» Production Planning:

Production of products is done in a very systematic manner. The orders of various customers are planned for production month wise for which a production plan is issued to Works as per delivery schedules of our various customers. A regular follow up of production activities/progress is done every week or as per emergence requirements through Production Review Meetings to ensure monthly sale targets.

» Raw Material:

Our Material management department as indicated in our monthly production plan procures raw material. All the raw materials are procured from approved suppliers/manufacturers only. The major suppliers of raw material include M/S Steel Authority of India Ltd., Upper India Steel, Modern Steel, Vardhman Special Steels Ltd.Vishavkarma Steel, Mukand Steel, Ludhiana etc. All these manufacturers produce M.S. and Alloy Steel Flats, Rounds, Squares and Hexagon sections under strict quality norms as per relevant ISS/BSS/DIN/ASTM specifications and are well equipped with in-plant material test facilities for Chemical and Mechanical properties. The major lots are accompanied with manufacturer's test certificate bearing Heat No. And colour code as per relevant specifications.

These raw materials are again tested for Chemical properties in our own test lab. to verify the values of various elements given by the manufacturer of Iron and Steel. On verification of Chemical properties, an identification (Q. No.) is marked on the lot of material tested and a document is generated for the same which is transferred to 'Job Route Card'(Annex. A). A stock register is maintained for the receipt and issue of raw materials for various items as per requirements indicated in the Job Route card as per specimen. Different grades of raw material are stacked at appropriate places earmarked for the purpose to avoid any mix up. Proper colour codification is maintained at all stages.

» Manufacturing Process :

1. The manufacturing process of Bolts Screws consists of blank cutting from round bars, forging / upsetting head by cold / hot process depending on size, trimming, facing, centreless grinding of shank, thread rolling, annealing, hardening, tempering, cleaning, plating, dispatch.

2. The manufacturing process of Nuts consists of blank cutting from round bars on Auto/ Semi auto Nut cutting machines or hot / cold forgings depending on size, chamfering, tapping, annealing, hardening, tempering, cleaning, plating, dispatch.

3. The manufacturing process of Studs consists of blank cutting from round bars, facing, chamfering, centreless grinding of shank, thread rolling, annealing, hardening, tempering, cleaning, plating, dispatch.

4. The manufacturing process of Washers consists of blank cutting from round bars on automats, facing, chamfering, hardening, tempering, cleaning, plating, dispatch.

5. The manufacturing process of Nuts by Cold forming process consists of feeding the rounds in coils in the imported Nut formers, which automatically forms the shape of a Hex/Flanged Nut/Weld Nut after passing through six inbuilt stations. These Nuts are then tapped in the Automatic Nut tapping Machines.

» Quality Management :-

A specific Quality policy exists in out unit. It is clearly defined to check the products at various stages of manufacture and at the end of all operations. It is ensured both by the workmen and quality staff on duty for this purpose. To achieve this aim and make a foolproof system, a Job Route Card (Annexure 'A') on the. Basis of Quality Plan (Annexure 'C') is introduced while launching the production of each item and stage inspection is carried out during each operation/after each operation on sampling basis as per Sampling Plan for Threaded Fasteners, I.S. 2614 by the concerned workmen and counter checked by QC staff.

During the manufacture of items, if any dimensions is not confirming to drawing, a Non conformity Report (NCR) is prepared and corrective action is taken then and there. Since ours is a mass production producing unit, sizes are thoroughly checked during the setting of the job as such negligible NCR's are raised. Quality control staff has the authority to stop the operation if any deviation in dimensions/process is observed at any stage of manufacture. Work is allowed to proceed further only after the necessary corrective action is taken.

The movement of material during various processes is strictly restricted in "BINS" specially employed for this purpose along with Job Route Card to avoid any mix up of various products and strictest quality control is maintained for all dimensions/processes. At the end of all the processes, final inspection is done by the Quality staff as per Sampling Plan for threaded fasteners I.S. 2614 and an Observation sheet is generated as per specimen enclosed as Annexure 'D.' Thus the following documents are maintained for each item.

01. Job Route Card duly certified by QC staff.

02. Observation sheet duly certified by QC staff.

03. Test certificate for Chemical/Mechanical Properties as per requirements of Customers duly certified by QC staff. The copy of the test certificate is sent to the Customer along with dispatch documents.

All the above documents are maintained by QC staffs, which are easily retrievable. These documents are normally retained for a period of three years.

After the material is cleared for dispatch by QC staff, the same is handed over to our Dispatch section who. Pack the material in standard Card boxes/cartoons or as per specific requirements of the customers after applying Anti corrosive oil. These card boxes/cartoons are then dispatched in Wooden boxes. Each box is identified with Size, grade and quantity of product. The records of receipt and issue of. finished goods is kept by the dispatch section. The stock items are properly identified for Size, grade and quantity and a proper record is maintained Rack/Box wise. The Stock is periodically reviewed for its correctness and quality.

Thus a total quality environment exists in our unit which has led to a wide acceptability of our products among various Govt. Organization/Public Sector Organizations/Private Large Scale Industries/our Authorized and registered dealers allover the country and International Market through Export Houses. We are proud of our achievements and total Quality Product.

PROCESS SHEET

WORK ORDER NO. ITEM NO.

CODE: DATED

DESCRIPTION:

ACHIEVED:

QTY. REQUIRED

" HERE DRG.OF THE COMPONENT IS INSERTED"

SPECIAL INSTRUCTION:

CHEMICAL ANALYSIS

ELEMENT C Mn Si S P Cr Ni Mo V

PROCESS	**SIZE**	**QTY. CHECKED**	**STAGE INSPECTION STATUS**	**REMARK**	**SIGN**
Blank cutting			ACC./RWK/REJ.		
Forging (size Identification)			ACC./RWK/REJ.		
Trimming			ACC./RWK/REJ.		
Facing			ACC./RWK/REJ.		
Grinding			ACC./RWK/REJ .		
Thread Rolling			ACC./RWK/REJ.	Check with Gauge,Yes/No	
Drilling			ACC./RWK/REJ.		
Heat Treatment	Temp.		Hardness Observed	Stage Inspection Status	Sign
Hardening		Soaking Period		ACC./RWK/REJ	
Quenching		Air/water/Oil		ACC./RWK/REJ	
Tempering		Soaking Period		ACC./RWK/REJ	
Magnaflux crack detection		Yes/No		ACC./RWK/REJ	
Plating :Zinc/ Auto Black/ Phosphating /E.T./Hot Dip Galv./Cadmium					
Cleaning Yes/ No.					

Quality Plans For Fasteners

Operation	Characteristic	Type of check	Quantum	Document Ref.	Norms of acceptance	Record Format
Raw Material	Chemical Analysis	Chemistry as per relevant grade	Onesample /heat/lot	Relevant Standard	Relevant Standard	Test Report
	Mechanical Properties	UTS,YS,%Elong	-do-	-do-	-do-	Test Report
Forgings	Dimensions	Major Parameters	2%	-do-	-do-	Process Obs.Sheet
Rough Machined Bolt/Nut	Dimensions	Major Parameters	2%	-do-	-do-	Process Obs.Sheet
Heat Treatment	Annealing,Hardening &Tempering	Hardness	5%	-do-	-do-	Process Obs.Sheet
	Mechanical Properties	UTS,YS,%elong.Proof Load test for Nuts only <M36	One Sample/Dia.	-do-	-do-	Test Report
	Surface discontinuity threads	MPI test Size with Ring/Plug Gauge	5% or SOS 5%	-do- -do-	-do-	Job Route card Process Obs.sheet
Plating	Depth of plating	As per requirement	1or2 Pcs/lots	-do-	-do-	Job Route card
Final Inspection	Dimensional and Review of Test reports	All Parameters as per Drg./Standards	As per sampling plan	-do-	-do-	Observation Sheet /Job Route Card.

OBSERVATION SHEET

Work Order No.

Description

Total Qty.As Per Order

Total qty processed

Drg.No./Specification

Sample size

Grade

Marking

Dimension as given in the Drg.	Dimension as observed ACC. RWK. REJ.	Status

Accepted/Not Accepted

Remark If Any

Inspector (QR)

Chief Technical Executive