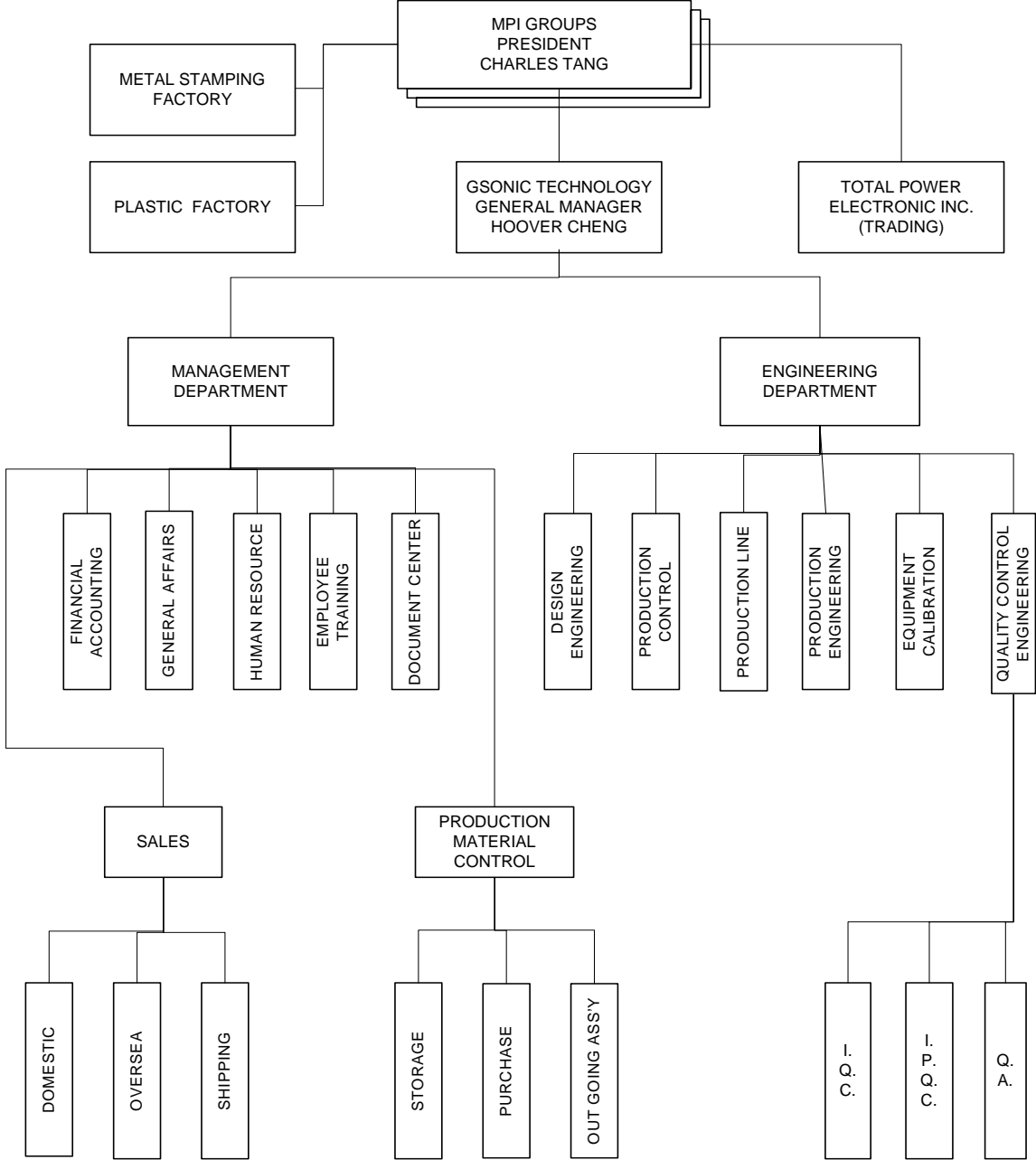
QC Engineering is also responsible for instrument correlation to every customers.

#### **C. Quality Evaluation for New Developed Products:**

Quality assurance also responsible to evaluate new developed products based on quality view and reliability.

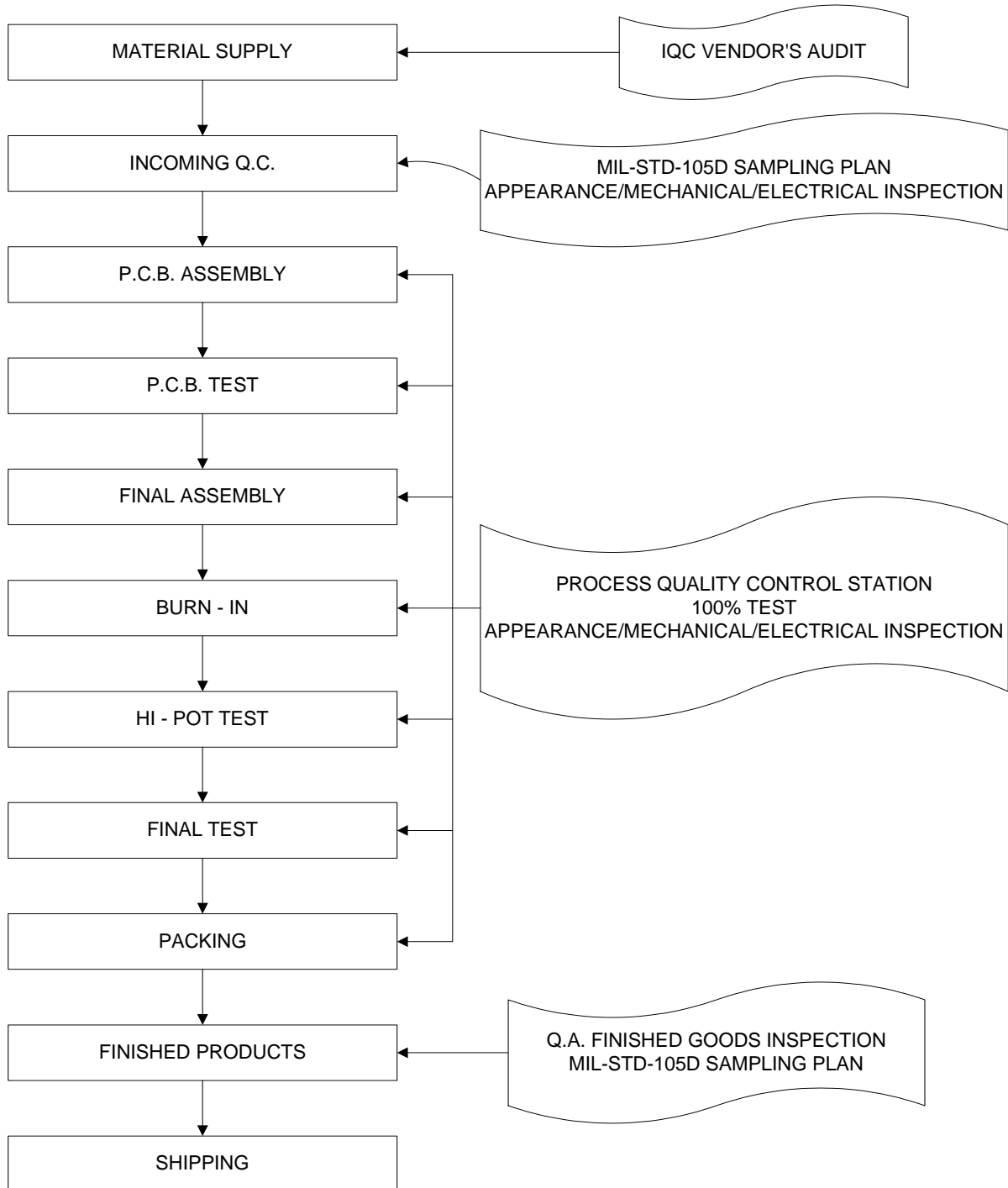
# GSONIC TECHNOLOGY INCORPORATION ORGANIZATION CHART

ATTACHMENT



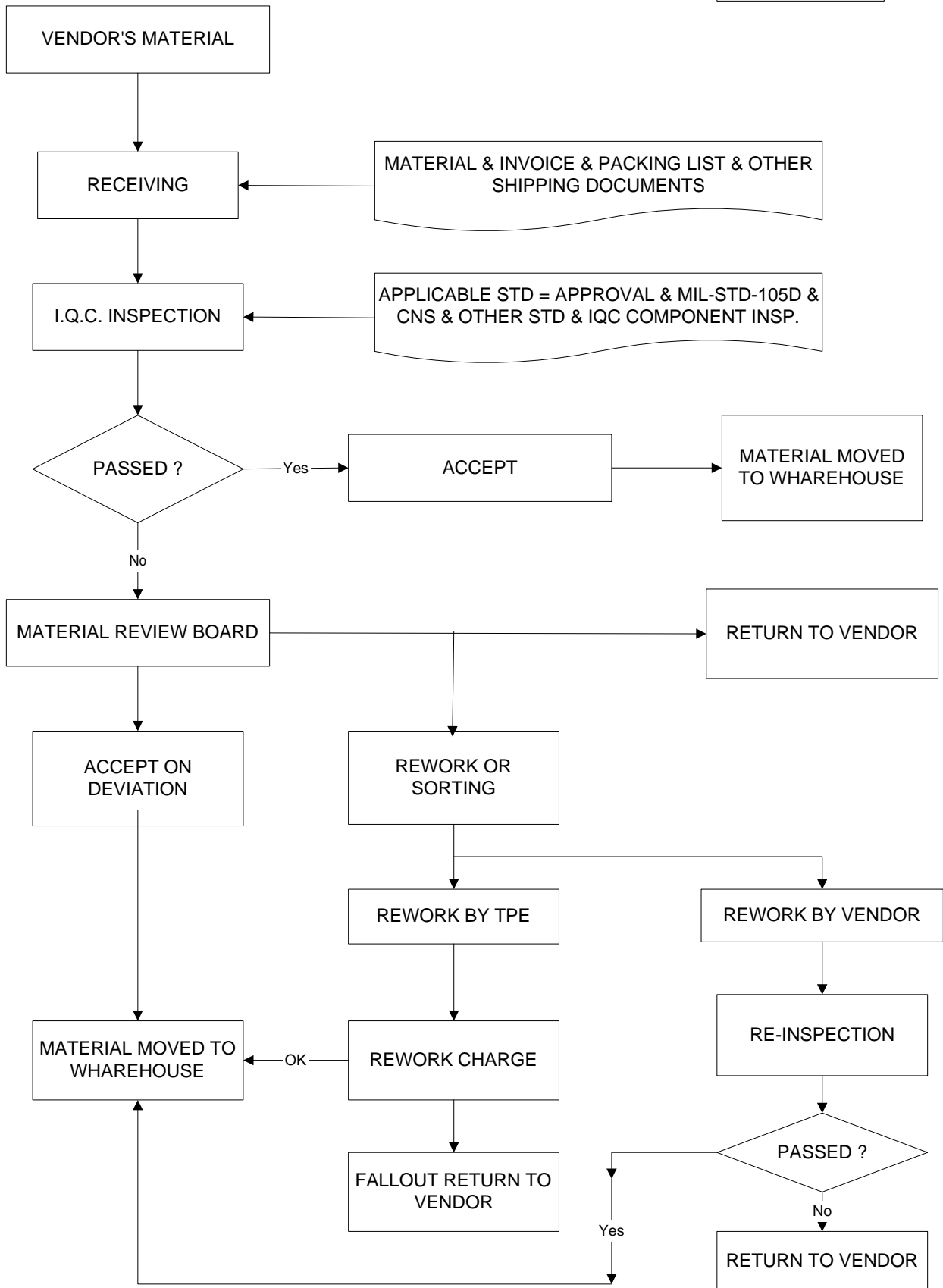
# FLOW CHART OF QUALITY CONTROL

ATTACHMENT



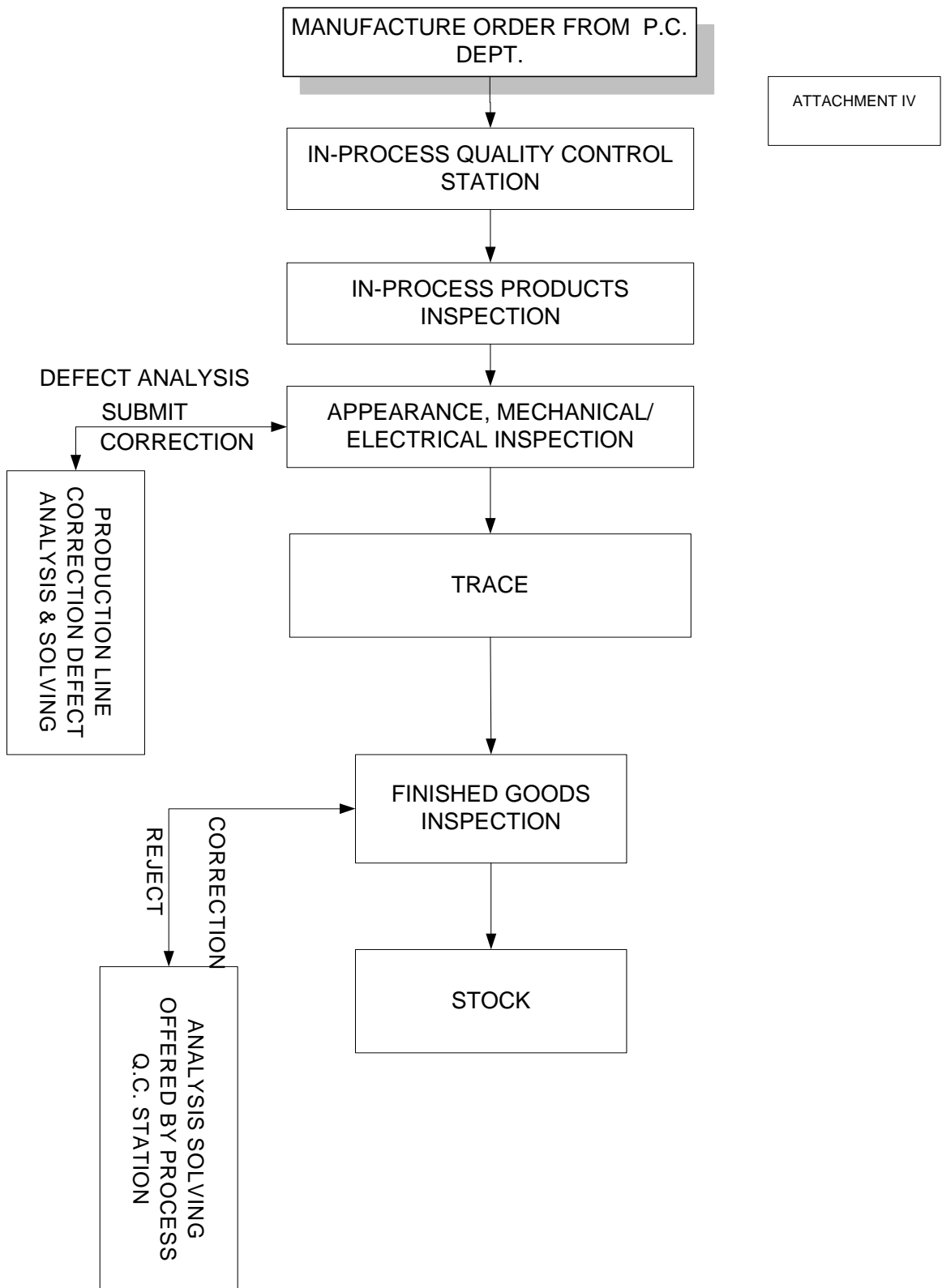
# MATERIAL CONTROL FLOW CHART

ATTACHMENT



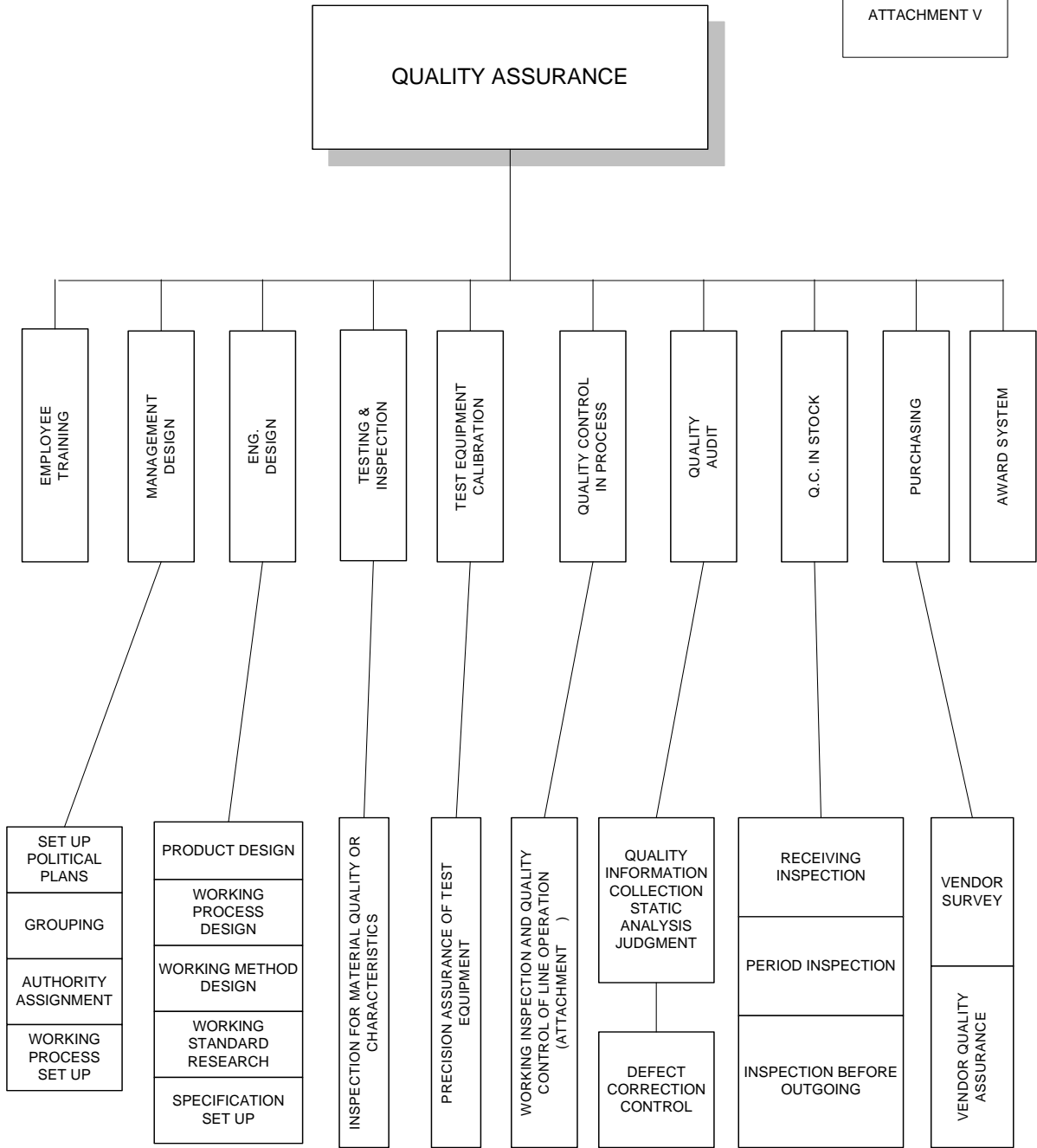


# PROCESS CONTROL LINE FLOW CHART



# QUALITY ASSURANCE OPERATION DETAIL

ATTACHMENT V





# **MIL-STD-105D LEVEL II**

## **SAMPLING TABLES FOR INSPECTION BY ATTRIBUTES**

This booklet has been compiled from Mil-Std-105D, dated April 29, 1963. It has been assembled for the express purpose that the indicated can be applied and interpreted in a simplified manner.

### **Drawing of Samples**

Samples shall be selected at random without regard to their quality. When appropriate, the number of units in the sample shall be selected in proportion the size of sublots, or parts of the lot identified by somerational criterior.

When double sampling is to be used, each sample shall be selected over the entire lot.

### **Inititation of Inspection**

Normal inspeciton will be used at the start of inspection unless otherwise directed by the responsible authority.

### **Contiunation of Inspection**

Normal, Tightened or reduced inspection shall continue unchanged for same part number produced produced from same source on sucessive lots, expect where the switching procedures given below require change.

# SWITCHING PROCEDURES

## **Normal to Tightened**

When normal inspection is in effect, tightened inspection shall be instituted when 2 out of 5 consecutive lots have been rejected on original inspection. (i.e., ignoring resubmitted lots of the procedure).

## **Tightened to Normal**

When tightened inspection is in effect, normal inspection shall be instituted when 5 consecutive lots have been considered acceptable on original inspection.

## **Normal to Reduced**

When normal inspection is in effect, reduced inspection shall be instituted providing that all of the following conditions are satisfied.

- a. the preceding 10 lots have been on normal inspection and none has been rejected on original inspection.
- b. The total number of defective in the samples from the preceding 10 lots is equal to or less than the applicable number given in Table VIII of Mil-std-105D. (See Table VIII) If double sampling is used all samples inspected should be included.
- c. Production is at a steady rate.
- d. Reduced inspection is considered desirable by the inspection instructions.

## **Reduced to Normal**

When reduced inspection is in effect, normal inspection shall be instituted, if any of the following occur on original inspection.

- a. A lot is rejected.
- b. If the acceptance number has been exceeded, but the rejection number has not been reached, accept the lot, but reinstate normal inspection.
- c. Production becomes irregular or delayed.
- d. Other conditions warrant that normal inspection shall be instituted.

Note: For additional information Mil-Std-105D should be consulted.

**MIL-STD-105D SINGLE SAMPLING**  
**LEVEL II NORMAL**

LOT SIZE	26	51	91	151	281	501	1201	3201	10001	35001	150001	500001	500001
	to	to	to	to	to	to	to	to	to	to	to	to	to
<b>SAMPLE SIZE</b>	8	13	20	32	50	80	125	200	315	500	800	1250	
<b>ACC-REJ NO</b>													
<b>AOL</b>													
<b>0.15</b>						0			1	2	3	5	
<b>0.25</b>					0			1	2	3	5	7	
<b>0.40</b>				0			1	2	3	5	7	10	
<b>0.65</b>			0			1	2	3	5	7	10	14	
<b>1.0</b>		0			1	2	3	5	7	10	14	21	
<b>1.5</b>	0			1	2	3	5	7	10	14	21		
<b>2.5</b>			1	2	3	5	7	10	14	21			
<b>4.0</b>		1	2	3	5	7	10	14	21				
<b>6.5</b>	1	2	3	5	7	10	14	21					
<b>10</b>	2	3	5	7	10	14	21						
<b>15</b>	3	5	7	10	14	21							

**MIL-STD-105D SINGLE SAMPLING**  
**LEVEL II TIGHTENED**

LOT SIZE	26	51	91	151	281	501	1201	3201	10001	35000	150000	500000	500001
	to	to	to	to	to	to	to	to	to	to	to	to	to
50	90	150	280	500	1200	3200	10000	35000	150000	500000	over		
<b>SAMPLE SIZE ACC-REJ NO AOL</b>	8	13	20	32	50	80	125	200	315	500	800	1250	
<b>0.15</b>							0			1	2	3	
<b>0.25</b>						0			1	2	3	5	
<b>0.40</b>					0			1	2	3	5	8	
<b>0.65</b>				0				1	2	3	5	8	12
<b>1.0</b>			0			1	2	3	5	8	12	18	
<b>1.5</b>		0			1	2	3	5	8	12	18		
<b>2.5</b>	0			1	2	3	5	8	12	18			
<b>4.0</b>			1	2	3	5	8	12	18				
<b>6.5</b>		1	2	3	5	8	12	18					
<b>10</b>	1	2	3	5	8	12	18						
<b>15</b>	2	3	5	8	12	18							

**MIL-STD-105D SINGLE SAMPLING**  
**LEVEL II REDUCED**

LOT SIZE	26	51	91	151	281	501	1201	3201	10001	35001	150001	500001	500001
	to	to	to	to	to	to	to	to	to	to	to	to	to
	50	90	150	280	500	1200	3200	10000	35000	150000	500000	over	
SAMPLE SIZE ACC-REJ NO AOL	3	5	8	13	20	32	50	80	125	200	315	500	
<b>0.15</b>						0-1			0-2	1-3	1-4	1-4	2-5
<b>0.25</b>					0-1			0-2	1-3	1-4	1-4	2-5	3-6
<b>0.40</b>				0-1			0-2	1-3	1-4	2-5	3-6	3-6	5-8
<b>0.65</b>			0-1			0-2	1-3	1-4	2-5	3-6	7-10	5-8	7-10
<b>1.0</b>		0-1			0-2	1-3	1-4	2-5	3-6	5-8	7-10	10-13	10-13
<b>1.5</b>	0-1			0-2	1-3	1-4	2-5	3-6	5-8	7-10	10-13		
<b>2.5</b>			0-2	1-3	1-4	2-5	3-6	5-8	7-10	10-13			
<b>4.0</b>		0-2	1-3	1-4	2-5	3-6	5-8	7-10	10-13				
<b>6.5</b>	0-2	1-3	1-4	2-5	3-6	5-8	7-10	10-13					
<b>10</b>	1-3	1-4	2-5	3-6	5-8	7-10	10-13						
<b>15</b>	1-4	2-5	3-6	5-8	7-10	10-13							



**TABLE      LIMIT NUMBERS FOR REDUCED INSPECTION**

NUMBER OF SAMPLE UNITS FROM LAST	20	30	50	80	130	200	320	500	800	1250	2000	3150	5000	8000	12500	20000	31500	50000	
	to 29	to 49	to 79	to 129	to 199	to 319	to 499	to 799	to 1249	to 1999	to 3149	to 4999	to 7999	to 12499	to 19999	to 31499	to 49999	to over	
<b>AOL</b>																			
<b>0.15</b>										0	0	1	3	7	13	22	38	63	63
<b>0.25</b>									0	0	2	4	7	14	24	40	67	111	110
<b>0.40</b>								0	0	2	4	8	14	24	40	68	111	186	181
<b>0.65</b>							0	0	2	4	8	14	25	42	69	115	186	301	
<b>1.0</b>						0	0	2	4	7	14	24	40	68	110	181			
<b>1.5</b>					0	0	1	3	7	13	22	38	63	105	169				
<b>2.5</b>				0	0	2	4	7	14	24	40	67	110	181					
<b>4.0</b>			0	0	2	4	8	14	24	40	68	111	181						
<b>6.5</b>		0	0	2	4	8	14	25	42	69	115	186							
<b>10</b>	0	0	2	4	7	14	24	40	68	110	181								
<b>15</b>	0	1	3	7	13	22	39	63	105	169									

Denotes that the number of sample units from the last ten lots is not sufficient for reduced inspection for this instance more than ten lots many be used for the calculation provided that the lots used are the lots used are the most recent ones in sequence, that they have all been on normal inspection, and that none has been rejected while original inspection.



