

PANCHAL

**SMES & FIA CLUSTER PROGRAM
ON
LEAN MANUFACTURING**

**PRESENTATION
BY
PANCHAL MANUFACTURING CO. PVT. LTD.**
(36A, Ind. Area, NIT, Faridabad-Haryana)

ON 13.01.2012

PROJECT : 3S IMPROVEMENT



PANCHAL **BREIF INTRODUCTION**

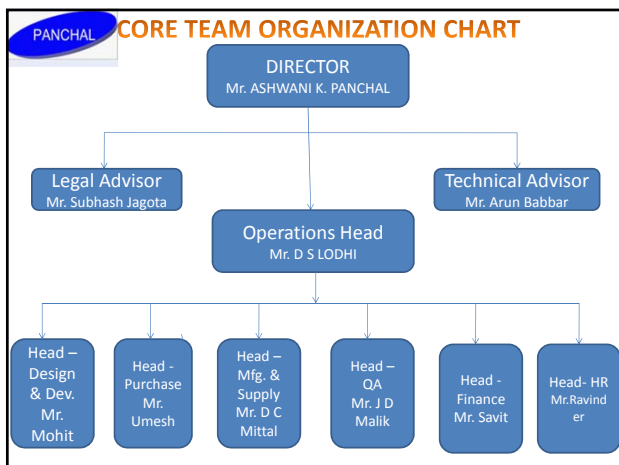
PANCHAL made a modest start in the year 1999 for manufacturing stainless steel Clamp, precision sheet metal components & sub assemblies for export & domestic OEM. A dedicated team of engineers & quality conscious persons headed by an innovative entrepreneur, who himself believe in offering best services beyond the demand of quality, quantity in the stipulated period.

The company is manufacturing the parts in wide range of application such as for Earth Moving (Engine, Transmission, Cab & Mainframe & Braking System parts etc.), Automobile comprising Two wheeler (Body, Brake & other safety parts) Four wheeler (Boot band clamp), Tractor & Railway (Pneumatic Braking System parts) etc.

Our entire team is very keen for continual improvements in manufacturing processes, supply chain & inventory management through adopting the advanced technologies, recognized methods & procedures globally

PANCHAL **CHALLENGES BEFORE JOINING CLUSTER**

- **NO ORGANIZATION STRUCTURE**
- **POOR HOUSE KEEPING (NO 3 S)**
- **SPACE CONSTRAINT (BAD LAYOUT & EXCESS INVENTORY)**
- **INCONSISTENT QUALITY (CUSTOMER END/INPROCESS)**
- **CUSTOMER DISSATISFACTION (ON TIME DELIVERY)**
- **LOW PRODUCTIVITY (SET UP TIME HIGH/ DOWN TIME HIGH)**
- **CONTINUAL IMPROVEMENT & SUSTAINANCE THRU EMPLOYEE INVOLVEMENT**



PANCHAL **BENEFITS ACHIEVED AFTER DOING 3S & RE- LAYOUT**

PRESS SHOP : SPACE GENERATED FOR

POWER PRESS – 6 Nos.
NC CLAMP FORMING M/C. – 1 No.
HYDRAULIC SHEARING M/C. - 1 No.
TOOL STORAGE CAPACITY INCREASED FROM 1200 Nos. To 1800 Nos.

WELD SHOP : SPACE GENERATED /CREATED FOR

MIG WELDING SET – 8 Nos.
SPOT WELDING M/C. (DOUBLE HEAD) – 1 No.
NC PIPE BENDING M/C. – 1 No.
WELDING ROBO - 1 No.
OPERATORS TEA AREA CREATED ON MEZZANINE FLOOR
FIXTURE STORAGE CCREATED ON MEZZANINE FLOOR 100 Nos. To 200 Nos.

PACKAGING & DESPATCH SHOP : SPACE GENERATED FOR

STANDARD ROOM (300 Sqr. feet)
OFFICE FOR MANUFACTURING HEAD (100 Sqr. feet)

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BENEFITS ACHIEVED AFTER IMPLEMENTATION 3S, RE- LAYOUT, SMED & EMPLOYEE INVOLVEMENT

- * Overall Inventory Reduced from **37 Days** to **26 Days**.
(Target 21 Days)
- * Improved Press Stroke Rate From **242 Nos.** to **380 Nos.**
(Target 450 Stroke / Hr)
- * Impr'mt In Overall Internal Rej. From **21960** to **14651 PPM**
(Target 8000 PPM)
- * Impr'mt In Overall Customer End Rej. From **24123** to **1278 PPM**
(Target 1000 PPM)
- * Impr'mt In On Time Delivery From **92.6%** to **99.30%**
(Target 100% OTIF)

New Challenge
Sustain & Improve

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IMPROVEMENT JOURNEY

Zone no.	01	Sub Zone No.	---
Department	Production	Location	Press Shop
Team Member	Dharmender & Brijesh Kumar		
BEFORE – 30.10.2011		AFTER – 28.11.11	
			
CHALLENGE		BENEFITS	
Improper shop layout in which tool rack & supervisor sitting were inside shop . Poor aesthetic look of machine		<ul style="list-style-type: none"> After re-lay outing & change of aesthetic look of entire shop lead to high morale of employee which give them home feel 	


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IMPROVEMENT JOURNEY

Zone no.	01	Sub Zone No.	---
Department	Production	Location	Press Shop
Team Member	Dharmender & Brijesh Kumar		
BEFORE – 30.05.2011		AFTER – 30.06.11	
			
CHALLENGE		BENEFITS	
Press tool were kept very scatter by mixing of each other customer tools which result to increase in searching while required		<ul style="list-style-type: none"> After successful placing of customer color code wise tools in defined rack, tool searching time reduced & enhance tool keeping capacity as well 	

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IMPROVEMENT JOURNEY

Zone no.	09	Sub Zone No.	---
Department	Welding Shop	Location	IInd Floor
Team Member	D C Mittal, Arjun Singh & Alok Kumar		
BEFORE – 30.10.2011		AFTER – 28.11.11	
			
CHALLENGE		BENEFITS	
There was no space for operator tea & lunch area		<ul style="list-style-type: none"> Lunch area constructed on mezzanine floor. 	

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IMPROVEMENT JOURNEY

Zone no.	09	Sub Zone No.	---
Department	Welding Shop	Location	IInd Floor
Team Member	Arjun Singh & Alok Kumar		
BEFORE – 30.10.2011		AFTER – 28.11.11	
			
CHALLENGE		BENEFITS	
Identification & easy searching of welding fixture was difficult		<ul style="list-style-type: none"> Easy in searching of welding fixture & space created 246 sqr. Feet thru construction made on mezzanine 	



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IMPROVEMENT JOURNEY

Zone no.	08	Sub Zone No.	---
Department	Packing & Despatch	Location	Ist Floor
Team Member	K K Bansal & Dharmender		
BEFORE – 30.08.2011		AFTER – 28.11.11	
			
CHALLENGE		BENEFITS	
To avoid mixing of material, damage & create neat & clean place for comfortable working		<ul style="list-style-type: none"> After successful 1 S & 2 S exercise thru red tag campaign we have created 370 sqr. Feet area for std room & mfg head office and at the same time final packing line fixed up with proper display board 	

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IMPROVEMENT JOURNEY

Zone no.	07	Sub Zone No.	---
Department	QA Office/Std Room	Location	1st Floor
Team Member	J D MALIK		
BEFORE – 30.09.2011		AFTER – 28.11.11	
			
CHALLENGE QA Office where PPAP file searching & misplace of file was a problem		BENEFITS • After successful set up of standard room facilities proper PPAP File keeping arrangement mad for easy searching	

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UP GRADATION IN MEASUREMENT & TEST FACILITIES



STANDARD ROOM

FARO ARM (1.2 Mtr)

UTM – 20 Ton

COUPOING VALUE

OFFICE – MFG HEAD

HARDNESS TESTER

POLISHING M/C

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IMPROVEMENT RESULT

S.No.	KEY INDICATOR	UOM	Jun 10	Dec 11
1	Customer Complaint in Nos.	Nos/Month	18	7
2	Customer Return in PPM	PPM	24123	1278
3	In Process Rejection in PPM	PPM	21960	11265
4	Delivery Schedule Adherence in %	%age	92.6	99.3
5	Inventory Turn Over Ratio	Days	37	26
5 a	Red Inventory in %	%	4%	0%
5 b	Grey Inventory in %	%	25%	10%
5 c	Green Inventory in %	%	71%	90%
6	Machine Break down Hours	Hrs/Month	232	60
7	SMED	Min/Die	105	36
8	Employee involvement in Kaizen activities	%	2.7	52.1
9 a	SS Audit Score in % (1S score)	%	38	77
9 b	SS Audit Score in % (2S score)	%	35	76
9 c	SS Audit Score in % (3S score)	%	30	72
10	Space Generating	Sqr. Feet		1680
11	Absenteeism %	%	8	5
12	Sale / Month	Rs (Cr.)	0.99	1.28

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EMPLOYEE INVOLVEMENT & RECOGNITION



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MISSION 2012

S No.	PROJECT	CURRENT STATUS
1	ERP IMPLEMENTATION IN MANUFACTURING	FINANCE & STORE IMPLEMENTED
2	TECHNOLOGICAL UP GRADATION THRU WELDING ROBO – 1 No CNC PIPE BENDING – 1 No PNEUMATIC PRESS WITH SAFETY GUARD – 2 Nos.	2 NEW SIMILAR M/C. ADDED
3	PRODUCTIVITY IMPROVEMENT THRU CYCLE TIME STUDY & IMPLEMENTATION DIE CHANGE OVER TIME REDUCTION	STUDY COMPLETED REUIRED MORE FACILITIES ARE ARE INDENTIFIED & TO BE PROCURED
4	EXTERNAL TRAINING	UNDER GONE
5	INCREASE EMPLOYEE INVOLVEMENT	

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THANK YOU