



# FARM PARTS



## FARM PARTS PRESENTATION

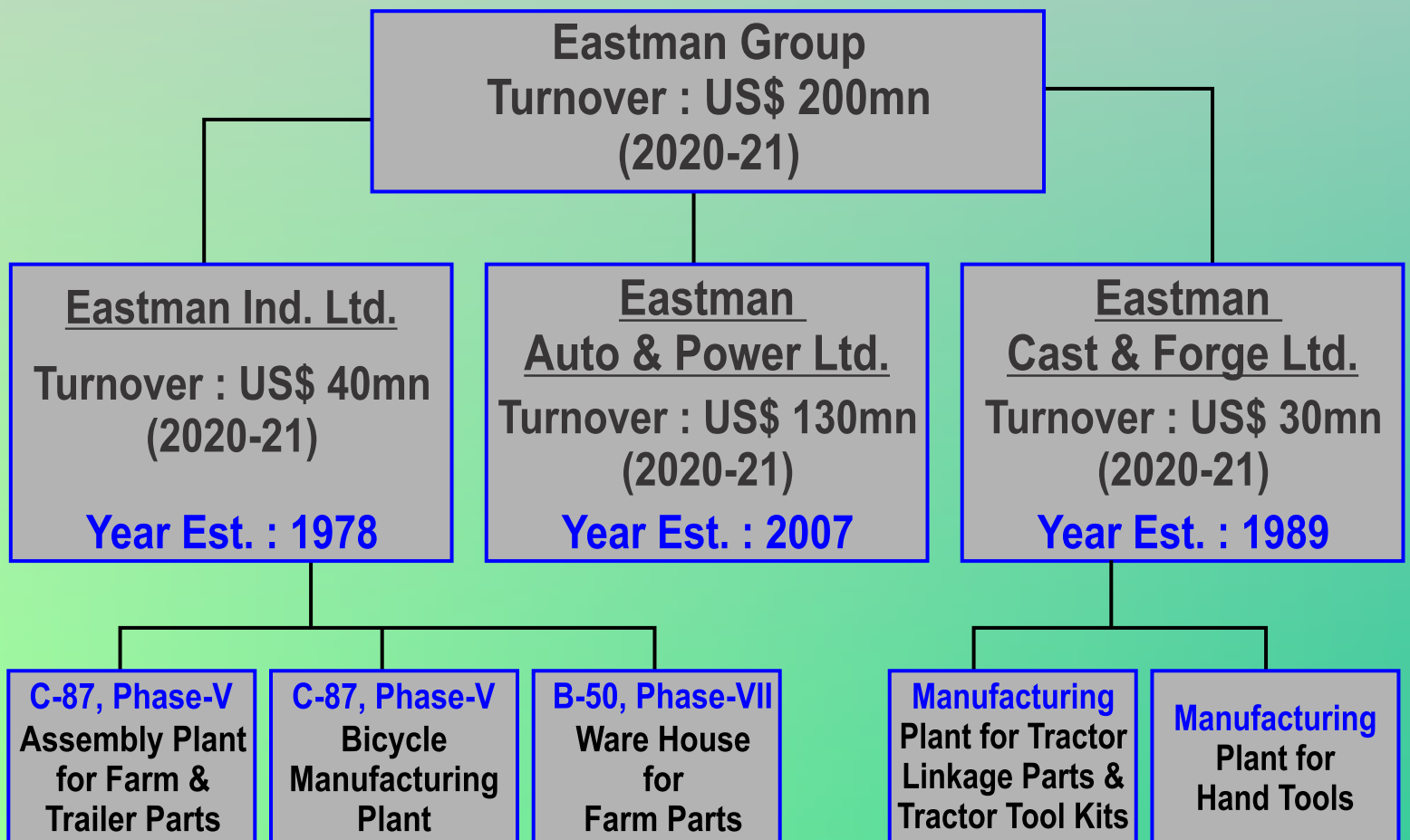


# EASTMAN INDUSTRIES LIMITED

## COMPANY INTRODUCTION

- Eastman Group consisting of three sister companies with Eastman Industries Ltd. as its flagship company, Established in 1978.
- JRS Farm Parts was founded in 2007 under the group company of Eastman Industries Ltd.
- Prominent STAR Export house recognized by Govt. of India

## TURNOVER Group Companies



# EASTMAN GROUP PRODUCT RANGE

- Tractor linkage & Trailer parts
- Bicycle & Bicycle parts
- Hand tools & Forging parts

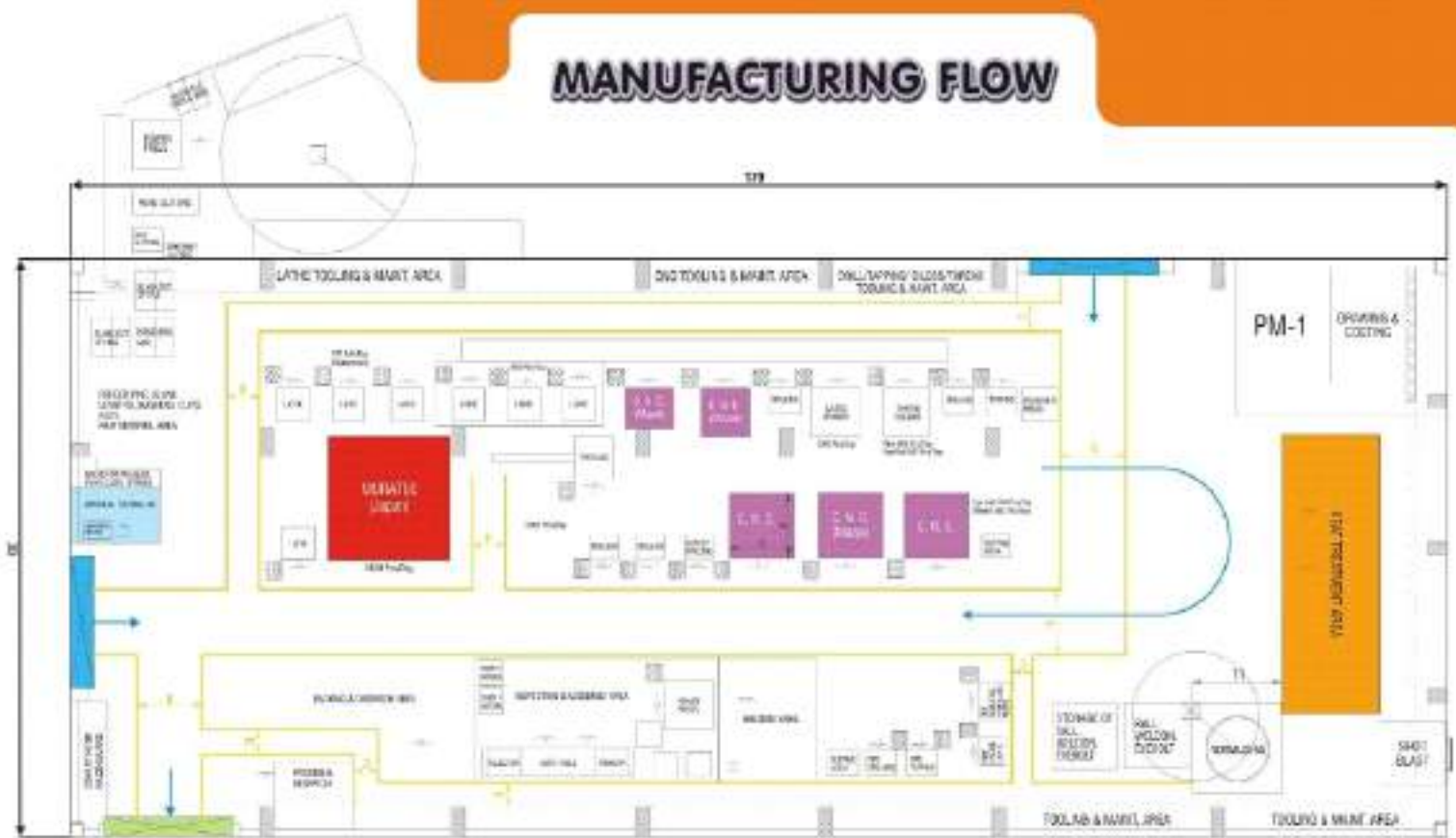


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## PRODUCT RANGE (TRACTOR PARTS)



# PLANT LAYOUT



## LOCATION JRS FARM PARTS (LUDHIANA)



- 300 kms away from the Capital city of India **New Delhi**

# INFRASTRUCTURE



- ISO 9001:2015 certified company.
- The main manufacturing unit is spread over 35000Sqm.
- The factory is equipped with Machineries to execute all manufacturing process in-house.

## ENSURING QUALITY

### 4 STAGES OF ORDER EXECUTION



**1st STAGE**  
**RAW**  
**MATERIAL**



**2nd STAGE**  
**DURING**  
**PRODUCTION**



**3rd STAGE**  
**SURFACE**  
**COATING**



**4th STAGE**  
**PRODUCT**  
**PACKING**

# RAW MATERIAL



## INCOMING RAW MATERIAL



### STANDARD RAW MATERIAL GRADES

EN8

EN8D

EN19

16MnCr5

20MnCr5

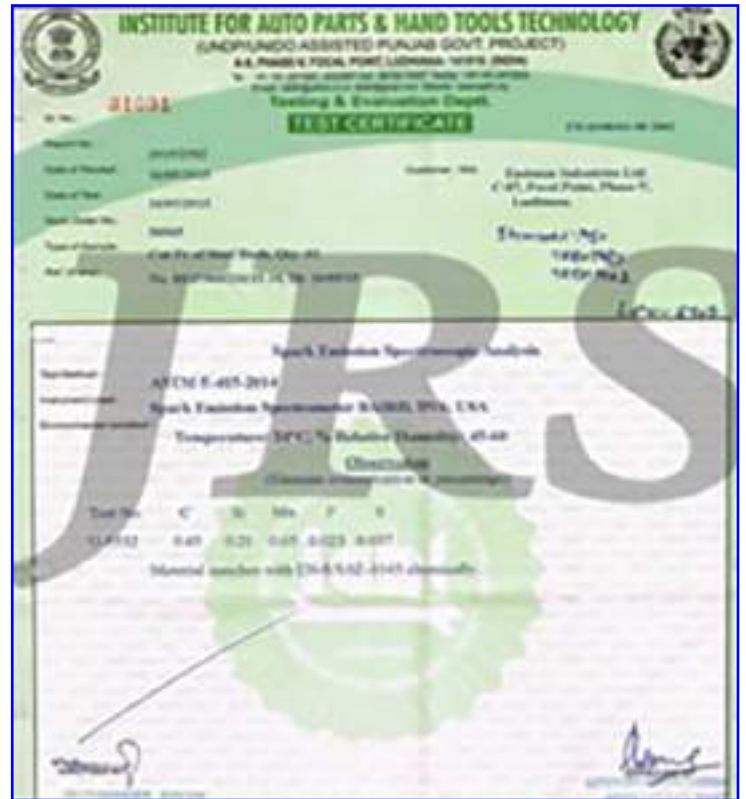
30MnCrB5

- We procure our raw material from top suppliers in India such as **TATA STEEL, AVON ISPAT** etc. from which we get a test certificate verifying the chemical composition.

# THREE POINT CHECK FOR INCOMING RAW MATERIAL



1. Test certificate from our vendors



3. Third Party verification of composition



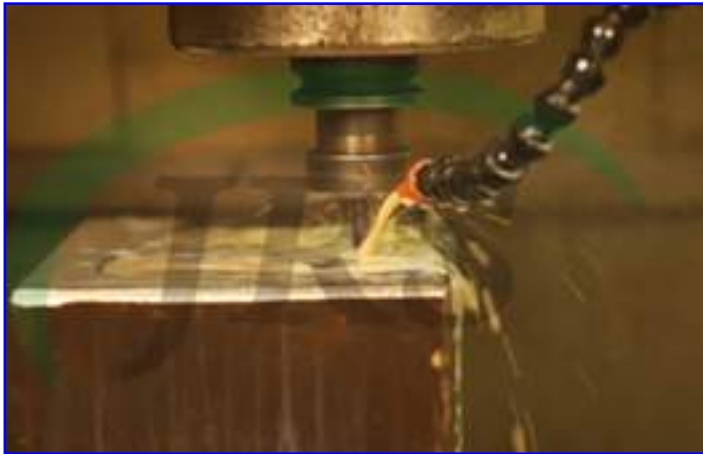
2. In-house spectrometer to verify the composition mentioned in test certificate

Although we procure raw material from top suppliers but we do not blindly trust them, therefore, we ensure 3 point check to ensure the raw material we are using for our goods

R&D

IN-HOUSE TOOLING  
DEVELOPMENT TEAM

# IN-HOUSE TOOL DEVELOPMENT



- VMC
- WIRE CUT M/C
- PANTOGRAPH M/C
- EDM



Muratec (Japan) Automatic Loading / Unloading Robotic Arm CNC Machine



Mazak (Japan) Quick Turn STAR 2001





## IN-HOUSE PRODUCTION

### PRODUCTION - HALL



- Proper ventilation system
- No blockage of paths
- All material stored in Bins & Crates
- Same day corrective action for rejected materials

Our Factory system is maintained with top manufacturing methodology such as :

- 5S
- Kaizen
- POKA YOKA

# DURING PRODUCTION & QUALITY ASSURANCE



## 3D CMM

- Measure Machined parts with high tolerances.



## 3D SCANNER

- Physically probing (touching) the part and recording the position of the sensor as the probe moves around the part.



## PROFILE PROJECTOR

- Measure in 2D space in which both length and width of the part can be measured.



## 3D PRINTER

- 3D printing allows for the design and print of more complex designs.



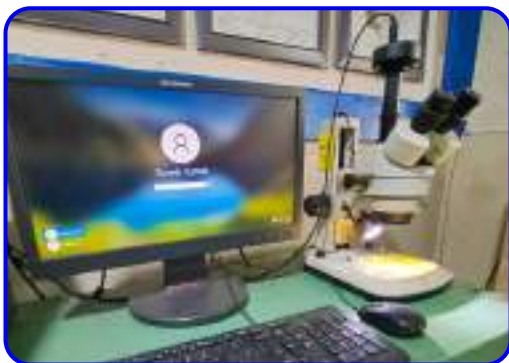
## SPECTRO TESTING

- Identify, sort, and analyse metals for incoming inspections, during production processes and before delivery.



## CONTOUR INSPECTION

- This machine is used in electronics, aerospace and automotive for contour measurement of workpiece.



## WELDING PENETRATION

- Check parameters of the Length, Thickness, Throat, Percentage of penetration and include other parameters.



## UNIVERSAL TESTING MACHINE

- Used to test the mechanical properties (tension, compression etc.) of a given test specimen by exerting tensile, compressive or transverse stresses.



## HEIGHT GAUGE

- Used in metalworking or metrology to either set or measure vertical distances

## PRODUCTION - FORGING



- Our Forging Line is equipped to forge parts from as low as 500gms and as high as 12 kilograms.
- GAS heated Induction Furnace is used to heat the material before forging.

## PRODUCTION - CNC



- Machining is done through JAPANESE CNC machines
- Our Machines are capable of producing high precision items with quality control in microns

# PRODUCTION – PRESS MACHINE



**Forging Press**



**Hydraulic Press**

## PRODUCTION - MACHINE LIST

List of Machines				
Sno.	Description	Type	Name	Process
1	CNC Turning	Single Spindle Quick Turn 200	MAJAK (JAPAN)	Turning Center
2	CNC Turning	Single Spindle Quick Turn 201	MAJAK (JAPAN)	Turning Center
3	CNC Turning	High Speed MD5/508	TONGTAI (TAWAN)	Turning Center
4	CNC Turning	Double Spindle with Automatic load in G-Unloading System MW120G	MURATEC (JAPAN)	Turning Center
5	CNC Turning	TL 160	LOKESH (INDIA)	Turning Center
6	CNC Turning	TL 20	LOKESH (INDIA)	Turning Center
7	Productive Lathes	Small Automatic Lathe	NDMACHINE (INDIA)	Machining
8	Lathe	With Copy Turning Attachment	NDMACHINE (INDIA)	Tooling
9	Tapping Lathe			Tapping
10	Rilling Machine	Hydraulic & Gear Drilling		Drilling
11	Mechanical Power Press	150 Ton (H type & C type)	MILAP (INDIA)	Coining

List of Machines				
Sno.	Description	Type	Name	Process
12	Hydraulic Press	100 Ton	UNIVERSAL (INDIA)	Banding
13	Hydraulic Press	250 Ton	UNIVERSAL (INDIA)	Banding
14	Conveyer System		PRECISION (INDIA)	Running Conveyer
15	Heat Treatment Furnace	GCF	SIMPLICITY (INDIA)	Heat Treatment
16	Welding Set	MIG	INDIA	Welding
17	Thread Rolling M/c	Hydraulic	REKOFA (INDIA)	Thread Rolling
18	Center Less Grinder	Center Less Grinder	BHAGWAN SONS	Grinding
19	Buffing Adda		INDIA	Polishing
20	Zinc Plating Plant	Plating	INDIA	Plating
21	VMC Machine		TAIWAN	Die Making & Drilling In Accuracy
22	Band Saw M/c		INDIA	Cutting
23	Automatic Band Saw		INDIA	Cutting



**IN-HOUSE  
TREATMENT**

## **SHOT BLASTING & SAND BLASTING**



# PRODUCTION – WELDING SECTION



- Proper Chimney system installed in welding section for better working environment for our workers

## CERTIFIED WELDERS



# HEAT TREATMENT – GCF (Gas Carburized Furnace)

**Hardening Furnace** ↓



**Tempering Furnace** ↓



**Normalizing Furnace** ↓



- We specialize in SURFACE HARDENING as well as CASE HARDENING
- Through GCF we can achieve CASE HARDENING even more than 65HRC

## QUENCHING

**Polymer Quenching** ↓



**Oil Quenching** ↓



**Water Quenching** ↓



- We follow CLOSED QUENCHING PROCESS to avoid formation of SCALING on surface to ensure smooth zinc plating



**IN-HOUSE  
FINISHING**

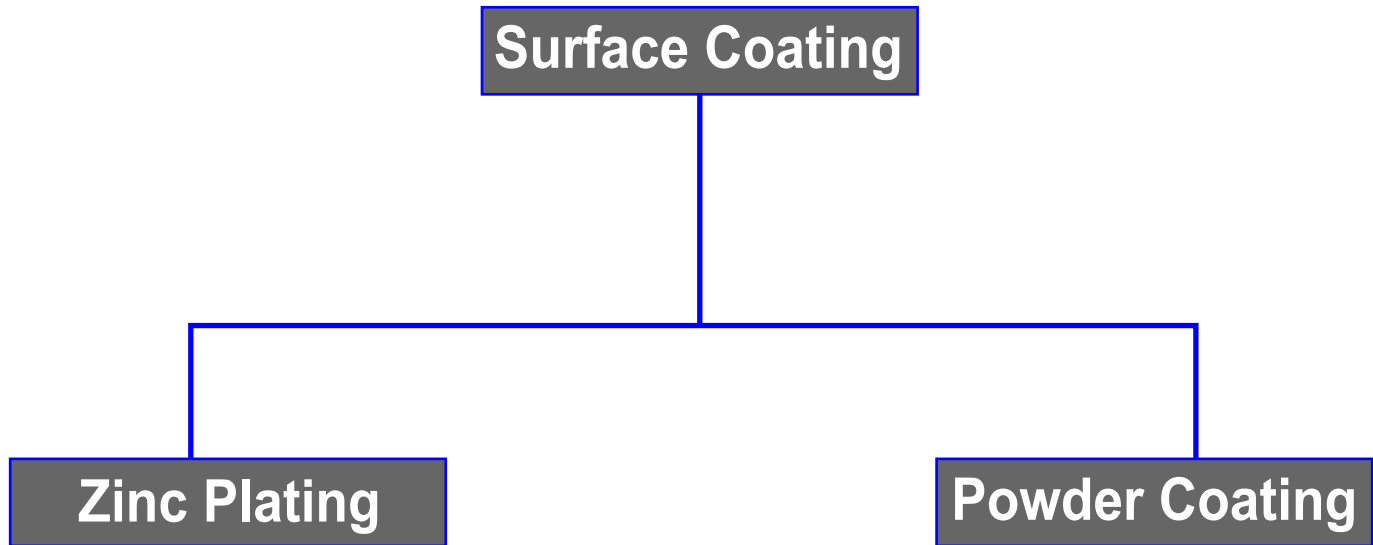
## **IN-HOUSE ZINC PLATING FACILITY**



- We follow 28 STEPS control action plan according to which the minimum coating thickness of our goods is 15-20 Micron



# SURFACE COATING POLICY



## ZINC PLATING

**Tank Zinc  
(Automatic Plant)**

**Barrel Zinc  
(Semi-Automatic Plant)**

- Cleaning of Tank
- pH value check

**Weekly De-  
contamination**

**Standards of  
chemical use**

- Growel for Plating
- Camtall for powder coat

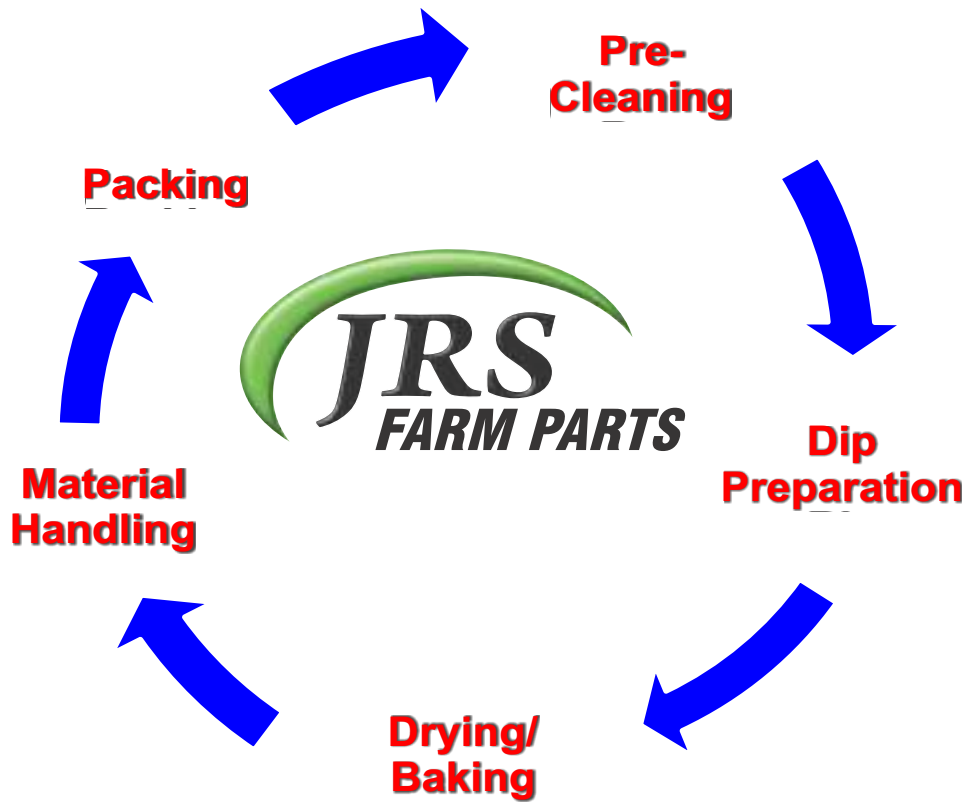
- Material handling strictly on crates
- No direct contact with hard surface

**Crate  
system**



# ZINC PLATING

## PROCESS CONTROL



**STEP 1 :**

Clean with dilute & concentrate H<sub>2</sub>SO<sub>4</sub> @ 50-60 degree for 4-6 mins



**STEP 2 :**

CHEMICAL REQUIREMENTS			
(Tank) Alkaline		(Barrel) Acid	
Component	Conc.	Component	Conc.
Zinc Metal	7-15 g/l	Zinc Metal	25-38 g/l
Sodium Hydroxide	100-150 g/l	Total Chloride	120-150 g/l
Uniglo 2012	10ml/l	Baric Acid	28-36 g/l
Brightner A		Zinohorit e CLZ - 942 M	30-40 ml/l
Uniglo 2012	2ml/l	Zinohorit e CLZ - 942 R	0.4-1.0 ml/l
Brightner B		Zinohorit e CLZ - 937 A	100 ml/l
Uniglo 2012	2ml/l	Zinohorit e CLZ 947	225gm/l
Brightner C			



**STEP 3 :**

Baking at 220° for 40 mins. immediately after plating



**STEP 4 :**

No direct contact with hard surface such as wooden, Cardboard & floor etc. after plating. Material handling strictly through Bins



**STEP 5 :**

Packing in cartons & seal through VCI bag to avoid moisture capture

# POWDER COATING

## PROCESS CONTROL



**STEP 1 :**

7 step pre-cleaning process with acid Gardoclean/Gardacid Palbond



**STEP 2 :**

Base material to be shot blasted and then cleaned with cloth before spraying



**STEP 3 :**

Parts should be hanged properly avoiding contact with each other. Powder should be evenly sprayed all over part



**STEP 4 :**

Baked at 220° for 30-40 mins. immediately after spraying. Thickness of 45 microns to be maintained



**STEP 5 :**

Packing in cartons & seal through VCI bag to avoid moisture capture

## IN-HOUSE ZINC PLATING FACILITY



We have semi-automatic zinc plating facility

## POWDER COATING



In-House Powder Coating Facility which is done with proper surface treatment for prolong life.



**IN-HOUSE LAB  
TESTING FACILITY**

# IN-HOUSE TESTING FACILITY



Crack Detector



Salt Spray Test



Chemical Test Laboratory



Center Less Grinding Machine



Hardness Testing



# QUALITY LAB



Rapid I video measuring machine



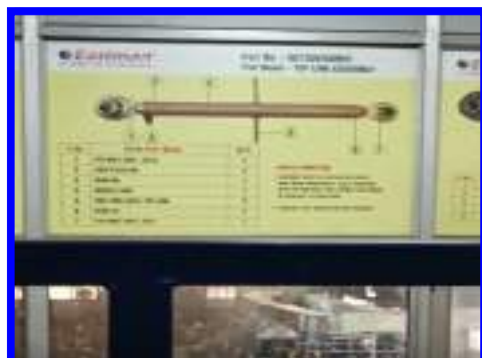
Salt Spray Testing of up to 72hrs for each batch



Vicker Hardness Tester



## STANDARD ASSEMBLY INSTRUCTION FOR OEM PARTS



- We have displayed the assembly instruction for our standard OEM items to minimize error on the worker part

## ASSEMBLY AREA



Semi-Finished Goods



Finished Goods



## IN-HOUSE CONTAINER STUFFING



Container are Stuffed and Sealed in house under CCTV surveillance  
Fumigation of wooden pallets is performed after stuffing of container

# **MATERIAL HANDLING & PACKAGING**



**Plastic Bins are used to keep products scratch free after Plating and before Packing.**



**Rust preventive Pills inside the Polybags for control all types of side effects in Packing.**



**Ready made Zipped Water proof Polybag used inside the Wooden packing for safe Packing**



**We used Ply in wooden pallets for strong and moisture free Packing of products so it safely reached at customer end.**



# SAMPLE MANAGEMENT SYSTEM



- As per the system, each customer is appointed a locker in which we keep the original samples, counter samples and mass production sample
- **RED STICKER** pasted on new samples received from customer
- **YELLOW STICKER** pasted on counter samples developed in-house.
- **GREEN STICKER** pasted on mass production sample

# DRAWING MANAGEMENT SYSTEM



DMS FILDING ON SERVER CONTAINING

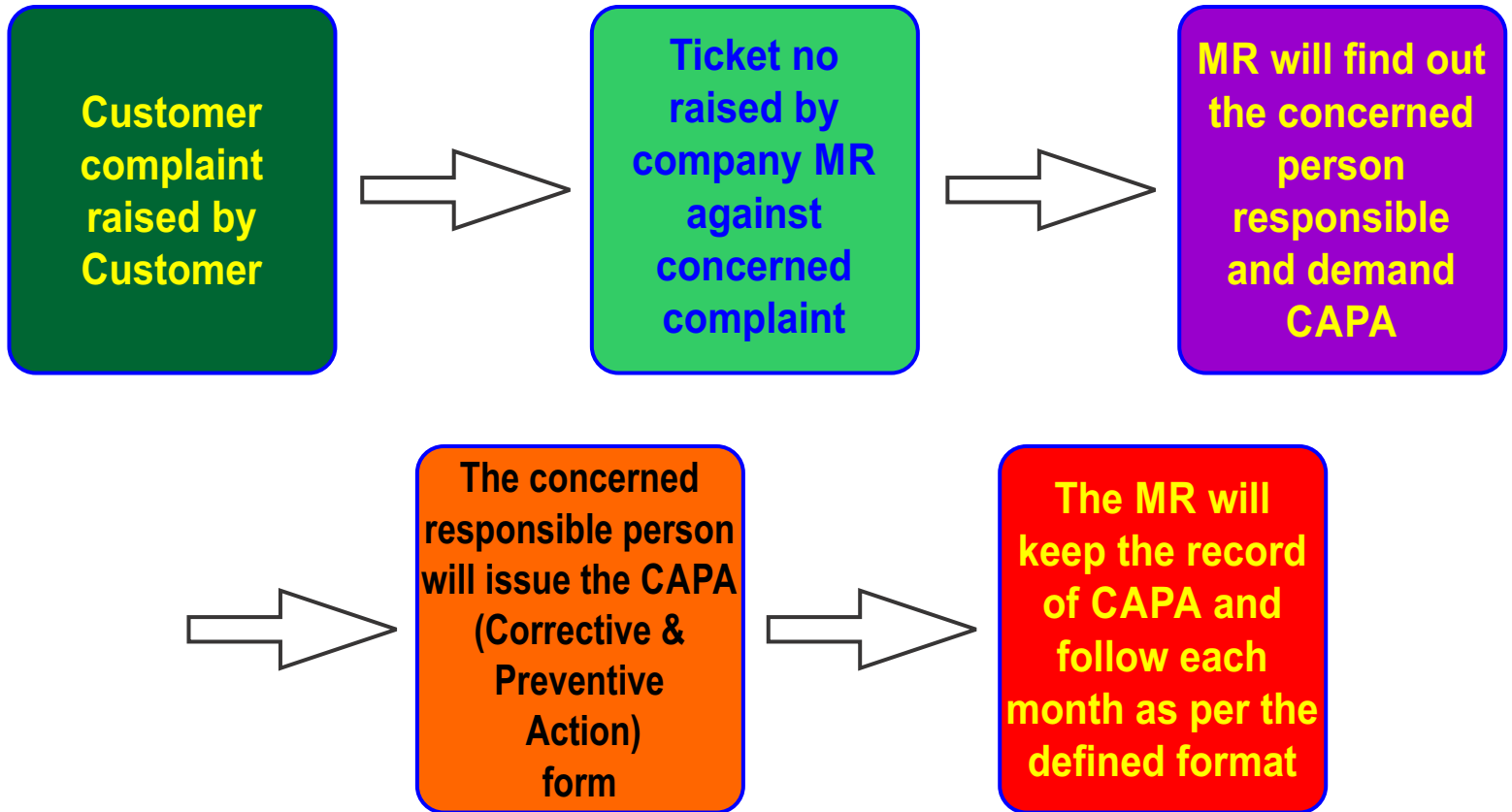
MASTER DRAWING FILES  
WITH DRAWING NAME, CODE NO.,  
EASTMAN DRAWING SERIAL NO.

MASTER DRAWING FILES  
PDF FILES SCANNED MASTER FILES

INSPECTION SHEETS

- We develop 3D models on SOLIDWORKS and dimensional drawings on AUTO CAD/CAM
- After developing the drawings they are dropped in common folder in server DMS as per following system

# CUSTOMER COMPLAINT MANAGEMENT SYSTEM



## FORMAT TO FOLLOW UP ON THE CUSTOMER COMPLAINT

Eastman INDUSTRIES LTD.		Pending Complaint Checklist						QMS-F-07/06		
Marketing - Tractor Parts										
Auditee Name : _____			Auditor Name / Sign : _____			Audit Date : _____				
S.No.	Complaint No. / Date	Assigned by Dept/Person	Complaint Description	Lot No.	Type of Complaint	Target	Status / Date	Auditee Sign	ECR Sign	Remarks
1	EL/IND/TP/19 25-Jun-13	Tractor Parts Marketing - EFG- Mr. Kulbir Singh	As per sheet attached (hard-copy) with original complaint : On 10.12.12 : 1. Sawinder Singh/Juldy ordered 7 pages from ME cell and he ordered not to hand over more 7 pages to Mr. Kulbir Singh. 2. Drawings that had been made but in 41 days with delays just for saying that Kaisha. It shows certain problems. Kachheri. Signed by : Sawinder Singh, Kulbir Singh, JS Gill.  On 12.12.12: I have received the 7 page documentation. I will return back with my answers on 17.12.12 (Monday) signed by Mr. JS Gill.  On 20.05.13 MD cell emailed the comments to Mr. Kulbir Singh that "This document to be used as Preventive measure".  On 27.05.13 - as discussed with Mr. JS Gill : Mr. JS Gill explained that in Lot No. 8907, seen Top Link Assembly, Qty 1000 Pcs, supplier - ECFE. As per available sample, the drawings were made wrong by Mr. Juldy and the same drawings were also approved by Marketing Person (JS Gill), which results in production of wrong stamped top link assembly. Buyer did not raised any complaint or claim. Actual problem was that E.L. drawing & developed sample pic to was not get approved from client.	8907	(E) Marketing related					
2	EL/IND/TP/21 05-Dec-13	Tractor Parts Marketing - JS Gill	We were having small issue of quality with our Poland client from last 1.5 years in various shipments, which were not settled on time. And now as per our client's e-mail of 20.07.13 he asked for total clear value of those reported goods, in USD 1224.66, which he wants from us in his upcoming consignment Lot no. 7100, value worth USD 1,06,000.	7100	(E) Marketing related					

# OUR OEM CUSTOMERS



## SUPPLIER DELIVERY PERFORMANCE RATING FROM ISUZU & MAHINDRA

Supplier Delivery Performance Rating					Aug-21
Supplier Name		Eastman Cast and Forge			
Supplier Code		1109			
S.No	Parameters	Weightage	Target	Actual	Score
1	Parts Quality	20	4	4	20
2	Schedule Adherence	20	4	4	20
3	Process Adherence	15	4	4	15
4	VOR Supportability	10	NA	NA	10
5	Quantity Mismatch	10	4	4	10
6	D-Note/Invoice	10	4	4	10
7	Tag Availability	10	4	4	10
8	Responsiveness	5	4	4	5
<b>Total Rating</b>					<b>100</b>

**Mahindra** **Ms EASTMAN CAST FORGE LTD.**  
 G.T. ROAD NEAR AIRPORT, LUDHIANA  
 Kind Attention: Mr. Sanjeev Tandon  
 Subject: Supplier Performance Score Card- Key Business Parameters

Kindly note the performance of your company for the month of October '2021 vis-a-vis set targets.

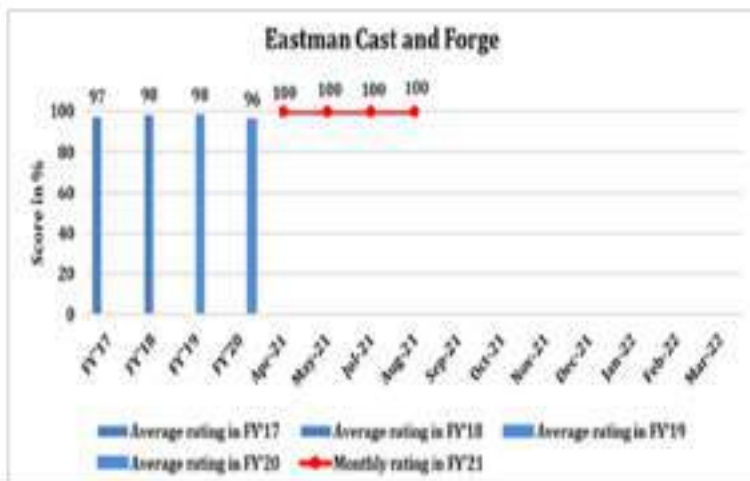
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**KEY BUSINESS PERFORMANCE SCORE CARD** Month | October '2021

**Ms EASTMAN CAST FORGE LTD.** Vendor Code: DE002

**Automotive Division**

RATING ELEMENT	LMT	TARGET	ACTUAL PERFORMANCE	LEVEL OF PERFORMANCE	WEIGHTAGE	SCORE
<b>CUSTOMER PERCEIVED QUALITY PERFORMANCE</b>						
Warranty (3 MS)	0/1000	<= 0.1	0.30 (Mar 20)	4	3	12
Warranty (12 MS)	0/1000	<= 0.6	0.00 (Jun 20)	4	2	8
No of VI & V/Coincidence	No. of incidences	NA	NA	NA	NA	NA
No of K2 concave	No. of incidences	NA	NA	NA	NA	NA
<b>WOM PLANT DELIVERY PERFORMANCE</b>						
Schedule Adherence	%	100%	100	4	20	80
ASN Preparation	%	100%	80	1	5	4
Short Receipts	No. of incidences	0	1	3	3	15
<b>SYSTEM CERTIFICATION/AUDIT</b>						
WISS Score	%	>= 94%	Not Audited	2	7	14
WSES Score	%	>= 85%	Not Audited	2	9	18
<b>Rating Criteria</b>						<b>Total</b> 320
Excellent	>= 320 and all parameters (DP's 2)	Good	>= 275 & 320 and all parameters (DP's 2)			<b>Rating</b> Good
Good	>= 225 & < 275	Mild Improve	>= 125 & < 225			
Fair	< 125					
<b>Warranty Cost</b> Rs.						Quality Crisis/Field Recall No
<b>SPARES DTP PERFORMANCE</b> #						
# O = 100% of parts supplied as per schedule # S = 100% of parts supplied as per schedule # B = 80% of parts supplied as per schedule # R = 60% of parts supplied as per schedule						
<b>Certification Status</b> GMS:TS 16949 EMS: No Certificate						
Yellow (G) Yellow (G) G1 G2						
Remark: Your performance in the last month is Good, you should upgrade to Excellent level in subsequent months.						
Regards, Vinod Sahay (CPO - Auto & Farm Sector, Mahindra & Mahindra Ltd)						
3 months in "Excellent" Category 3 months in "Mild Improve" Category 3 months in "Good" Category Any other Combination Any 3 months in "Fair" Category						



# JRS FARM PARTS



## FARM PARTS PRESENTATION

### **Eastman Industries Ltd.**

Head Office :  
C-87, Phase-V, Focal Point, Ludhiana -141 010 Punjab. (INDIA)  
Tel. : ++91-161-2670935, 2670936, 5280000  
Fax : ++91-161-2670934  
E-mail : jaswinder@jrsmfarmparts.com  
paldeep@jrsmfarmparts.com  
Website : www.farmparts.com

### **Eastman Cast & Forge Ltd.**

Works :  
Near Ludhiana Airport,  
G.T. Road, Ludhiana, Punjab (INDIA)