



EMERALD RESILIENT TYRE MANUFACTURERS PVT. LTD.,
79 & 80, Export Promotional Industrial park,
SIPCOT Industrial complex,
Gummidipoondi.

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QUALITY PROCEDURE MANUAL PROCESS MONITORING

1.0 PURPOSE:

The purpose of this procedure is to establish a system for application of control during process to ensure that the product meets the specified requirements.

2.0 SCOPE:

This procedure is applicable to all the products manufactured by the company.

3.0 RESPONSIBILITY:

Plant incharge is responsible for implementation of the procedure.

4.0 AUTHORITY:

This procedure is approved and authorized by CEO and can be amended only by him.

5.0 DEFINITIONS:

FG: Finished goods CDD - Committed date of delivery

6.0 PROCEDURE:

6.1 SOLID TYRE (SRT) :

- 6.1.1 Customer requirements(Order) are received by Marketing Dept. and it is given to planning through E mail / Sales order. For domestic requirement minimum stock requirement will be given by marketing. Production will be planned and delivery schedule is prepared by Planning in-charge in consultation with CEO/Marketing Dept. and the CDD will be given to marketing.
- 6.1.2 Based on the CDD production has been organized by the divisional head.
- 6.1.3 Divisional head to prepare material plan and it is forwarded to the concerned. The daily plan including material requirement is prepared and necessary instructions for mould changes (if any) given to Engg. Daily material requirement is given to mixing and stores dept. through E mail.
- 6.1.4 The production process is carried out as per the flow chart attached.
- 6.1.5 First off approval is done for the mould changes if any and then for regular production continued.

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- 6.1.6 Line inspection is organized for each of the products. Production entries made in ERP system by Mfg.
- 6.1.7 Finished product is inspected and the tyre status updated in the ERP through hand held device. Bar code sticker will be generated and placed on the tyre lugs/ tread portion.
- 6.1.8 Then the FG passed finished products (with bar code sticker) are cleaned, packed and stored as per the order in the FG area.
- 6.1.9 Despatch of these products done in co-ordination with marketing department. Dock audit is conducted for the products sent through containers(shipping).

6.2 INDUSTRIAL PNEUMATIC TYRE (IPT) :

- 6.2.1 Plan for the next month will be given by marketing through P & Co., by last week of every month, through e mail.
- 6.2.2 Despatch target prepared and it will be communicated to the planning and marketing.
- 6.2.3 Raw materials (Fabric, Bead wire, Bladder, Flap) requirement arrived and it is given to purchase by every month end.
- 6.2.4 Based on despatch target, production plan will be prepared (taking into consideration of marketing priority)
- 6.2.5 Based on the production plan daily tyre building plan will be arrived
- 6.2.6 On daily basis compound requirement will be given to the mixing plant
- 6.2.7 For the tyre building plan, tread extrusion, fabric calendaring, bead winding, etc. will be scheduled keeping in view the ageing of all materials by I shift-in-charge.
- 6.2.8 Material planning for tyre building & curing in shift wise will be followed by the SI.
- 6.2.9 WIP materials including bias cutting will be maintained as per the requirement, by following FIFO and ageing by every shift by SI.
- 6.2.10 If any breakdown in any machineries, accordingly the plan of other WIP materials will be restricted and the requirement will be altered suitably
- 6.2.11 PM schedule will be received first day of every month. If any schedule changes in the PM schedule, it would be communicated by the Engg, dept for arranging the material plan for production 1 day before

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- 6.2.12 Tyre building gap and curing gap analysis will be done on daily basis.
- 6.2.13 FIR action plan will be done once in a week.
- 6.2.14 Tube requirement for the given tube type sizes plan will be given to Tube plant.
- 6.2.15 ERP entry will be done on shift basis for the tyres cured in press wise and it will be checked and approved.
- 6.2.16 Simultaneously tyres will be trimmed and finished for II line inspection
- 6.2.17 After approval, tyres will be kept for second line inspection by QA and it will be okayed.
- 6.2.18 Finally, tyres will be packed as per the requirements.

6.3 TUBE :

- 6.3.1 Plan for the next month will be given by marketing and as well as from IPT plant / planning by every month last week through mail and update the requirement as and when required by the customer.
- 6.3.2 Despatch target prepared and it will be communicated to the concerned
- 6.3.3 Raw materials (Butyl compound, Valve, Valve Accessories, Tube Poly Covers...) requirement arrived and it is given to purchase and mixing plant (compound requirement only) by every month end.
- 6.3.4 Based on despatch target, production plan will be prepared (taking into consideration of marketing priority)
- 6.3.5 Based on the production plan daily Extrusion plan will be arrived
- 6.3.6 On daily basis compound requirement will be given to the mixing plant
- 6.3.7 Based on the daily plan, valve Fixing, Splicing, will be scheduled keeping in view the ageing of all materials by shift-in-charge.
- 6.3.8 Material planning for Green tube & curing in shift wise will be followed by SI.
- 6.3.9 If any breakdown in any machineries, accordingly the plan of other WIP materials will be restricted and the requirement will be altered suitably
- 6.3.10 PM schedule will be received first day of every month. If any schedule changes in the PM schedule, it would be communicated by the Engg, dept. for arranging the material plan for production 1 day before

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- 6.3.11 Sample tube(cured) analysis will be done on daily basis at lab.
- 6.3.12 ERP entry will be done on daily basis for the tubes cured
- 6.3.13 Cured tubes are inspected by the line inspector and it will be passed to packing.
- 6.3.14 Production loss gaps are monitored on shift basis and it will be reviewed on daily basis.
- 6.3.15 Corrective action and preventive action will be taken against the issues
- 6.3.16 Line rejections also addressed on shift basis and the proper corrective action will be taken then and there.
- 6.3.17 Support required will be communicated to the concerned at the stipulated time / review
- 6.3.18 Random II line inspection will be done the Quality inspector.
- 6.3.19 After completion of the line inspection, the respective tubes will be sent for vaccuming, Valve bending (if reqd.), provision of valve accessories process
- 6.3.20 Finally the tubes will be packed as per the requirements and kept separately with proper identification.
- 6.3.21 Despatches will be done as per the despatch schedule received from the marketing dept.

6.4 MIXING :

- 6.4.1 Compound requirement will be received from the SRT,IPT and Tube plants, by every month end. Based on this raw material requirements planned and sent to purchase department.
- 6.4.2 On daily basis compound requirement will be received from the SRT,IPT and Tube plants, with a copy marked to stores.
- 6.4.3 Based on requirement, production plan will be prepared. Raw materials are withdrawn from the stores and compounds are produced
- 6.4.4 WIP and final compounds are tested as per quality plan by the lab technicians.
- 6.4.5 Rejections if any, are addressed on daily basis and the proper corrective action will be taken
- 6.4.6 Final compounds are despatched to the user departments by stores.

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- 6.4.7 ERP entry will be done on daily basis by production and stores as applicable.
- 6.4.8 Production loss gaps are monitored on shift basis and it will be reviewed on daily basis. Corrective and preventive actions will be taken as required.
- 6.4.9 PM schedule will be received first day of every month and PM carried out. If any schedule changes, it would be communicated by the Engg, person for arranging the material plan for production 1 day before.
- 6.4.10 Outside mixing with approved vendors will be carried out on need basis, in coordination with stores.
- 6.4.11 Ready mix compounds can be outsourced from the approved vendors and necessary test reports will be received from the vendor and also the properties to be verified as per QP

6.5 WHEELS :

- 6.5.1 Plan for the next month will be given by export - domestic marketing & SRT planning by last week of every month, through e mail.
- 6.5.2
- 7.4.2 Subsequent additional orders will be by given export - domestic marketing & SRT planning through e mail and included based on priority requirement.
- 6.5.3 Raw materials (Steel, fasteners, etc.,) requirement arrived and it is given to purchase by every month end and shall be revised based on additional order requirement.
- 6.5.4 Despatch target prepared and it will be communicated to the planning and marketing.
- 6.5.5
- 6.5.5 Based on despatch target, production plan will be prepared.(taking into consideration of marketing priority)
- 6.5.6 Based on the production plan, daily plan will be arrived.
- 6.5.7 Batch number to be stamped as per the Batch number arrived with respect to the receipt of RM per lot.
- 6.5.8 Production details to be updated in the Machine Log note.
- 6.5.9 Tool setting to be carried out as per the Daily Production plan.
- 6.5.10 Inspection to be carried out and recorded as per the Quality plan.
- 6.5.11 Finished Goods will be handed to Stores.
- 6.5.12 ERP entry will be done on daily basis for the wheels produced.
- 6.5.13 Production loss gaps are monitored on shift basis and it will be reviewed on daily basis. Corrective actions will be taken as required.

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- 6.5.14 If any breakdown in any machineries, accordingly the plan of other WIP materials will be restricted and the requirement will be altered suitably.
- 6.5.15 PM schedule will be received first day of every month. If any schedule changes in the PM schedule, it would be communicated by the Engg, dept for arranging the material plan for production 1 day before.
- 6.6 Process is carried out as per relevant Work instructions(WI). Process monitoring is done as per the relevant quality plan and records are maintained as per the checklist/production activity cards by Mfg.
- 6.7 The effectiveness of corrective actions are verified through results/trend graphs as applicable.
- 6.8 The plant incharge review and control the changes for production if any after ensuring continuing conformity with requirements. The relevant records are maintained for the changes including the person authorizing the change and necessary action if any, arising from the review.
- 6.9 [Revision in the plan will be updated and communicated to the concern as applicable.](#)

7.0 RECORDS :

As stated in the Quality plan.

8.0 REFERENCE:

Quality plan & WI

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