

JINDAL ALUMINIUM LIMITED ROLLING & EXTRUSION DIVISION			
DOCUMENTED INFORMATION APEX MANUAL	Doc No: JAL/R&E/AM Issue #: A Issue Date: 01/02/2016	SECTION	-
		SUB SECTION	-
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APEX MANUAL

**(PART OF DOCUMENTED INFORMATION
OF IS/ISO 9001:2015)**

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AMENDMENT RECORD

Sl. No.	Date	Amendment Description	Discard		Insert	
			Page No	Rev No	Page No	Rev No
0	01.02.2016	Quality Manual revised as Apex Manual from ISO:9001 2008 to ISO:9001:2015 version	All pages			
1	01.09.2016	CI-2 amended for- Inclusion of IS, ASTM, ASME & EN standards in normative reference	07	00	07	01
		CI-4.1 amended for – a) All applicable external & internal issues have been identified. b) External & internal issues have been addressed	09	00	09	01
		CI-4.2 amended for – All applicable interested parties with relevant requirement have been addressed.	10	00	10	01
		CI-4.3 amended for – a) Scopes of QMS as documented information have been addressed. b) Justification provided for exclusion of clause 8.3 & 8.5 have been addressed.	10	00	11	01
		CI-4.4.1 amended for – a) All the processes needed QMS & their application throughout the organization have addressed. b) Requirement of the standard given in a) to h) have been addressed all requirement. c) Interaction of process of QMS given in annex B have been addressed as per clause 0.3.1 standard d) Interaction of the processes given in annex c has been addressed.	11	00	11 & 12	01
		CI-4.4.1 amended for – Record term deleted in clause 4.4.1	12	00	12	01
		CI-5.2 amended for – Title of clause 5.2.1 is changed as developing the quality policy	14	00	14	01
		CI-5.3 amended for – a) Responsibility & authority term deleted in page no 17. b) Organization chart (Annex D) have been revised & updated. c) Functional responsibility matrix to address all clauses as per ISO 9001: 2015 d) Under responsibility & authority of fire & safety officer, job description & documented information have been addressed.	16 19	00 00	17 19	01 01
		CI-6.1.2 amended for – Risk & opportunities have been addressed as per requirement.	22 & 23	00	22	01
		CI-6.2.2 amended for – a) Quality term addressed before objective in clause 6.2.1 b) Documented information on the quality objective has been addressed.	23	00	24	01

....Continued)

(Amendment Record...Continued)

Sl. No.	Date	Amendment Description	Discard		Insert	
			Page No	Rev No	Page No	Rev No
1	01.09.2016	CI-6.2.2 amended for – How to achieve quality objective have been addressed	07	00	07	01
		CI-6.3 amended for – a) All applicable external & internal issues have been identified. b) External & internal issues have been addressed	24	00	24 & 25	01
		CI-7.4 amended for – All the interested parties have been addressed in internal & external communication	31	00	29 & 30	01
		CI-7.5.3.1 amended for – Where & when have been addressed in documented information	34	00	33	01
		CI-7.5.3.2 amended for – Record term deleted in control of documentation information	34	00	33	01
		CI-8.1 amended for – Block diagram have been changed name as process flow diagram in ANNEX- E	36	00	34	01

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Designation related abbreviation:

01.	CMD	-	Chairman and Managing Director
02.	JMD	-	Joint Managing Director
03.	VC	-	Vice Chairman
04.	ED	-	Executive Director
05.	PR	-	President
06.	VP	-	Vice President
07.	VP(O)	-	Vice President (Operations)
08.	OSD	-	Officer on Special Duty
09.	GM (O)	-	General Manager (Operation)
10.	GM (MAT)	-	General Manager (Maintenance)
11.	DGM(C)	-	Dy General Manager (Commercial)
12.	AGM	-	Asst General Manager
13.	SM	-	Sr. Manager
14.	MGR	-	Manager

Other abbreviations

15.	R&E	-	Rolling & Extrusion
16.	QMS	-	Quality Management System
17.	AO	-	Acceptance of Order.
18.	JAL	-	Jindal Aluminium Limited
19.	SQC	-	Statistical Quality Control
20.	MRM	-	Management Review Meeting
21.	QA	-	Quality Assurance
22.	ISO	-	International Organization for Standardization.
22	AM	-	Apex Manual
23	OH & S	-	Occupational Health and Safety

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INTRODUCTION

The Jindal Aluminum Limited (JAL) extrusion factory at Bangalore was established in 1968 under the name of "Jindal India Private Limited" initially. Jindal Aluminum Limited was founded in the year 1970 by taking over the extrusion factory at Bangalore from Jindal India Private Limited.

Jindal Aluminum Limited situated in the serene outskirts of Bangalore rural district at Dabaspeta, is having Rolling & Extrusion divisions for manufacture of aluminium sheets, rolled foils and extrusions. These are manufactured in wide range to cater the needs of various industries, not only for domestic market but also for export markets and are in roads to become a big player overseas as soon as possible.

The JAL – R&E is having most modern plant with advanced technology to produce 50,000 MT of rolled products and 18,000 MT of extrusions. The Rolling division is having casters imported from China and Germany. Foils upto 6 micron thickness is produced. The rolled products are largely used in the field of industrial components, roofing sheets, general engineering, food packaging industries and household consumer products.

The extruded products are largely used in the field of transport, communication, construction, agriculture, defense, space, atomic energy, electrical, electronics, aviation, pressure equipment, general engineering and commercial applications. Both the divisions are adequately equipped with chemical, mechanical and metallurgical testing laboratory, which also includes "Spectro lab" to carry out various sophisticated tests. The quality of the products conform to international standards.

Customer satisfaction is the keystone to the growth of the company. The high standard of quality of the products is achieved by continuous casting for defect free rolls, using the most modern foundry casters. The continuous cast aluminium sheets are further rolled and annealed to thinner gauges. The foil will be manufactured in hard & soft (annealed).

The high standard quality of extrusion is achieved by making use of the logs produced in 2 Nos of 25 MT capacity stationary-reverberatory type melting furnace and 1 No of 25 MT capacity tilting type holding furnace as well as direct chill (DC) casting machine to cast around 25 MT of finished logs in one batch. This is fed to production shop after trimming as billet to produce extrusion in 4 extrusion presses of German & China make.

The required dies & tooling are manufactured in Bangalore factory Tool Shop or outsourced. The Dabaspeta factory Tool Shop is equipped for correcting & cleaning the dies with proper assembly before being sent to presses for extrusion. The Tool Shop is also equipped with solution treatment furnace, nitriding furnace as well as a machine shop.

Customers are spread out all over the country, ranging from small scale units in the private sector to the giant enterprises in the public sector. Customer satisfaction is assured through quality products and timely deliveries.

Adequate safety and hazard prevention measures are strictly followed at the production facilities. The safety features conform to statutory rules as per all identified and applicable legal requirements. Also all legal compliances are strictly adhered to. Medical facilities are available for all employees at Jindal Rural Charitable Hospital where trained doctors are available to check the health of workers at planned intervals and also in 24 hours health center in the factory with a doctor & a nurse. It also has an ambulance with all facilities and is available for 24 hours.

The expertise available in R & D department of the Bangalore factory which is having the recognition of the Department of Science & Technology, Government of India, will be made use of, for improving technologies, as and when required.

Jindal Aluminium Limited is producing 36.84 MW and 25.2 MW wind power through projects situated in Chitradurga district of Karnataka and in Anantapur district of Andhra Pradesh.

Jindal Aluminium Limited is producing 10 MW solar power in Chitradurga district of Karnataka. Plans are there to set up 50 MW solar power projects in Karnataka and Andhra Pradesh in the coming years.

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1. SCOPE

This Apex Manual is prepared in accordance with International Organization for Standardization
Quality management systems – requirements IS/ISO 9001:2015.

This Apex Manual describes the quality management system of **JAL- R & E Division** which:

- a) demonstrates the ability of **JAL- R & E Division** to consistently provide products and services that meets customer requirements and applicable statutory and regulatory requirements, and
- b) aims to enhance customer satisfaction through the effective application of the system, including processes for improvement of the system and the assurance of the conformity to customer and applicable statutory and regulatory requirements.

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2 NORMATIVE REFERENCES

The following International Standards have reference to the quality management system formulated in this Apex Manual:

- **ISO 9000: 2015** Quality Management systems – Fundamentals & vocabulary.
- **ISO 9001: 2015** Quality management systems – Requirements.
- **ISO 19011:2011** Guidelines for auditing management systems
ISO/IEC Directives, Part 1 Consolidated ISO Supplement —Procedures specific to ISO.
- **IS 2673:2002**- Dimension for wrought aluminium & aluminium alloy extruded round tube
- **IS 6477:1983** - Dimension for wrought aluminium & aluminium alloy extruded hollow section
- **IS 733:1983** - Wrought Aluminium and Aluminium Alloy Bars, Rods and Sections.
- **IS 5082:1998** - Wrought Aluminium and Aluminium Alloy Bars, Rods, tubes and Sections.
- **EN 573-:2009** - Aluminium and aluminium alloys — Chemical composition and form of wrought products — Part 2: Chemical symbol based designation system.
- **ASTM B209** – Standard specification for Aluminium & aluminium alloy sheet & plate.
- **IS 737:2008** – Wrought aluminium & aluminium alloy sheet & strip for general engineering purposes.
- **IS 1285** - Wrought Aluminium and Aluminium Alloys - Extruded Round Tube and Hollow Sections for General Engineering Purposes.
- **IS 3965** - Dimension for wrought aluminium & aluminium alloy bar, rods & section.
- **ASME SB 221** - Aluminium & aluminium alloy extruded bars, rods, wire, profile & tubes

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3 TERMS AND DEFINITIONS

For the purposes of this Apex Manual, the terms and definitions given in

IS/ISO 9000: 2015 Quality management systems – Fundamentals & vocabulary

are applicable.

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4.0 CONTEXT OF THE ORGANIZATION

4.1 Understanding the organization and its context

JAL- R & E Division has identified external and internal issues that are relevant to the purpose and the strategic direction and which affects the ability to achieve the intended results of the quality management system.

EXTERNAL ISSUES ARE

- a) Competitive environment – overall low cost of entry into the market.
- b) Overall competition within the recruitment sector
- c) Relationships with external interested parties
- d) External inspections/audits
- e) Availability of raw material.
- f) Change in government policy.
- g) Technology advance.
- h) High cost leaving in tier 1 city (Bangalore).

INTERNAL ISSUES ARE

- i) Availability & quality of candidates to fulfill our *vacancies*.
- j) Staff training level.
- k) Root cause analysis abilities.
- l) Culture within organization.
- m) Decision making processes.
- n) Relationship with interested parties.
- o) Understanding & experience in implementation of ISO 9001.
- p) Co-operation of workforce.
- q) Stability of workforce.

The consent / clearances obtained from Legal and Regulatory bodies are as detailed in Annexure A. JAL-R&E Division has monitored and review information about these external and internal issues.

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4.2 Understanding the needs and expectations of interested parties

Due to their effect or potential effect on the ability of **JAL- R & E Division** to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, **JAL- R & E Division** has determined :-

- a) the interested parties that are relevant to the organization
- b) the requirements of these interested parties that are relevant to the quality management system

JAL- R & E Division has monitor and review information about these interested parties and their relevant requirements.

The interested parties are:

SI No	Interested parties	Needs & Expectation
1	Customer/ dealers	Quality, price, & delivery of products and services
2	Employees.	Profitability/return on investment/growth in market value of organization
3	Owners/shareholders.	Profitability/return on investment/growth in market value of organization
4	Society.	Social & ethical behavior, Environment behavior & protection.
5	External providers.	Increase scope and volume of purchases/long-term contractual arrangements/information on future requirements.
6	Government authorities.	Environmental protection/Ethical behavior/growth in business and taxes to build infrastructure to support community services, activities and institutions.
7	Bank	Good financial performance and cash flow
8	Management	Increased growth, sales & profitability/efficiency & effectiveness of operations

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4.3 Determining the scope of the quality management system

JAL- R & E Division has determined the boundaries and applicability of the quality management system to establish the scope.

While determining the scope, the following factors have been considered.

- a) The external and internal issues referred in 4.1
- b) The requirements of relevant interested parties as in 4.2
- c) The products and services provided by **JAL- R & E Division**.

All requirements of the standard ISO 9001:2015 have been considered where applicable.

The scope of QMS of JAL-R&E Division as available and maintained as documented information. Therefore scope of certification for **JAL- R & E Division** is

“Manufacture and supply of Aluminium Sheets, Rolled Foils & Extrusions”.

By stating the above mentioned scope, justification is also being provided to determine any requirement of ISO 9001:2015 Standard that **JAL R&E division** is not applicable to the scope of quality management system.

- i. Design & Development - We are not doing product design. We manufacture the product as per customer design/product) - Clause 8.3.1 to 8.3.6
- ii. Validation of Processes - (Since we are able to verify the output of our product by monitoring / measurement) - Clause 8.5.1 (f)

4.4 Quality management system and its processes

4.4.1 JAL- R & E Division has established, implemented, maintained and continually improved its quality management system. The processes needed, and their interactions are maintained in line with the requirements of ISO 9001: 2015.

JAL-R&E Division has determined of all processes needed for the quality management system and their application throughout the JAL-R&E Division.

- a) Determined the inputs required and the outputs expected from these processes;
- b) Determined the sequence and interaction of these processes;
- c) Determined and apply the criteria and methods (including monitoring, measurements and related performance indicators) needed to ensure the effective operation and control of these processes;
- d) Determine the resources needed for these processes and ensure their availability;
- e) Assign the responsibilities and authorities for these processes;
- f) Address the risks and opportunities as determined in accordance with the requirements of [6.1](#);

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g) Evaluate these processes and implement any changes needed to ensure that these processes achieve their intended results.

h) Improve the processes and the quality management system.

SIPOC have been detailed in Annexure B.

The interactions of the processes of the quality management system have been detailed in Annexure C.

The above have been addressed in each of the following processes identified:

The Process Flow Chart for Rolling and Extrusion are maintained as per Annexure F.

- | | | |
|--|---|------------------------|
| 1) Procedure for Control of Documented Information | - | JAL/R&E/DOC/PR/01 |
| 2) Procedure for Retaining of Documented Information | - | JAL/R&E/RDI/PR/02 |
| 3) Procedure for Internal Audit | - | JAL/R&E/IA/PR/03 |
| 4) Procedure for Control of Non-conforming Outputs | - | JAL/R&E/NCO/PR/04 |
| 5) Procedure for Nonconformity and Corrective Action | - | JAL/R&E/NCA/PR/05 |
| 6) Procedure for Cast House | - | JAL/R&E/CH/PR/06 |
| 7) Procedure for Rolling | - | JAL/R&E/ROL/PR/07 |
| 8) Procedure for Extrusion Foundry | - | JAL/R&E/EFOU/PR/08 |
| 9) Procedure for Extrusion Production | - | JAL/R&E/EPRN/PR/09 |
| 10) Procedure for Rolling Quality Assurance | - | JAL/R&E/QA/PR/10 |
| 11) Procedure for Extrusion Quality Assurance | - | JAL/R&E/EQA/PR/11 |
| 12) Procedure for Extrusion Tool Shop | - | JAL/R&E/TS/PR/12 |
| 13) Procedure for Rolling PPC | - | JAL/R&E /PPC/PR/13 |
| 14) Procedure for Maintenance | - | JAL/ R&E /MAT/PR/14 |
| 15) Procedure for Purchase (Indigenous) | - | JAL/R&E/PUR(IND)/PR/15 |
| 16) Procedure for Purchase (Imports) | - | JAL/R&E/PUR(IMP)/PR/16 |
| 17) Procedure for Stores | - | JAL/R&E/STO/PR/17 |
| 18) Procedure for Packing and Shipping | - | JAL/R&E/SHP/PR/18 |
| 19) Procedure for Marketing-Domestic | - | JAL/R&E/MAR(D)/PR/19 |
| 20) Procedure for Marketing-Exports | - | JAL/R&E/MAR(E)/PR/20 |

4.4.2 To the extent necessary, **JAL- R & E Division** maintains

a) the documented information for each of the above processes to support the process.

b) retains documented information to have confidence that the processes are being carried out as planned.

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5. LEADERSHIP

5.1 Leadership and commitment

5.1.1 General

Top management of **JAL- R & E Division** has demonstrated leadership and commitment with respect to the quality management system by following :

- a) taking accountability for the effectiveness of the quality management system;
- b) ensuring that the quality policy and quality objectives are established for the quality management system and are compatible with the context and strategic direction of the organization;
- c) ensuring the integration of the quality management system requirements into organization's business processes;
- d) promoting the use of the process approach and risk-based thinking;
- e) ensuring that the resources needed for the quality management system are available;
- f) communicating the importance of effective quality management and of conforming to the quality management system requirements;
- g) ensuring that the quality management system achieves its intended results;
- h) engaging, directing and supporting persons to contribute to the effectiveness of the quality management system;
- i) promoting improvement;
- j) supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

5.1.2 Customer focus

Top management of **JAL- R & E Division** has demonstrated leadership and commitment with respect to customer focus by ensuring that:

- a) customer and applicable statutory and regulatory requirements are determined, understood and consistently met;
- b) the risks and opportunities that can affect conformity of products and services and the ability to enhance customer satisfaction are determined and addressed;
- c) the focus on enhancing customer satisfaction is maintained.

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5.2 Policy

5.2.1 Developing the quality policy

Top management of **JAL- R & E Division** has established, implemented and maintained a quality policy that:

- a) is appropriate to the purpose and context of the organization and supports its strategic direction;
- b) provides a framework for setting quality objectives;
- c) includes a commitment to satisfy applicable requirements;
- d) includes a commitment to continual improvement of the quality management system.

VISION

To become number one supplier of quality Aluminium sheets, rolled foils & extrusions in the years to come, not only in the domestic market, but also in the Global market.

MISSION

It is our mission to provide customers of both in domestic market as well as global market with what they need at a price, which to them represents value, and delivered in a manner that exceeds their expectations.

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The quality policy of **JAL- R & E Division** is given below:

QUALITY POLICY

THROUGH CONTINUAL IMPROVEMENT OF THE QUALITY MANAGEMENT SYSTEM, JINDAL ALUMINIUM LIMITED, R & E DIVISION RENEWS ITS COMMITMENT TO COMPLY WITH THE REQUIREMENTS OF IS/ISO 9001: 2015 TO ENSURE RELIABLE QUALITY AT A COMPETITIVE PRICE AND IN TURN, ENHANCE CUSTOMER SATISFACTION THROUGH MANUFACTURE AND SUPPLY OF ALUMINIUM SHEETS, ROLLED FOILS AND EXTRUSIONS

IT IS THE STRATEGIC DIRECTION OF OUR ROLLING AND EXTRUSION DIVISION :

- TO PRODUCE ALUMINIUM SHEETS, ROLLED FOILS, AND EXTRUSIONS WITH WORLD CLASS TECHNOLOGY
- TO IMPROVE THE TECHNIQUE OF DOCUMENTED INFORMATION
- TO PROVIDE A FRAMEWORK FOR SETTING QUALITY OBJECTIVES
- TO COMMIT TO MEET THE REQUIREMENTS OF APPLICABLE CUSTOMER, STATUTORY AND REGULATORY REQUIREMENTS, AND INTERESTED PARTIES
- TO CONSIDER RISKS AND OPPORTUNITIES IN ALL PROCESSES FOR IMPROVEMENT
- TO CONTINUALLY IMPROVE THE QUALITY MANAGEMENT SYSTEM
- TO CREATE MOST CONGENIAL AND HEALTHY WORKING ENVIRONMENT FOR ATTAINMENT OF QUALITY OBJECTIVES
- TO DEVELOP HIGHLY MOTIVATED AND SKILLED HUMAN RESOURCES IMBUED WITH STRONG SENSE OF VALUES AND COMMITMENT TO QUALITY
- TO IMPROVE THE QUALITY OF LIFE OF THE COMMUNITIES LIVING AROUND US IN PARTICULAR AND SOCIETY IN GENERAL BY PROVIDING BASIC NEEDS LIKE HEALTH, WATER AND EDUCATION

DATE: 1st February 2016

**K.R. RAGHUNATH
VICE CHAIRMAN**

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5.2.2 Communicating the quality policy

JAL- R & E Division has ensured that the quality policy is:

- a) available and maintained as documented information;
- b) is communicated, understood, and applied within the organization;
- c) is available to relevant interested parties, as appropriate.

5.3 Organizational roles, responsibilities and authorities

The top management of **JAL- R & E Division** has ensured that the responsibilities and authorities for relevant roles are assigned, communicated and understood within the organization.

Top management of **JAL- R & E Division** has assigned the responsibility and authority for:

- a) ensuring that the quality management system conforms to the requirements of **IS/ISO 9001:2015**;
- b) ensuring that the processes are delivering their intended outputs;
- c) reporting on the performance of the quality management system and on opportunities for improvement to top management;
- d) ensuring the promotion of customer focus throughout the organization;
- e) ensuring that the integrity of the quality management system is maintained when changes to the quality management system are planned and implemented.

The organizational chart of **JAL- R & E Division** is detailed in Annexure D.

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Organizational roles, responsibilities and authorities are as mention below.

01 CHAIRMAN & MANAGING DIRECTOR AND JT. MANAGING DIRECTOR

Chairman & Managing Director and Jt. Managing Director are responsible for the overall administration and operations of the organization. They are responsible to ensure that the Quality Policy and Quality Management System are implemented and maintained by the organization.

02 VICE CHAIRMAN

Responsible for monitoring and taking timely action on the performance of technical, production and also government liaison at higher level. Authorized to implement and maintain the QMS. Authority for revision and establishing the policy and objectives of the company. Appointment of IS/ISO Coordinators. Authorized to implement and maintain the quality management system.

03 EXECUTIVE DIRECTOR

Executive Director is overall responsible for:

- a) Monitoring and action taking on all personnel and all matters in all respects.
- b) Procurement of raw material (aluminium metal) assisted by Vice President (Commercial) of Extrusion division, Tumkur Road, Bangalore.
- c) Marketing of Rolling & Extrusion product.

04 VICE PRESIDENT

Reporting to the CMD/JMD/VC/ED and be responsible for smooth running of the entire Division. The Vice President has nominated one executive to look after the activities of QMS as a coordinator.

05 OFFICER ON SPECIAL DUTY (OSD)

Reporting to Vice President, he will be responsible for all activities shown in the Organization Chart – Annexure 'D'.

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06 GENERAL MANAGER (OPERATION)

Reporting to OSD and be responsible for efficient working of Rolling Quality department by improving the production and quality of products such as litho sheets, finished stock, lamp cap stock, PP caps and coils. With this, the marketability of these products will improve. He will also be responsible to reduce the manufacturing cost of these items and also develop new products, such as litho sheets, fin stock, 5000 series alloy sheets, 3000 series alloy circles, SCR stock (semi rigid container)

07 DY GENERAL MANAGER (C)

Reporting to OSD and be responsible for efficient working of Extrusion Foundry, Extrusion Production, Extrusion QA, Extrusion Tool Shop and Extrusion packing and Dispatch., He is also responsible for smooth running of Purchase and Stores departments.

08 AGM (QUALITY ASSURANCE – EXTRUSION)

He will report to DGM (C) and be responsible for quality of extrusion production, as per quality plan. He will also plan departmental activities related to RM inspection – in process as well as final inspection. Also, responsible for running the chemical, mechanical and Spectro labs. Attend to customer complaints by carrying out detailed analysis on non-conformance, root cause, corrective action. Also resolve issues related to manufacturing Corrective Actions.

09 SR MANAGER (QUALITY ASSURANCE – ROLLING)

The Sr. Manager will report to GM(O) and is responsible for quality of product in Rolling division. The quality plan will be prepared by him, plan departmental activities related to RM inspection, in-process inspection and final inspection.

Attend to customer complaints by carrying out detailed analysis on non-conformance, root cause, corrective action. Also resolve issues related to manufacturing Corrective Actions.

Also responsible for running of the chemical, mechanical and Spectro Lab as well as Slug & Circle production department.

10 GENERAL MANAGER (MAINTENANCE)

He will be responsible for maintenance of equipments installed in Rolling & Extrusion, as well as other utilities, such as LPG bullet, Nitrogen plant, LNG, DG sets, Compressors, Cranes, Forklift trucks, Switch yard, ETP, STP, etc. He will also be responsible for all developmental activities of Dabaspet factory, assisted by AGM (Devp).

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11 General Manager / Dy General Managers / Asst General Managers of Marketing (Domestic & Export)

They will all report to the Executive Director and be responsible for smooth running of both Domestic & Export Marketing departments. Their individual responsibilities are addressed in the respective departmental procedures.

12 FIRE & SAFETY OFFICER

He will reporting to OSD and is responsible for all aspects of fire & safety of the entire plant activities.

The job descriptions of **Fire & safety officer:**

- Periodical safety inspection to identify unsafe acts/unsafe condition.
- Carryout periodical inspection of fire extinguisher, fire hydrants system, smoke detector etc & carryout necessary maintenance & servicing.
- Conduct training, mock drill to create awareness among employees & check emergency preparedness.
- Appraise the management for necessary modification/updation of system/ process to avoid & eliminate risk & hazard.
- Analyze & investigate selected accidents & suggest necessary CAPA.
- Compliance to legal requirement
- Ensure usage of necessary PPE

The job descriptions of other positions are addressed in the relevant departmental procedures.

13 QMS COORDINATOR

QMS coordinator will report to the Vice President and will be overall responsible for all IS/ISO 9001: 2015 related activities and will be assisted by departmental ISO coordinators.

DELEGATION OF AUTHORITY

The VC takes all policy decisions concerning the Quality System.

In case of departmental operations, responsibilities and authorities are detailed in the respective procedures. In the absence of the concerned person, all matters relating to policy are referred to the higher level, while all routine operating matters may be delegated to the next lower level.

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FUNCTIONAL RESPONSIBILITY MATRIX

ISO 9001: 2015 CLAUSE	SECTION	RESPONSIBILITY
4	Context of the organization	
4.1	Understanding of organization & context	All HOD's
4.2	Understanding the need & expectation of interested parties	All HOD's
4.3	Determine scope of QMS	Vice Chairman/ /VP/GM QMS Coordinators
4.4	Quality Management System and its processes	QMS Coordinators
5	Leadership	
5.1	Leadership and commitment	Vice Chairman/ VP/GM
5.2	Policy	Vice Chairman/ /VP/GM QMS Coordinators
5.3	Organizational roles, responsibilities and authorities	Vice Chairman/ /VP/GM QMS Coordinators
6	Planning	
6.1	Actions to address risks and opportunities	Vice Chairman/ /VP/GM QMS Coordinators
6.2	Quality objectives and planning to achieve them	Vice Chairman/ /VP/GM QMS Coordinators
6.3	Planning of change	All HOD's
7	Support	
7.1	Resources	Vice chairman/ VP/GM
7.2	Competence	All HOD's
7.3	Awareness	QMS Coordinators
7.4	Communication	All HOD's
7.5	Documentation information	All HOD's/QMS Coordinators

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8	Operation	
8.1	Operation planning & control	All HOD's
8.2	Requirement of product & service	HODs of Mktg (D) & Mktg (E)
8.3	Design & development	NA
8.4	Control of externally provided processes, products and services	Purchase Manager
8.5	Production and service provision	HOD's of Production, QA, Purchase and Stores, Shipping and Dispatch
8.6	Release of product & service	QA & Marketing
8.7	Control of non conformity output	QA Manager
9	Performance evaluation	
9.1	Monitoring, measurement, analysis and evaluation	Vice chairman/ VP/GM
9.2	Internal audit	QMS Coordinators
9.3	Management review	QMS Coordinators
10	Improvement	
10.1	General	QA & Marketing
10.2	Non conformity & corrective action	All HOD's & QA Manager
10.3	Continual Improvement	All HOD'S & Employees

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6. PLANNING

6.1 Actions to address risks and opportunities

6.1.1 While planning for the quality management system, **JAL- R & E Division** has considered the issues referred in section 4.1 and the requirements referred to in section 4.2 and has determined the risks and opportunities that need to be addressed to:

- a) give assurance that the quality management system can achieve its intended results;
- b) enhance desirable effects;
- c) prevent, or reduce undesired effects;
- d) Achieve improvement.

6.1.2 **JAL- R & E Division** has planned;

- a) actions to address these risks and opportunities;
- b) how to:
 - 1) integrate and implement the actions into its quality management system processes as per section 4.4
 - 2) evaluate the effectiveness of these actions.

Actions taken to address risks and opportunities are proportionate to the potential impact on the conformity of products and services..

Risk & opportunities have been detailed in Annexure G.

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6.2 Quality objectives and planning to achieve them

6.2.1 JAL- R & E Division has established quality objectives at relevant functions, levels and processes needed for the quality management system.

The quality objectives are:

- a) consistent with the quality policy;
- b) are measurable;
- c) takes into account applicable requirements;
- d) are relevant to conformity of products and services and for the enhancement of customer satisfaction;
- e) are regularly monitored;
- f) are communicated to all concerned;
- g) and are updated when appropriate.

JAL-R& E Division maintaining documented information on the quality objectives.

6.2.2 When planning how to achieve the quality objectives, **JAL- R & E Division** has taken into account:

- a) what will be done;
- b) what resources will be required;
- c) who will be responsible;
- d) when it will be completed.

e) how the results will be evaluated.

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Sl. No	What will be done	Resources required	Responsibility	Date of completion	Evaluation
1	To achieve Quality Objectives	Man, machine, method, material etc	All HOD	Ongoing	Once in 6 months

JAL- R & E Division's quality objectives are detailed below:

- to minimize customer complaints pertaining to product and delivery
- to detect and prevent any non-conformance during production and service activities and implement the means to prevent its recurrence.
- to minimize non-conformances in documented information
- to ensure compliance with statutory and regulatory bodies
- continual improvement through quality objectives in all processes
- to enhance the quality of work of employees through training and development

The quality objectives are measurable & established for each department in order to achieve the quality policy. They are identified in the respective documented information.

The quality objectives are reviewed during the management review meetings.

The quality objectives of all the departments are monitored for achievement of the objectives and details are maintained in the format No. JAL/R&E/QMSC/F/01 and reviewed for improvement.

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6.3 Planning of changes

When **JAL- R & E Division** determines the need for changes to the quality management system, the changes are carried out in a planned manner as detailed mention below.

- Change to a process (inputs, activities, outputs, controls, etc.)
- Implement a new process.
- Change existing documented information.
- Change roles, responsibility & authority for the processes.
- Improve employee competence.
- Communication with customers
- Communication with the supply chain
- Additional controls for processes

JAL- R & E Division will consider the following:

- a) the purpose of changes and their potential consequences;
- b) the integrity of the quality management system;
- c) the availability of resources
- d) the allocation or reallocation of responsibilities and authorities.

REFERENCE:

Procedure for control of documented information - JAL/R&E/DOC/PR/01

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7. SUPPORT

7.1 Resources

JAL- R & E Division has determined and provided the resources needed for the establishment, implementation, maintenance and continual improvement of the quality management system.

JAL- R & E Division has considered:

- a) the capabilities of, and constraints on, existing internal resources;
- b) what needs to be obtained from external providers

7.1.2 People

JAL- R & E Division has determined and provided persons necessary for the effective implementation of the quality management system and for the operation and control of its processes.

The details of persons provided and their authorities and responsibilities are given as per Annexure D of this manual and also in the departmental documented information processes.

7.1.3 Infrastructure

JAL- R & E Division has determined, provided and maintained the infrastructure necessary for the operation of its processes and to achieve conformity of products and services.

Infrastructure includes:

- a) buildings and associated utilities;
- b) equipment, including hardware and software;
- c) transportation resources;
- d) information and communication technology.

The applicable resources pertaining to the respective department processes are detailed in the documented information of the department.

The Information Technology (IT) department is responsible to provide hardware and software support for all the departments. The details are addressed in document Procedure for Control of Documented Information JAL/R&E/DOC/PR/01.

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7.1.4 Environment for the operation of processes

JAL- R & E Division has determined, provided and maintained the environment necessary for the operation of the processes and to achieve conformity of products and services.

The environment consists of a combination of human and physical factors such as:

- a) social (non-discriminatory, calm, non-confrontational);
- b) psychological (stress-reducing, burnout prevention, emotionally protective);
- c) Physical (temperature, heat, humidity, light, airflow, hygiene, noise).

The applicable work conditions pertaining to the respective department processes are detailed in the documented information/procedure of the department.

7.1.5 Monitoring and measuring resources

7.1.5.1 General

JAL- R & E Division has determined and provided the resources needed to ensure valid and reliable results when monitoring and measuring is used to verify the conformity of products and services to requirements.

JAL- R & E Division has ensured that the resources provided:

- a) are suitable for the specific type of monitoring and measurement activities being undertaken;
- b) are maintained to ensure their continuing fitness for their purpose.

Applicable documented information is retained as evidence of fitness for purpose of the monitoring and measurement resources.

The monitoring and measuring resources pertaining to the respective department processes are detailed in the documented information of the department.

7.1.5.2 Measurement traceability

JAL- R & E Division ensures that when measurement traceability is a requirement, or is considered by **JAL- R & E Division** to be an essential part of providing confidence in the validity of measurement results, measuring equipment are:

calibrated or verified, or both, at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards; when no such standards exist, the basis used for calibration or verification is retained as

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- a) documented information;
- b) identified in order to determine their status;
- c) safeguarded from adjustments, damage or deterioration that would invalidate the calibration status and subsequent measurement results.

JAL- R & E Division takes action that if the validity of previous measurement results has been adversely affected when measuring equipment is found to be unfit for its intended purpose, and will take appropriate action as necessary.

REFERENCE

Procedure for Rolling Quality Assurance	-	JAL/R&E/QA/PR/10
Procedure for Extrusion Quality Assurance	-	JAL/R&E/EQA/PR/11
Procedure for Maintenance	-	JAL/ R&E /MAT/PR/14

7.1.6 Organizational knowledge

JAL- R & E Division has determined the knowledge necessary for the operation of its processes and to achieve conformity of products and services.

This knowledge is maintained and will be made available to the extent necessary.

When addressing changing needs and trends, **JAL- R & E Division** considers its current knowledge and determines how to acquire or access any necessary additional knowledge and required updates.

Organizational knowledge consists of knowledge gained from past experience, information used and shared to achieve quality objectives.

Internal sources of knowledge consist of intellectual property, lessons learned from failures and successful projects, capturing and sharing undocumented knowledge and experience, results of improvements in processes, products and services.

External sources of knowledge include standards, academia, conferences, gathering knowledge from customers or external providers.

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7.2 Competence

JAL- R & E Division has:

- a) determined the necessary competence of persons doing work under its control that affects the performance and effectiveness of the quality management system;
- b) ensured that these persons are competent on the basis of appropriate education, training, or experience;
- c) where applicable, has taken actions to acquire the necessary competence, and evaluate the effectiveness of the actions taken;
- d) Retained appropriate documented information as evidence of competence.

Actions taken consist of provision of training of employees, mentoring, reassignment of currently employed persons, or the hiring or contracting of competent persons.

Training activities are detailed in respective process documented information.

7.3 Awareness

JAL- R & E Division has ensured that persons doing work under its control are aware of:

- a) the quality policy;
- b) relevant quality objectives;
- c) their contribution to the effectiveness of the quality management system, including the benefits of improved performance;
- d) the implications of not conforming with the quality management system requirements.

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7.4 Communication

JAL- R & E Division has determined the internal and external communications relevant to the quality management system, including:

- a) when to communicate;
- b) with whom to communicate;
- c) how to communicate;
- d) who communicates.

The effectiveness of the quality management system is discussed during the Management review meeting and the department heads discuss the points discussed in the Management Review Meeting with regard to objectives, improvements and status of corrective and preventive action with their subordinates.

Apart from this, internal communications are made through following means:

1. Circulars, Notice Boards, etc.
2. Internal Notes / E-Mails, Journals / Magazines.
3. Meetings of the following Committees:
 - a. Works Committee
 - b. Production, QA (along with Marketing) Committee
 - c. Maintenance Committee
 - d. Purchase Committee .

The internal communication details are as tabulated below:

SI. No	What to Communicate	When	To Whom	How	Who should communicate
1	Quality Policy and Quality Objectives	When changes occur	To all levels of employees	Display Boards	VC
2	Responsibility and Authority	When changes occur	To all levels of employees	Through Letter	Concerned HODs
3	QMS Apex Manual, Processes / Procedures, Forms, Checklists, Work Instructions	After approval	All Concerned	Soft copies / Hard copies	QMS coordinators

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Sl. No	What to Communicate	When	To Whom	How	Who should communicate
4	Customer Requirements/Orders	On receipt of orders	Concerned HOD	Conveying Customer Order Details	HOD-Marketing
5	Customer Complaints	On receipt of complaint	Quality Assurance	Customer Complaints Register	HOD-Marketing/ Quality Assurance
6	Control on waste generation	Monthly	All Concerned	Through Objectives	Concerned HODs
7	Corrective Actions (Internal)	On receipt of corrective action	Concerned HOD	NCR Register & Corrective Action Report	Concerned HODs
8	Internal Audit	As per plan	HOD's	Through Letter / Internal Audit Schedule / Email	Top Management
9	Management Review Meeting	As per plan	To all HODs	Through Letter / email	Top Management

The external communication details are as tabulated below:

Sl. No	What to Communicate	When	To Whom	How	Who should communicate
1	Customer	As and when required	Customers	Through mail	Marketing Dept
2	Statutory and regulatory bodies	As and when required	Respective Authorities	Through letters	Top management

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Sl. No	What to Communicate	When	To Whom	How	Who should communicate
3	Owner/Shareholders	Before Board meeting	Shareholders	Through letters/e-mail	Corporate body
4	Certifying bodies	Before audit	Certifying bodies	Through letters/e-mail	Top management
5	External provider communication	As and when required	External provider	Through mail & letter	Purchase dept
6	communication	As and when required	Employees	Through e-mail & face to face.	All HOD's

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7.5 Documented Information

7.5.1 General

JAL- R & E Division's quality management system includes:

- a) Documented information required by **IS/ISO 9001:2015**
- b) Documented information determined by **JAL- R & E Division** as being necessary for the effectiveness of the quality management system.

7.5.2 Creating and updating

When creating and updating documented information, **JAL- R & E Division** ensures appropriate:

- a) Identification and description – title, date, author, and reference number;
- b) format – language, software version, graphics – and media – paper or electronic;
- c) review and approval for suitability and adequacy.

7.5.3 Control of documented information

7.5.3.1 Documented information required by the quality management system and by **IS/ISO**

9001:2015 standard are controlled to ensure:

- a) it is available and suitable for use; where and when it is needed;
- b) it is adequately protected from loss of confidentiality, improper use, or loss of integrity.

7.5.3.2 For the control of documented information, **JAL- R & E Division** addresses the following activities, as applicable:

- a) distribution, access, retrieval and use;
- b) storage and preservation, including preservation of legibility;
- c) control of changes (like version control);
- d) retention and disposition.

Documented information of external origin determined by **JAL- R & E Division** to be necessary for the planning and operation of the quality management system are identified as appropriate, and are controlled. Documented information retained as evidence of conformity is protected from unintended alterations.

Access implies decision regarding the permission to view the documented information only, and permission and authority to view and change the documented information.

REFERENCES:

- 1) Procedure for control of documented information - JAL/R&E/DOC/PR/01
- 2) Procedure for retaining of documented information - JAL/R&E/QR/PR/02

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8 OPERATION

8.1 Operational planning and control

JAL- R & E Division has planned, implemented and controlled the processes as per section 4.4 needed to meet the requirements for the provision of products and services, and to implement the actions determined in section 6 by:

- a) determining the requirements for products and services;
- b) establishing criteria for:
 - 1. the processes
 - 2. the acceptance of products and services;
- c) determining the resources needed to achieve conformity to products and service requirements;
- d) implementing control of processes in accordance with the criteria;
- e) determining and keeping documented information to the extent necessary;
 - 1. to have confidence that processes have been carried out as planned;
 - 2. to demonstrate the conformity of products and services to their requirements.

The output of this planning is kept suitable for the operations of **JAL- R & E Division**.

JAL- R & E Division controls planned changes and reviews the consequences of unintended changes, taking action to mitigate any adverse effects, as necessary.

JAL- R & E Division has ensured that outsourced processes are controlled as per section 8.4.

The Process flow Diagram of the activities of the organization is as per Annexure – E.

REFERENCE

Procedure for Rolling PPC - JAL/R&E /PPC/PR/13

PPC of Extrusion is covered in Extrusion Foundry and Extrusion Production procedures JAL/R&E /EFOU/PR/08 and JAL/R&E /EPRN//PR/09.

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8.2 Requirements for products and services

8.2.1 Customer communication

Communication with customer includes:

- a) providing information regarding products and services;
- b) handling enquiries, contracts or orders, including changes;
- c) obtaining customer feedback related to products and services, including customer complaints;
- d) handling or controlling customer property;
- e) establishing specific requirements for contingency actions, when relevant.

8.2.2 Determining the requirements related to products and services

When determining the requirements for the products and services to be offered to customers, **JAL- R & E Division** ensures that:

- a) the requirements for the products and services are defined, including:
 - 1) any applicable statutory and regulatory requirements;
 - 2) those considered necessary by **JAL- R & E Division**;
- b) whether **JAL- R & E Division** can meet the claims for the products and services it offers.

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8.2.3 Review of requirements related to products and services

8.2.3.1 JAL- R & E Division ensures that it has the ability to meet the requirements for products and services to be offered to customers. **JAL- R & E Division** conducts a review before committing to supply products and services to a customer, to include:

- a) requirements specified by the customer, including the requirements for delivery and post-delivery activities;
- b) requirements not stated by customer, but necessary for the specified or intended use, when known;
- c) requirements specified by **JAL- R & E Division**;
- d) statutory and regulatory requirements applicable to the products and services;
- e) contract or order requirements differing from those previously expressed.

JAL- R & E Division ensures that contract or order requirements differing from those previously defined are resolved.

The customer requirements are confirmed by **JAL- R & E Division** before acceptance, when the customer does not provide a documented statement of their requirements.

8.2.3.2 JAL- R & E Division retains documented information, as applicable:

- a) on the results of the review;
- b) on any new requirements for the products and services.

8.2.4 Changes to requirements for products and services

JAL- R & E Division ensures that relevant documented information regarding products and services are amended and that relevant persons are made aware of the changed requirements, when the requirements for products and services are changed.

REFERENCE:

Procedure for Marketing-Domestic) Rolling	-	JAL/R&E/MAR(D)/PR/19
Procedure for Marketing-Exports)	-	JAL/R&E/MAR(D)/PR/20
Procedure for Marketing-Domestic) Extrusion	-	JAL/MKT(D)/PR/01
Procedure for Marketing-Exports)	-	JAL/MKT(E)/PR/01

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8.3 Design and development of products and services

Design and development of products and services is not applicable to **JAL- R & E Division** since the products manufactured are as per customer's specification and requirements and as per Jindal Aluminium Limited product catalogue maintained.

Hence clauses 8.3.1, 8.3.2, 8.3.3, 8.3.4, 8.3.5, 8.3.6 of **IS/ISO 9001:2015** are not applicable.

8.4 Control of externally provided processes, products and services

8.4.1 General

JAL- R & E Division ensures that externally provided processes, products and services conform to requirements.

JAL- R & E Division has determined the controls to be applied to externally provided processes, products and services when:

- a) products and services from external providers are intended for incorporation into **JAL- R & E Division's** own product and services;
- b) products and services are provided directly to the customer(s) by external providers on behalf of **JAL- R & E Division**;
- c) a process, or part of a process, is provided by an external provider as a result of a decision by **JAL- R & E Division**.

JAL- R & E Division determines and applies criteria for the evaluation, selection, monitoring of performance, and re-evaluation of external providers, based on their ability to provide processes or products and services in accordance with requirements. **JAL- R & E Division** retains documented information of these activities and any necessary actions arising from evaluations.

8.4.2 Type and extent of control

JAL- R & E Division ensures that externally provided processes, products and services do not adversely affect its ability to consistently deliver conforming products and services to its customers.

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JAL- R & E Division has:

- a) ensured that externally provided processes remain within the control of the quality management system;
- b) defined both the controls that it intends to apply to an external provider and those it intends to apply to the resulting output;
- c) taken into consideration:
 - 1) the potential impact of the externally provided processes, products and services on its ability to consistently meet customer and applicable statutory and regulatory requirements;
 - 2) the effectiveness of the controls applied by external provider;
- d) determined the verification, or other activities, necessary to ensure that the externally provided processes, products and services meet requirements.

8.4.3 Information for external providers

JAL- R & E Division has ensured the adequacy of requirements prior to their communication to the external provider.

JAL- R & E Division has communicated to the external provider its requirements for:

- a) the processes, products and services to be provided;
- b) the approval of:
 - 1) products and services;
 - 2) methods, processes and equipment;
 - 3) the release of products and services
- c) competence, including any required qualification of persons;
- d) the external providers' interaction with **JAL- R & E Division**
- e) control and monitoring of the external providers' performance to be applied by **JAL- R & E Division**
- f) verification or validation activities that **JAL- R & E Division**, or its customer, intends to perform at the external providers' premises.

REFERENCES

- Procedure for Purchase (Indigenous) - JAL/R&E/PUR(IND)/PR/15
Procedure for Purchase (Imports) - JAL/R&E/PUR(IMP)/PR/16

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8.5 Production and service provision

8.5.1 Control of production and service provision

JAL- R & E Division has implemented production and service provision under controlled conditions.

Controlled conditions include, as applicable:

- a) the availability of documented information that defines:
 - 1) the characteristics of the products to be produced, the services to be provided, or the activities to be performed;
 - 2) the results to be achieved;
- b) the availability and use of suitable monitoring and measuring resources;
- c) the implementation of monitoring and measurement activities at appropriate stages to verify that criteria for control of processes or outputs, and acceptance criteria for products and services have been met;
- d) the use of suitable infrastructure and environment for the operation of processes;
- e) the appointment of competent persons, including any required qualification;
- f) validation of processes for production and service provision **is not applicable to the activities of JAL- R & E Division;**
- g) the implementation of actions to prevent human error;
- h) the implementation of release, delivery and post-delivery activities.

The Process Flow Chart for Rolling and Extrusion are as per Annexure – F.

REFERENCE

Procedure for Cast House	-	JAL/R&E/CPA/PR/06
Procedure for Rolling	-	JAL/R&E/ROL/PR/07
Procedure for Extrusion Foundry	-	JAL/R&E/EFOU/PR/08
Procedure for Extrusion Production	-	JAL/R&E/EPRN/PR/09
Procedure for Extrusion Tool Shop	-	JAL/R&E/TS/PR/12
Procedure for Rolling PPC	-	JAL/R&E /PPC/PR/13
Procedure for Maintenance	-	JAL/ R&E /MAT/PR/14

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8.5.2 Identification and traceability

JAL- R & E Division has used suitable means to identify outputs when it is necessary to ensure the conformity of products and services.

JAL- R & E Division has identified the status of outputs with respect to monitoring and measurement requirements throughout production and service provision.

JAL- R & E Division controls the unique identification of the outputs when traceability is a requirement, and retains the documented information necessary to enable traceability. Identification and traceability of products and services are addressed in procedures pertaining to Stores, Production, Quality Assurance, Packing and Dispatch.

8.5.3 Property belonging to customers or external providers

JAL- R & E Division exercises care with property belonging to customers or external providers while it is under its control or being used.

JAL- R & E Division identifies, verifies, protects and safeguards customers' or external providers' property provided for use or their incorporation into the products and services.

When the property of a customer or external provider is lost, damaged or otherwise found unsuitable for use, **JAL- R & E Division** reports this to the customer or external provider and retains documented information on what has occurred.

Customer's or external provider's property includes material, components, tools and equipment, premises, intellectual property and personal data. **JAL- R & E Division** at present receives the following items from customers:

Item samples and drawings

Properties belonging to customers or external providers are addressed in procedures pertaining to Marketing and Quality assurance.

8.5.4 Preservation

JAL- R & E Division preserves the outputs during production and service provision, to the extent necessary to ensure conformity to requirements.

Preservation includes identification, handling, contamination control, packaging, storage, transmission or transportation, and protection.

Preservation is addressed in procedures related to Stores, Production, and Packing and Shipping.

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8.5.5 Post-delivery activities

JAL- R & E Division meets requirements for post-delivery activities associated with the products and services.

In determining the extent of post-delivery activities that are required, **JAL- R & E Division** considers:

- a) statutory and regulatory requirements;
- b) the potential undesired consequences associated with its products and services;
- c) the nature, use and intended lifetime of its products and services;
- d) customer requirements;
- e) customer feedback.

Post-delivery activities include actions under warranty provisions, contractual obligations such as maintenance services, and supplementary services such as recycling or final disposal.

REFERENCE:

Procedure for Marketing-Domestic) Rolling	-	JAL/R&E/MAR(D)/PR/19
Procedure for Marketing-Exports)	-	JAL/R&E/MAR(D)/PR/20
Procedure for Marketing-Domestic) Extrusion	-	JAL/MKT(D)/PR/01
Procedure for Marketing-Exports)	-	JAL/MKT(E)/PR/01
Procedure for Packing and Shipping	-	JAL/R&E/SHP/PR/18

8.5.6 Control of changes

JAL- R & E Division reviews and controls the changes for production or service provision, to the extent necessary to ensure continuing conformity with requirements.

JAL- R & E Division retains documented information describing the results of the review of changes, the personnel authorizing the change, and any necessary actions arising from the review.

REFERENCE:

Procedure for Cast House	-	JAL/R&E/CPA/PR/06
Procedure for Rolling	-	JAL/R&E/ROL/PR/07
Procedure for Extrusion Foundry	-	JAL/R&E/EFOU/PR/08
Procedure for Extrusion Production	-	JAL/R&E/EPRN/PR/09

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8.6 Release of products and services

JAL- R & E Division implements planned arrangements, at appropriate stages, to verify that product and service requirements have been met.

The release of products and services to the customer is not done until the planned arrangements have been satisfactorily completed, unless otherwise approved by a relevant authority and, as applicable, by the customer.

JAL- R & E Division retains documented information on the release of products and services. The documented information includes:

- a) evidence of conformity with the acceptance criteria;
- b) traceability to the personnel authorizing the release.

REFERENCE

- | | | |
|---|---|-------------------|
| Procedure for Rolling Quality Assurance | - | JAL/R&E/QA/PR/10 |
| Procedure for Extrusion Quality Assurance | - | JAL/R&E/EQA/PR/11 |

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8.7 Control of nonconforming outputs

JAL- R & E Division has ensured that outputs that do not conform to their requirements are identified and controlled to prevent their unintended use or delivery.

JAL- R & E Division takes appropriate action based on the nature of the nonconformity and its effect on the conformity of products and services. This also applies to nonconforming products and services detected after delivery of products, during or after the production of services.

JAL- R & E Division deals with nonconforming products in one or more of the following ways:

- a) correction;
- b) segregation, containment, return or suspension of provision of products and services;
- c) informing the customer;
- d) obtaining authorization for acceptance under concession.

Conformity to the requirements are verified when nonconforming outputs are corrected.

8.7.2 JAL- R & E Division retains documented information that:

- a) describes the nonconformity;
- b) describes the action taken;
- c) describes any concessions obtained;
- d) identifies the authority deciding the action in respect of the nonconformity.

REFERENCE

Procedure for Control of Non-conforming Outputs - JAL/R&E/CNO/PR/04

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9. PERFORMANCE EVALUATION

9.1 Monitoring, measurement, analysis and evaluation

9.1.1 General

JAL- R & E Division has determined:

- a) what needs to be monitored and measured
- b) the methods for monitoring, measurement, analysis and evaluation needed to ensure valid results;
- c) when the monitoring and measurement needs to be performed;
- d) when the results from monitoring and measurement are to be analyzed and evaluated.

JAL- R & E Division evaluates the performance and effectiveness of the quality management system.

JAL- R & E Division retains appropriate documented information as evidence of the results.

9.1.2 Customer satisfaction

JAL- R & E Division monitors customers' perceptions of the degree to which their needs and expectations have been fulfilled. **JAL- R & E Division** determines the methods for obtaining, monitoring and reviewing this information.

Monitoring customer perception includes customer surveys, customer feedback on delivered products and services, meetings with customers, market-share analysis, compliments, warranty claims and dealer reports.

REFERENCE

Procedure for Marketing-Domestic	-	JAL/R&E/MAR(D)/PR/19
Procedure for Marketing-Exports	-	JAL/R&E/MAR(D)/PR/20

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9.1.3 Analysis and evaluation

JAL- R & E Division analyses and evaluates appropriate data and information arising from monitoring and measurement.

The results of analysis are used to evaluate:

- a) conformity of products and services;
- b) the degree of customer satisfaction;
- c) the performance and effectiveness of the quality management system;
- d) if planning has been implemented effectively;
- e) the effectiveness of actions taken to address risks and opportunities;
- f) the performance of external providers;
- g) the need for improvements to the quality management system.

These activities are handled by applicable departments in their procedures.

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9.2 Internal audit

9.2.1 JAL- R & E Division conducts internal audits once in six months to provide information on whether the quality management system:

- a) conforms to:
 - 1) **JAL- R & E Division's** own requirements for its quality management system;
 - 2) the requirements of **IS/ISO 9001:2015**
- b) is effectively implemented and maintained.

9.2.2 JAL- R & E Division:

- a) plans, establishes, implements and maintains an audit programme including frequency, methods, responsibilities, planning requirements and reporting, which takes into account the importance of the processes concerned, changes affecting **JAL- R & E Division**, and the results of previous audits;
- b) defines the audit criteria and scope for each audit;
- c) selects auditors and conducts audits to ensure objectivity and the impartiality of the audit process;
- d) ensures that the results of the audits are reported to relevant management;
- e) takes appropriate correction and corrective action without undue delay;
- f) retains documented information as evidence of the implementation of the audit programme and the audit results.

REFERENCE

Procedure for Internal Audit - JAL/R&E/IA/PR/03
 ISO 19011: 2011 – Guidelines for auditing management systems

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9.3 Management review

9.3.1 General

JAL- R & E Division reviews the quality management system, once in six months, to ensure its continuing suitability, adequacy, effectiveness and alignment with the strategic direction of the organization.

A “Steering Committee“ has been constituted comprising VC/ VP, OSD, HODs of all departments. The QMS coordinator will be the Secretary.

Chairman of the steering committee will be VC. The Members of the Steering Committee meet at least once in six months to evaluate the progress made towards effectiveness of IS/ ISO 9001:2015 requirements and its maintenance.

9.3.2 Management review inputs

JAL- R & E Division plans and carries out management reviews taking into consideration:

- a) the status of actions from previous management reviews;
- b) changes in external and internal issues that are relevant to the quality management system;
- c) information on the performance and effectiveness of the quality management system, including trends in:
 - 1) customer satisfaction and feedback from relevant interested parties;
 - 2) the extent to which quality objectives have been met;
 - 3) process performance and conformity of products and services;
 - 4) nonconformities and corrective actions;
 - 5) monitoring and measurement results;
 - 6) audit results;
 - 7) the performance of external providers;

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- d) the adequacy of resources;
- e) the effectiveness of actions taken to address risks and opportunities;
- f) opportunities for improvement.

9.3.3 Management review outputs

The outputs of the management review include decisions and actions related to:

- a) opportunities for improvement;
- b) any need for changes to the quality management system;
- c) resource needs.

Records and minutes of such meeting are maintained by the Secretary.

The documented information is retained as evidence of the results of management reviews for a period of 3 years.

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10 IMPROVEMENT

10.1 General

JAL- R & E Division has determined and selected opportunities for improvement and implemented necessary actions to meet customer requirements and enhance customer satisfaction.

These include:

- a) improving products and services to meet requirements as well as to address future needs and expectations;
- b) correcting, preventing or reducing undesired effects;
- c) improving the performance and effectiveness of the quality management system.

Improvements done include correction, corrective action, continual improvement, breakthrough change, innovation and re-organization.

10.2 Nonconformity and corrective action

10.2.1 When a nonconformity occurs, including any arising from complaints, **JAL- R & E Division**:

- a) react to the nonconformity and, as applicable:
 - 1) takes action to control and correct it;
 - 2) deals with the consequences;
- b) evaluates the need for action to eliminate the causes of the nonconformity, in order that it does not recur or occur elsewhere, by:
 - 1) reviewing and analyzing the nonconformity;
 - 2) determining the causes of the nonconformity;
 - 3) determining if similar nonconformities exist, or could potentially occur;

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- c) implements any action needed;
- d) reviews the effectiveness of any corrective action taken;
- e) updates risks and opportunities determined during planning, if applicable,
- f) makes changes to the quality management system, as necessary.

Corrective actions taken are ensured to be appropriate to the effects of the nonconformities encountered.

10.2.2 JAL- R & E Division retains documented information as evidence of:

- a) the nature of nonconformities and any subsequent actions taken;
- b) the results of any corrective action.

REFERENCE

Procedure for Nonconformity and corrective action - JAL/R&E/NCA/PR/05

10.3 Continual improvement

JAL- R & E Division continuously improves the suitability, adequacy and effectiveness of the quality management system.

JAL- R & E Division considers the results of analysis and evaluation, and the outputs from management review, to determine if there are needs or opportunities that required to be addressed as part of continual improvement.

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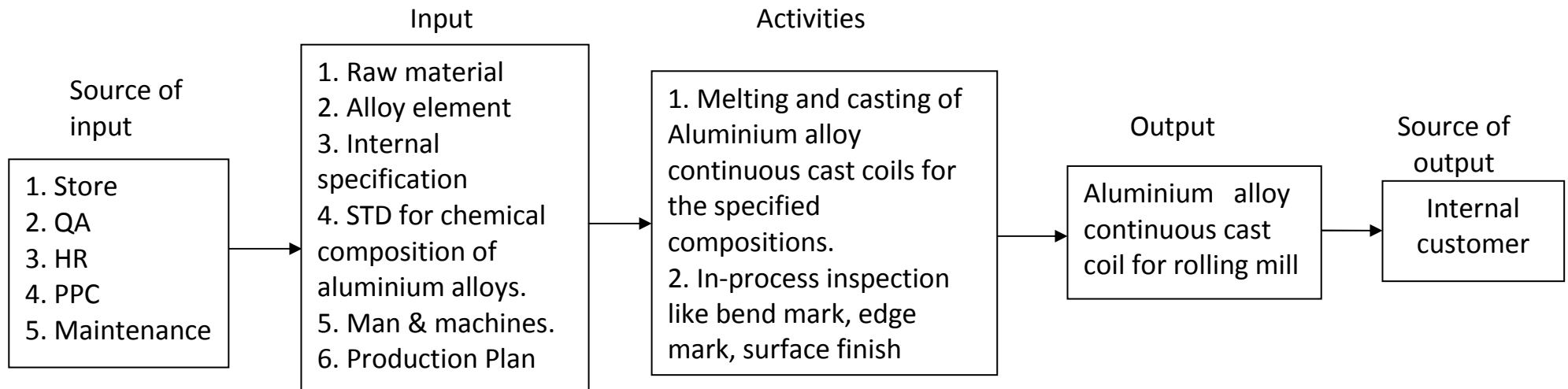
Consent / Clearance obtained from Legal and Regulatory bodies

Sl. No.	Consent / Clearance obtained for	From	Reference Number / Date
1	NOC for LPG	Dy. Commissioner & District Magistrate, Bangalore Rural District	No. MAG/4/MISC.37/2011-12 DATE : 08/06/2012
2	LPG Licence	CCOE, Nagpur	No. S/HO/4A/03/503/512201 Date : 05/04/2012
3	Exemption of NOC for ground water abstract	Regional Director, Central Ground Water Board, Government of India, Bangalore.	No.SWR/VOL/2012/JINDAL AL/177 Date : 29/01/2013
4	Registration of License for running factory	Directorate of Factories and Boilers, Bangalore	No. MYB-20342 Date : 12/04/2013 & 01/01/2014
5	KSPCB consent for trade effluent, domestic effluent and air emissions	Sr. Environmental Officer, KSPCB, Bangalore	1) No. PCB/117/N17/2013-14 H 750 Date : 02/07/2013 2) No. PCB/HPI/117/2014-15/41436 Date : 18/01/2015
6	Energy load for 6000 kVA	Chief Engineer – Electricity, BRAZ, KPTCL, Bangalore	No. CEE/BRAZ/SEO/AEE-2/13/14/2845-50 Date : 03/09/2013
7	General license for establishment of Factory	Panchayat Development Officer, Sompura Gram Panchayat, Nelamangala, Bangalore District	No. 14 Date : 06/06/2012
8	Energy audit	PCRA (Southern Region), Chennai	Report dated 23/01/2014
9	Environmental Impact Assessment Report	BS ENVI-TECH (P) LTD., Hyderabad 500 057	Report of December 2012

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Process Approach

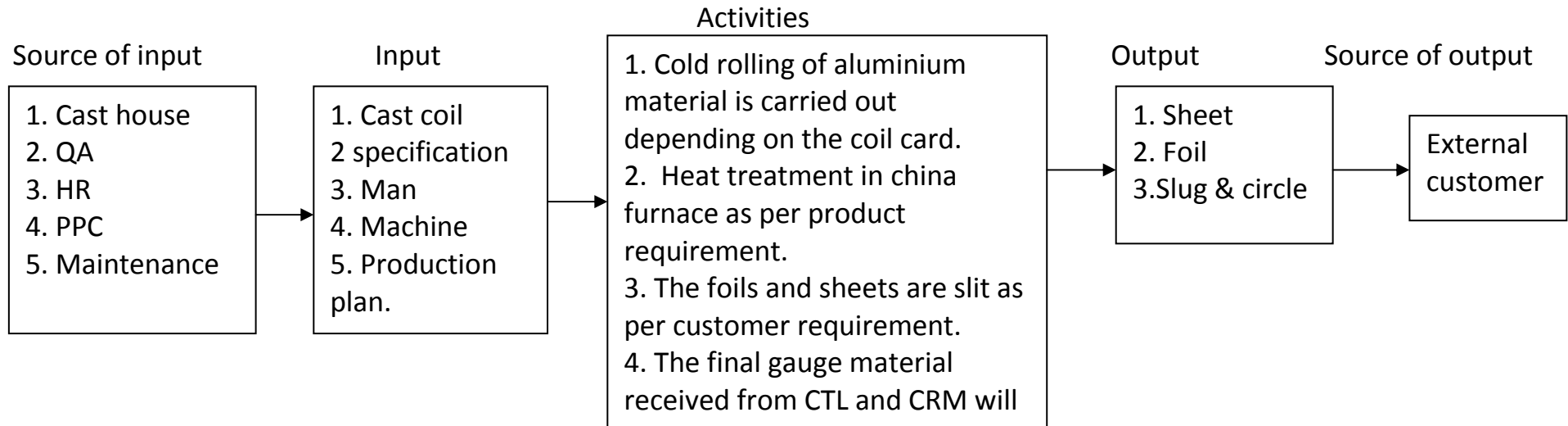
Cast House Process



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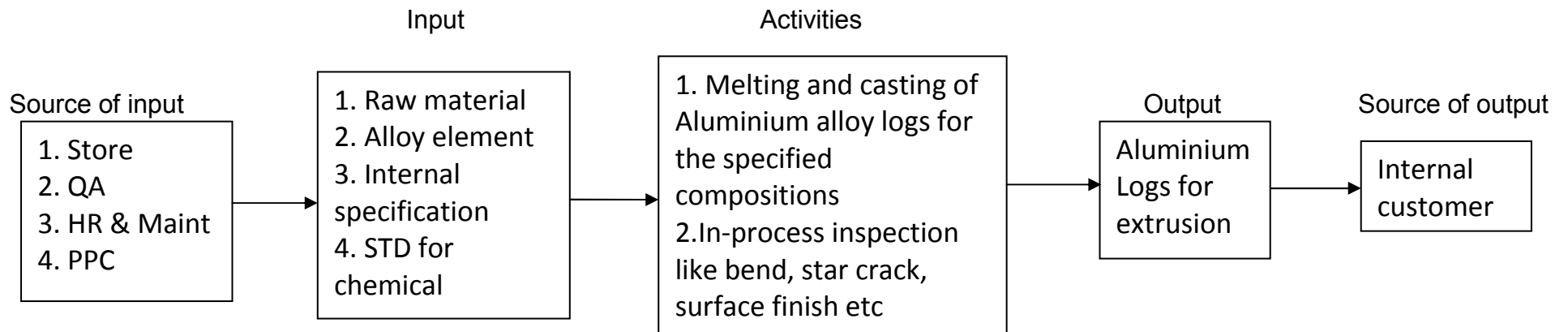
Rolling Process



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Process Approach

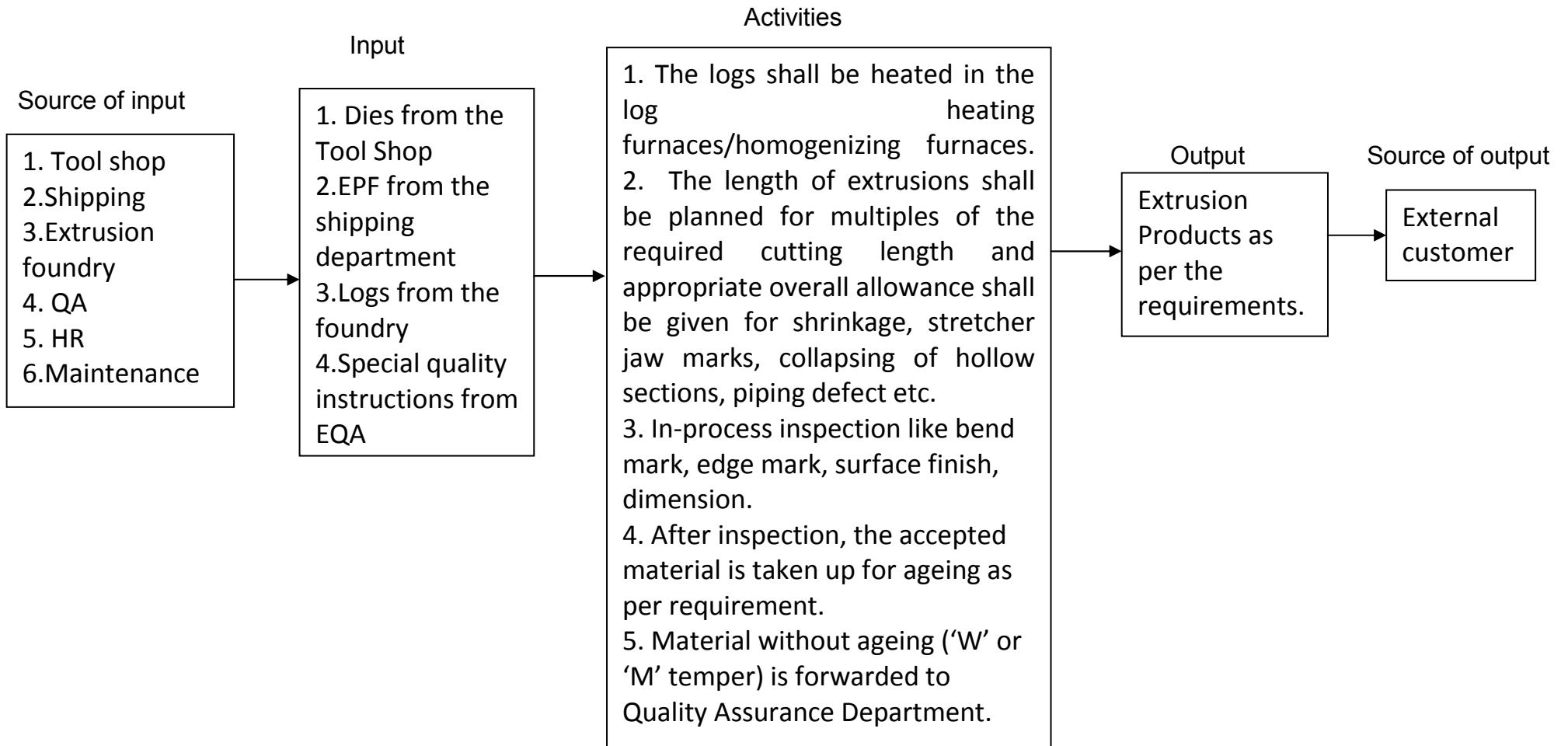
Extrusion foundry Process



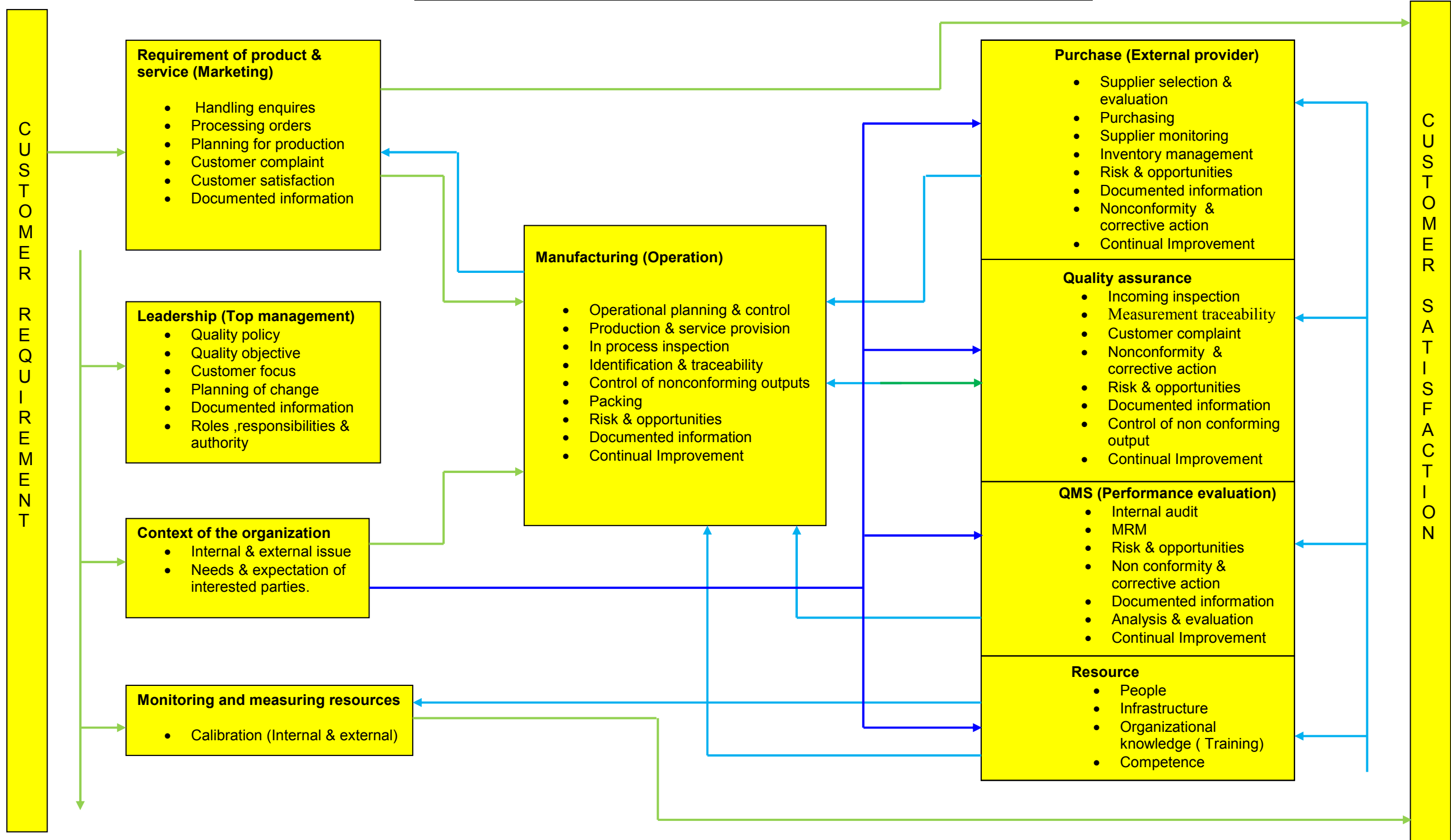
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Process Approach

Extrusion Production Process

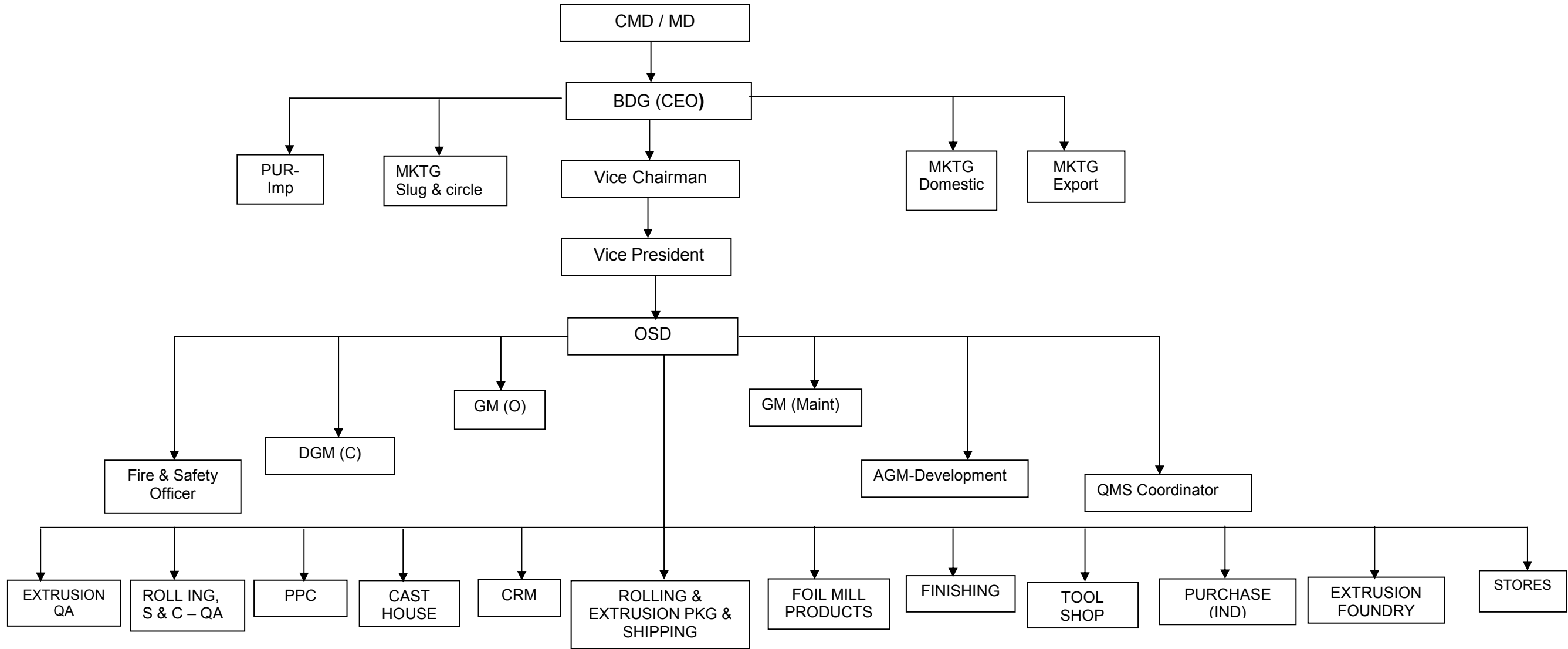


JINDAL ALUMINIUM LIMITED ROLLING & EXTRUSION DIVISION	DOCUMENTED INFORMATION APEX MANUAL	SECTION	ANNEXURE C
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CI.No.5.3: ORGANIZATIONAL ROLES, RESPONSIBILITIES AND AUTHORITIES:



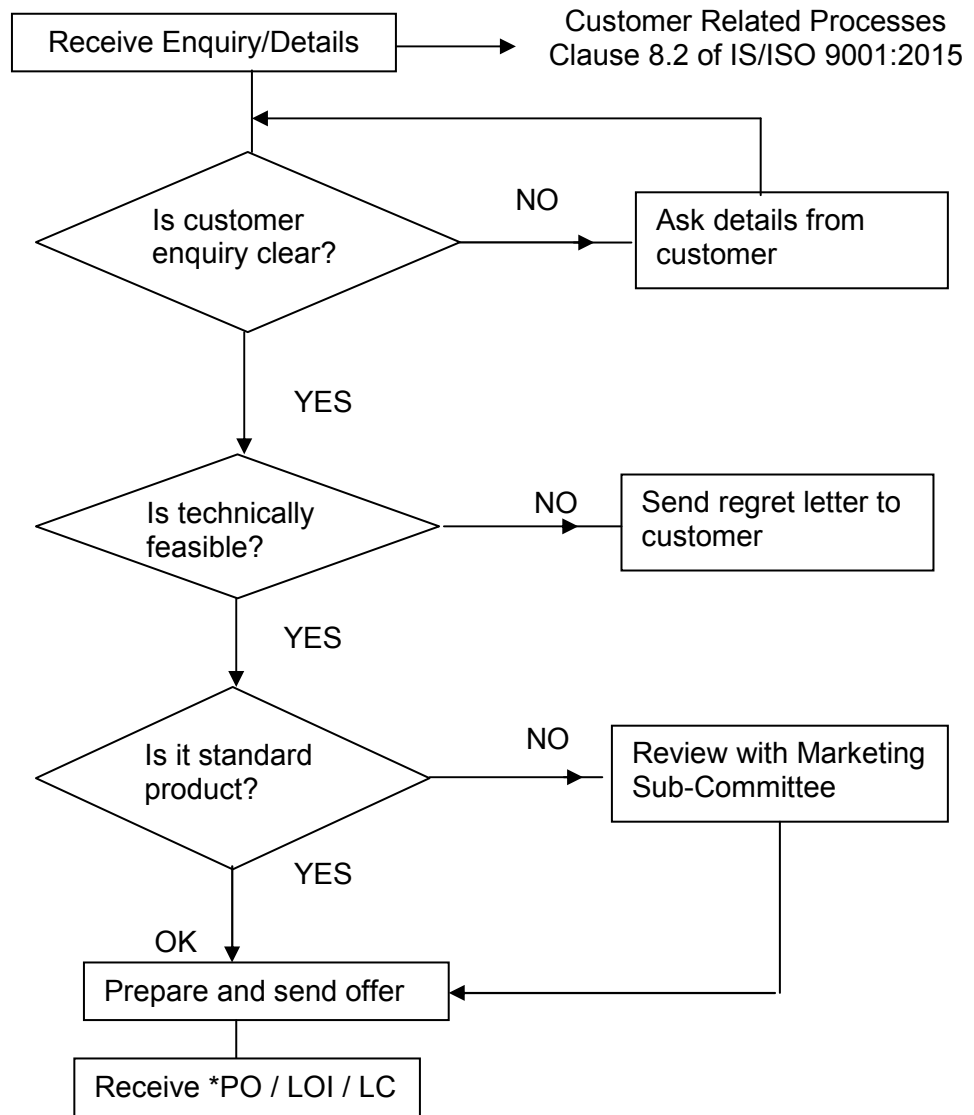
NOTE:
 1) HOD of Human Resource dept of Bangalore factory looks after recruitment of personnel. He is also the training coordinator for mass training programmes.
 2) HODs of Marketing – Domestic & Export departments, Bangalore factory looks after Marketing & Sales of Extrusion products of R&E Division.
 3) Dealer sales of extrusions of R&E's division is looked after by HOD of Marketing (P&D) of Bangalore factory.

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PROCESS FLOW DIAGRAM OF THE ACTIVITY OF ORGANIZATION

(Ref Clause No.8.1)

(Common for both Rolling & Extrusion)



Reference:

Marketing Procedure (Domestic):

JAL/R&E/MAR(D)/PR/19

Marketing Procedure (Export):

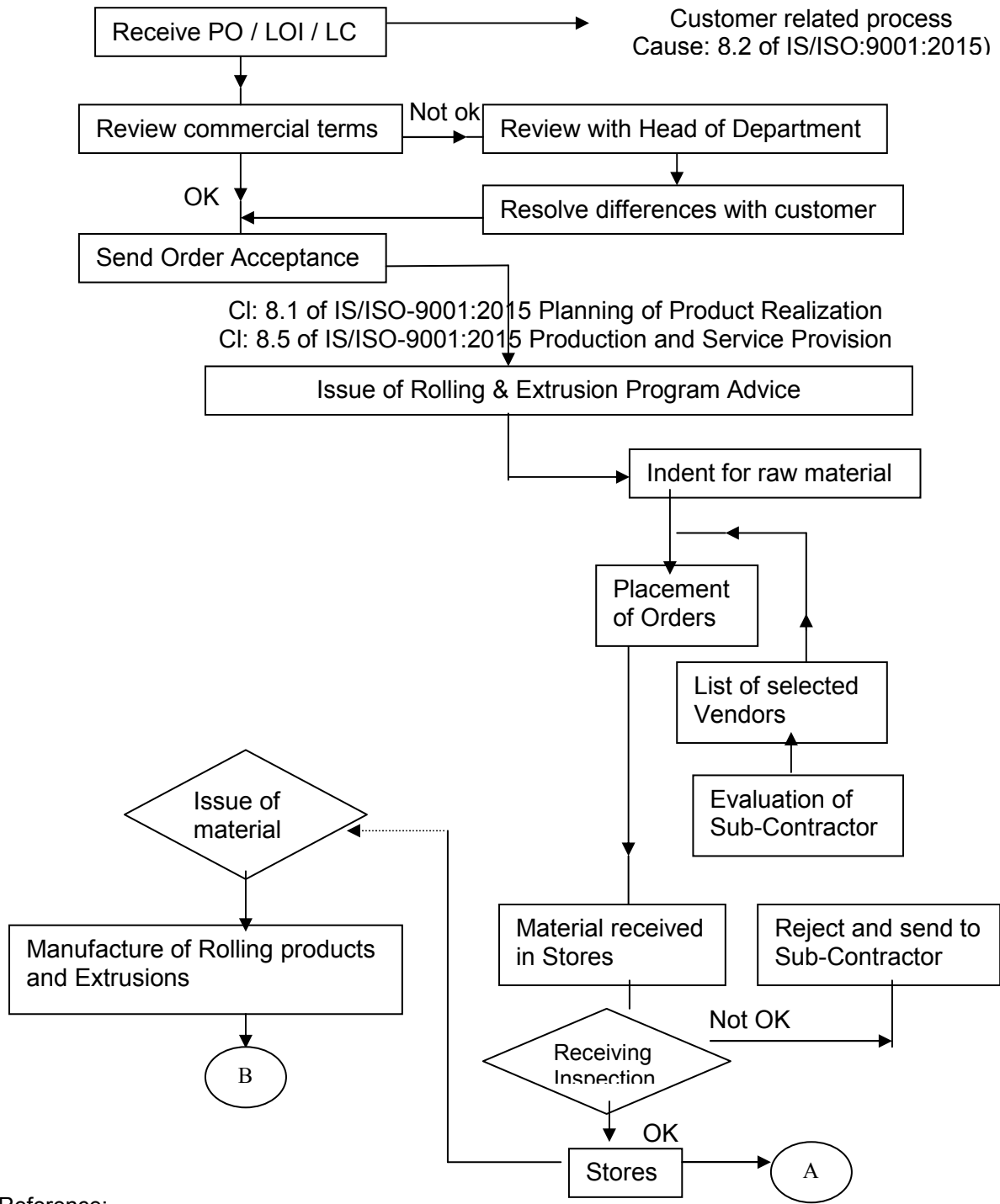
JAL/R&E/MAR(E)/PR/20

* PO – Purchase Order

LOI - Letter of Intent

LC – Letter of Credit

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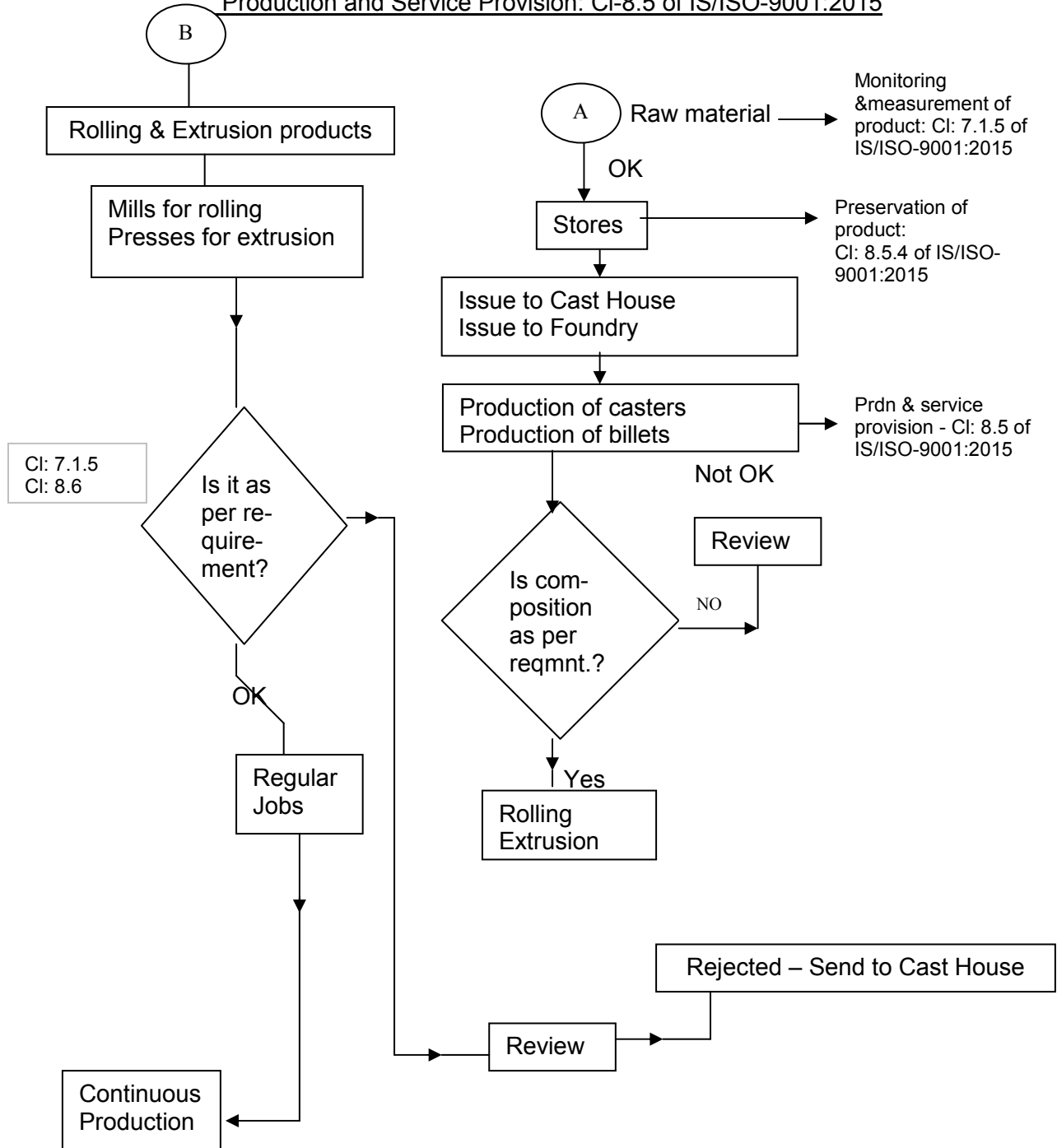


Reference:

- 1) Purchase Procedure - JAL/R&E/PUR(IND)/PR/15 & JAL/R&E/PUR(IMP)/PR/16
- 2) Stores Procedure - JAL/R&E/STO/PR/17

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Planning of Product Realization: Cl-8.1 of IS/ISO-9001:2015
Production and Service Provision: Cl-8.5 of IS/ISO-9001:2015



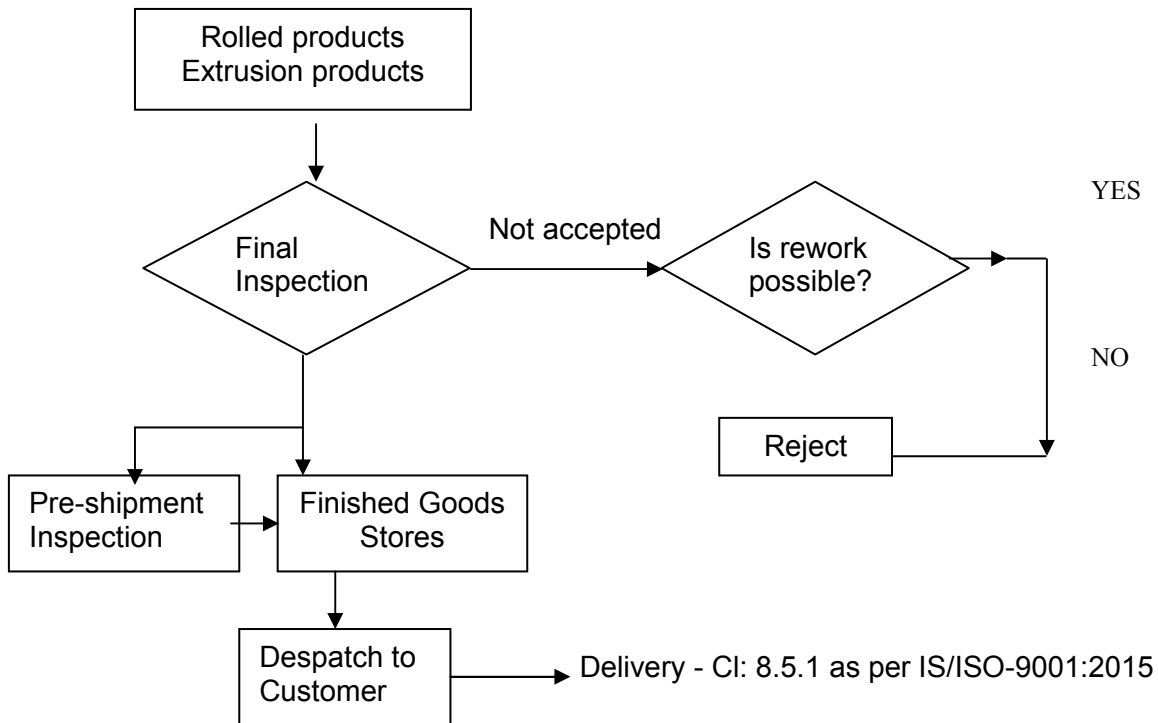
JINDAL ALUMINIUM LIMITED ROLLING & EXTRUSION DIVISION	DOCUMENTED INFORMATION APEX MANUAL	SECTION	ANNEXURE E
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Reference:

Procedure for Rolling - JAL/R&E/ROL/PR/07
 Procedure for Extrusion Foundry - JAL/R&E/EFOU/PR/08
 Procedure for Extrusion Production - JAL/R&E/EPRN/PR/09
 Procedure for Rolling Quality Assurance - JAL/R&E/QA/PR/10

Stores Procedure - JAL/R&E/STO/PR/17

Production & Service Provision - Cl: 8.5 of IS/ISO-9001:2015
 Monitoring & Measurement of Finished product - Cl: 8.6 of IS/ISO-9001:2015
 Preservation of Product – Cl :8.5.4 of IS/ISO-9001:2015



Note: Apart from this, detailed activities are highlighted in respective departmental procedures.

Reference:

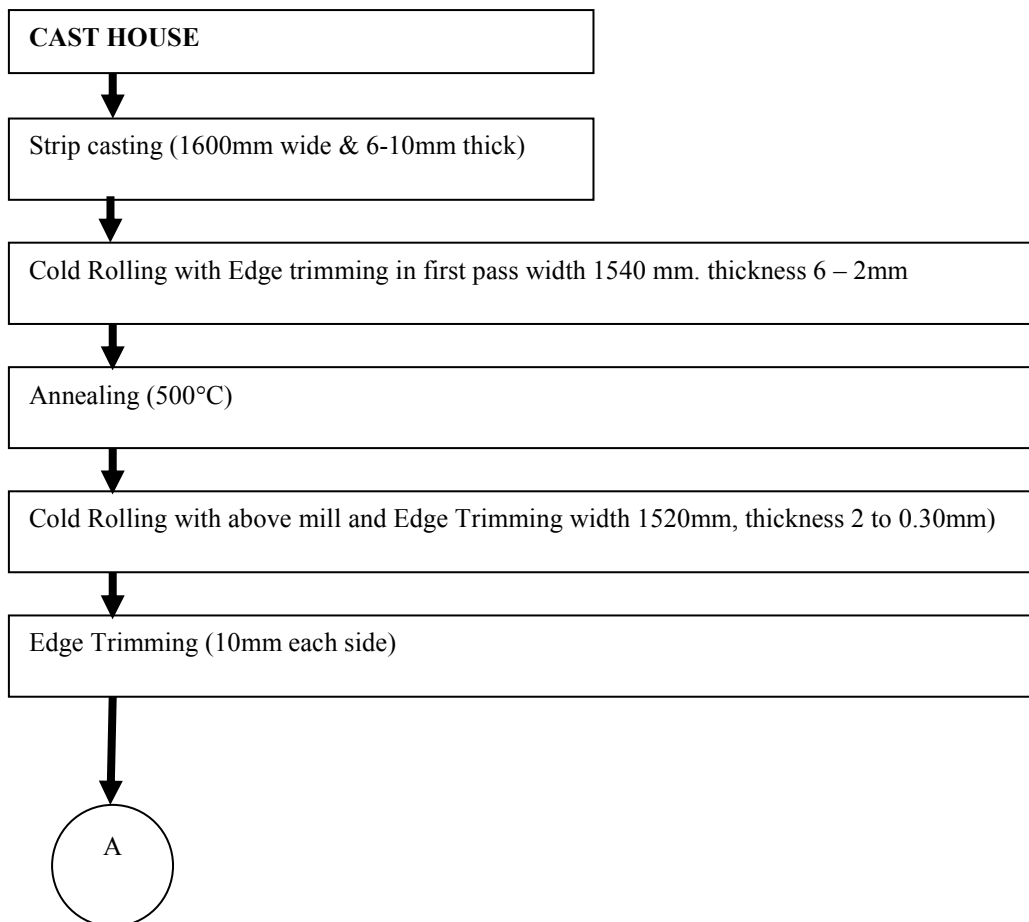
- 1) Rolling Procedure - JAL/R&E/ROL/PR/07
- 2) Extrusion Foundry - JAL/R&E/EFOU/PR/08
- 3) Extrusion Production – JAL/R&E/EPRN/PR/09
- 4) Cast House - JAL/R&E/CH/PR/06
- 5) Rolling Quality Assurance - JAL/R&E/QA/PR/10
- 6) Extrusion Quality Assurance - JAL/R&E/EQA/PR/11
- 7) Packing & Shipping Procedure - JAL/R&E/SHP/PR/18

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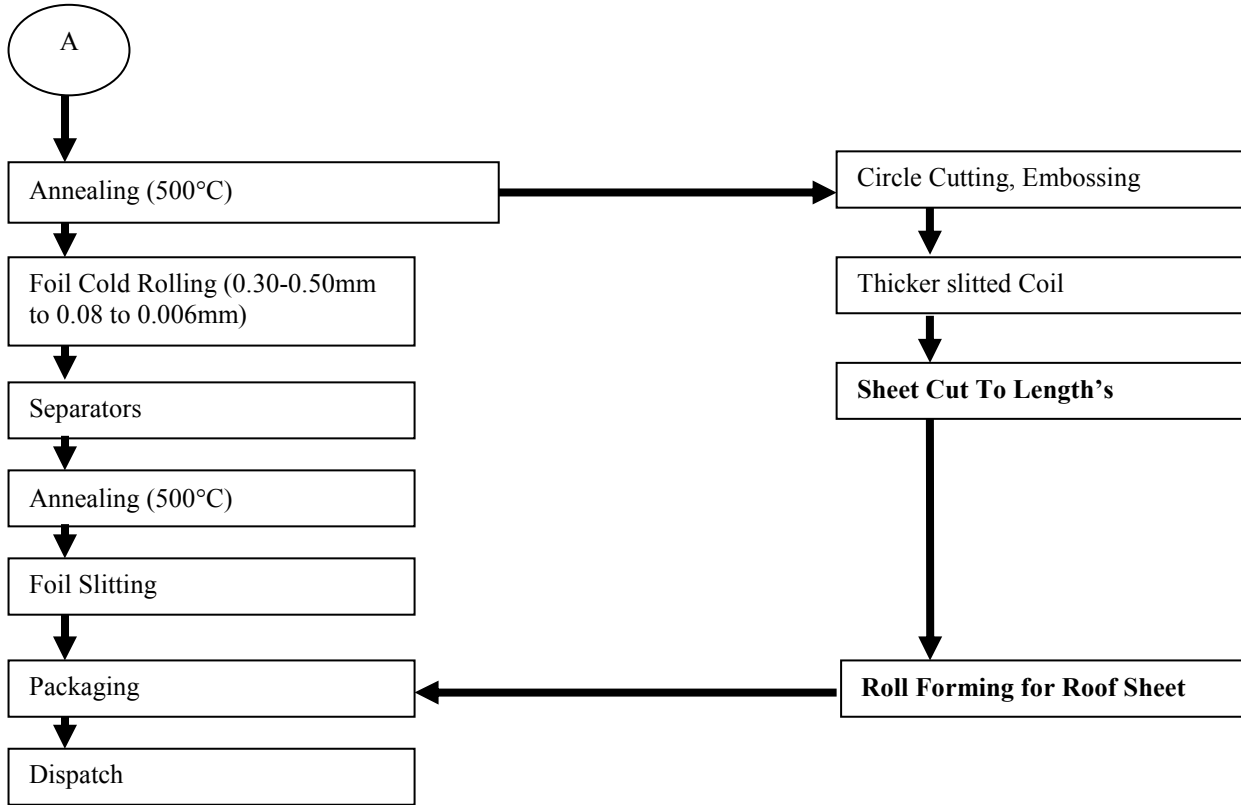
PROCESS FLOW CHART FOR ROLLING

(Clause 8.5 of Planning of Product Realization as per IS/ISO: 9001:2015)

The Process Flow Chart is as follows:



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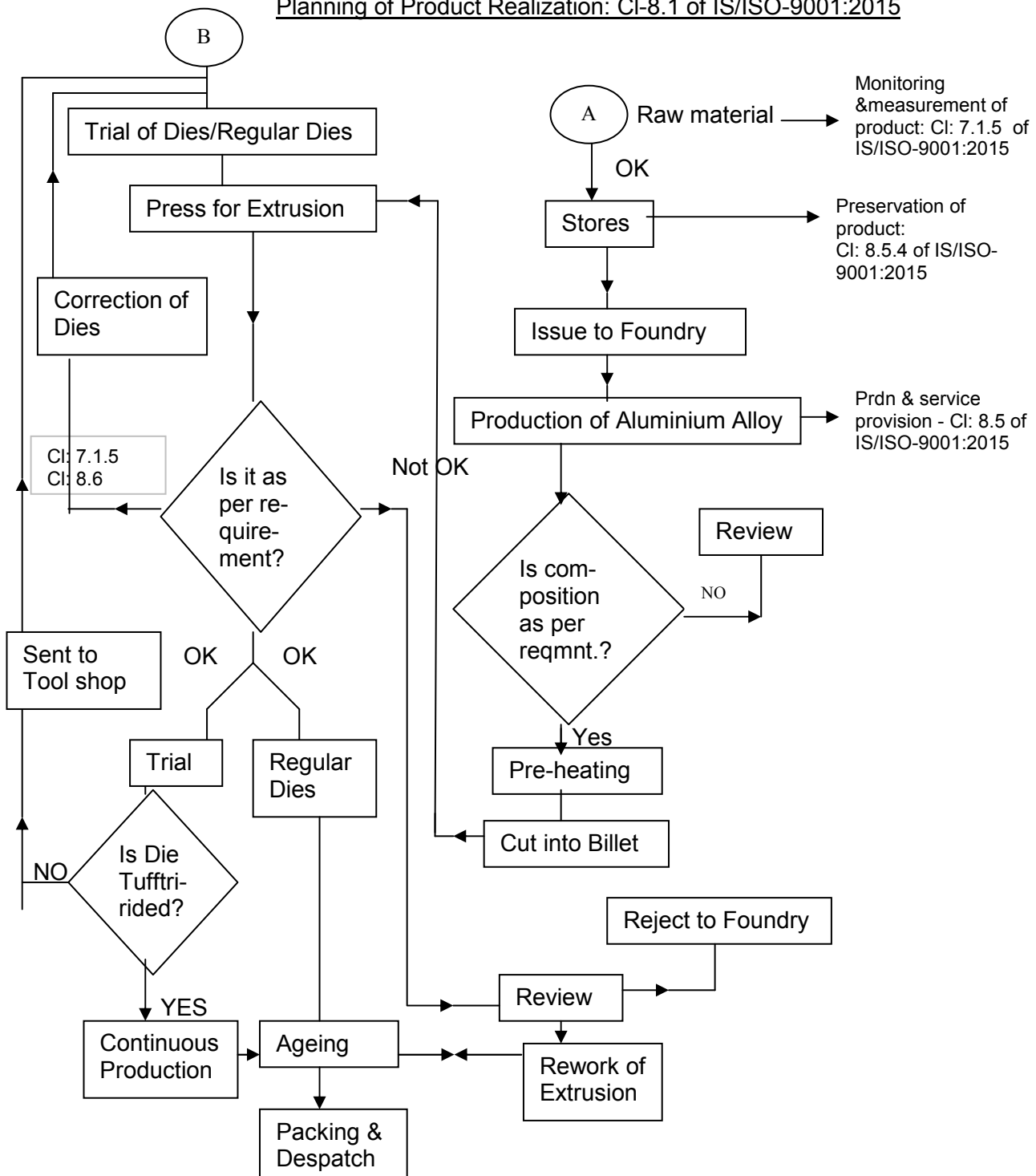
Supporting Services Department for executing the Rolling & Extrusion processes		
*Planning and Production Control (For Rolling only)	Maintenance (Mechanical, Electrical and Civil)	Utilities and Services Infrastructure, such as DG set, LPG bullet, Nitrogen plant, Compressor, etc
Quality Assurance	Purchase (Ind & Imp)	Stores
Marketing (D) & Marketing (E)	Packing and Shipping	Fire and Safety
Human Resource Department: Administration, Personnel Management, Security, Canteen, Scrap yard, Development, Green belt development and Occupational Health Care Centre.		

*NOTE: For Extrusion Foundry & Extrusion Production, there is no separate PPC department. The activities of PPC are addressed in the respective department procedures.

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PROCESS FLOW CHART FOR EXTRUSION

Planning of Product Realization: Cl-8.1 of IS/ISO-9001:2015



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Reference:

Procedure for Cast House	-	JAL/R&E/CH/PR/06
Procedure for Rolling	-	JAL/R&E/ROL/PR/07
Procedure for Extrusion Foundry	-	JAL/R&E/EFOU/PR/08
Procedure for Extrusion Production	-	JAL/R&E/EPRN/PR/09
Procedure for Rolling Quality Assurance	-	JAL/R&E/QA/PR/10
Procedure for Extrusion Quality Assurance	-	JAL/R&E/EQA/PR/11
Procedure for Extrusion Tool Shop	-	JAL/R&E/TS/PR/12

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Risk & Opportunities

Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Responsibility	Date of completion
QA Lab (Rolling Division)	Thickness Variation	Internal	In Accurate Result Not able to maintain the standard Tolerance	sample cutting by Manually to check the thickness in Foil	Checking by GSM Method	The square die of the same requirement	HOD	05.04.2016
	Hardness	Internal/ External	No of External Complaint increase	Manually Checking by BHN Machine	Manual BHN Machine using to check the Hardness	Digital Hardness tester requirement	HOD	05.04.2016
	Cracking receiving from Customer	External	No of External Complaint increase	Manually Checking by Bending quality	Manual Checking	Bend test instrument require	HOD	Under discussion with Management For Indent.

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Risk & Opportunities

Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Date of completion	Responsibility
Maintenance	High Power consumption	internal	Production cost high	Low power factor	Maintaining HT capacitor panel to improve PF	Capacitor panels to be ready in ZCRM	HOD	Jun-16
	High break down time of the Extrusion Press	Internal	Production loss, Resources Wastage	High Heat, Dust Inside the RCC Building	Maintaing Panel A/C and Panel Cooling fans	Cabin for Electrical Panels with AC	HOD	Jul-16
				Non Availability Of Spares	Indenting Materials time to time	Regular / Critical used items to be add in Level items	HOD	Aug-16
				Incompetent Man Power	Improving by Time and training	Recruit experience man power and Training	HOD	Continuously
				Sudden Major failure of equipments	Daily checking of critical equipments, Training of operators	100% Preventive /Opportunity /Shut down maintenance, Training of operators	HOD	Jul-16
High Lubricant oil consumption	Internal	High Maintenance cost	Leakages, Improper Handling	Checking leakage, Used as per requirement	Regular Checking and arresting leakages, Doing Preventive maintenance	HOD	Jul-16	

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Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Date of completion	Responsibility
Marketing (Exports)	Product Details	External	End use information	Wrong material produced or may not be suitable	Required information requested from customer	If customer is not clear, we go for our company standard	HOD	Resolved
	Payment not on time	External	Delay in receiving payment	After material is produced, customer is not getting sanction by their financial institution	Communication with customer for correct status	If payment not received, try to divert the material	HOD	31.10.2016
	Material not ready on time	Internal	Delay in despatch	1.Casting delay, 2.Machine breakdown, 3.Quality rejection	Informing plant the priority	To inform plant in advance about order details in pipeline	HOD	31.10.2016
	Improper packing	Internal	Material damage as Transit hazard, moisture, etc.	Improper lashing & choking and poor material used for packing	Approved / Standard wood or Packing material is being used	To improve packing quality; arranging suitable method as nylon strips is used for lashing	HOD	31.10.2016
	Product specs not matching with order	External	Rejection of material	Improper technical specification, Quality rejection	Requesting customer to check whether material can be used	Management approval to settle the claim or check if material can be diverted to other customer	HOD	31.10.2016
	Customer complaint & satisfaction level	External	Order may be less & rating level may decrease	Material quality issue and delivery delay issue	Communication with QA for supplying approved material only and trying to deliver material on time as per preplanned schedule	Proper follow-up with QA about approved and rejected material. We are improving quality and trying to reduce complaints, to increase rating level	HOD	31.10.2016

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Risk & Opportunities

Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Date of completion	Responsibility
Cold Rolling And Foil Rolling	Poor Quality sheet / foil stock recived	Internal	Sheet /Foil Hold and to be divreted	Casting Poor Quality Coils by cast house	In house checking (like visual inspection , chemical and physical property checking)	1. Checking frequency to be increased. 2. Action to be taken as soon as any deviation observed instead of keep on casting stop the casting and rectify the problem	QA/ Caster Incharge /HOD	15/06/2016
	Hydraulic Leakage	Internal	Brown Make on the finished coil/foil after annealing	When Hydrolic oil mix with rolling oil then rolling oil condaminated and it causes the brown stain problem.	Heavy end checking of coolent oil and maintaining below 2 %	1. Routine Checking of hydraulic leakages. 2.Change the coolant oil OR Top Up Fresh Oil as soon as oil Recovery gone down below 96% or heavy ends increase	Mechanical/ Rolling Shift In-charge	06/01/2016
	Intermediate Alloy Mixed coil	Internal	Default in the Product property	During casting alloy changes take place in caster (i.e. if after 8011 alloy another alloy of 8006 alloy cast start during that period mix alloy coil produced) .	Full Coil is casted in mixed alloy and final decision is taken by QA head. Some time it cause problem.	Such coil should by default diverted to GEQ product where quality is not a big concern.	QA & Caster HOD	06/01/2016
	Surface Defect	Internal	Material Hold due to rolling defect	Even after Roll damaged it is used for rolling. And some time marks generated from any Ideal rolls.	visual observation	Make it mandatory as soon as any default observed on the surface during running ,stop the mill and change the defective roll or resolve the mark before restart the rolling.	Rolling Incharge	06/01/2016

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Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Date of completion	Responsibility
Annealing	Not Achieving Uniform Result	Internal	Material Hold or re-anneal or has to Scrap	Either any of the burner , circulation fan and dumper not working.	visual observation	Periodic furnace PM and Furnace survey to be conducted.	Annealing Incharge	06/01/2016
Finishing Line	Gauge and Size Variation in finished product.	Internal	Material hold or to do rework.	care lessens of operator ,wrong planning And avoiding in between checks	Q A person check and give the approval of setting and gauge.	Frequency of checking to be increased.	QA& Finishing Shift Incharge	07/01/2016
	Scratches and Dent	Internal	finished Material Hold or to divert	During rolling ,slitting and packing this marks are generated due to mishandling	QA and Shift Incharge are keep visual inspection.	1. Time to Time proper training to be conducted to concern area to avoid this problem. 2.To modify the line to avoid scratches	QA& Finishing Incharge	06/01/2016

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Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Date of completion	Responsibility
Foundry extrusion	Increased FO consumption	Internal	Cast more	Improper setting of valves	Maintenance department setting the valves when ever required	Continuous monitoring of the system by Mech.Maint	HOD Mech.Maint	Ongoing
				Furnace oil quality	Checking of quality parameters before offloading in storage tank.	Same can be followed	HOD QA/HOD Ext.Foundry	Ongoing
	Casting defect/Failure	Internal	production loss/delay	Less water flow	Mould cleaning	Need more Training to Casting operator	HOD Ext.Foundry	Ongoing
				Low metal temperature	Proper temperature measuring before starting casting	Confirmation of liquid metal temperature by shift incharge just before casting	HOD Ext.Foundry	Ongoing
	Cutting Saw damage	Internal	production loss/delay	Improper coolant water	Periodical Visual inspection of cutting saw.	Re-sharpening TCT blade whenever required.	HOD Ext.Foundry	Ongoing

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Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Responsibility	Date of completion
PPC	Delivery failure	Internal	Loosing customer	Due to excess breakdown in caster, Mill & finishing Line.	Break down are attended by maintenance people	Preventive maintenance as per schedule	Maint. HOD/ Prod. HOD	Jan-17
	Excess Inventory (Above 4000 MT)	Internal	Cost increase	1. Due to materials Hold. 2. Due to Excess Production. 3. Due to orders cancel from customer end.	1. Delivering the materials. 2. Trying to produce the forecast material. 3. Material kept in hold condition.	1. Produce good quality material. 2. To produce the material which are of conformed & regular order. 3. To find the new customers to salvage the material.	Prod. HOD/QA HOD/ PPC HOD	Completed

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Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Date of completion	Responsibility
Marketing (Domestic)	Packing	Internal	Material damage	Worker Negligence & packing Raw Material	Standard wood or packing material is being used.	To improve packing quality & arrange suitable method as nylon strips is used for lashing. To make arrangement of online packing to dues of Good Quality wood & Material which have mark/sign of Our company.	HOD	Ongoing
	Insufficient Stock	Internal	Customer Switch to other Brand	Shortage in Standard Material & 25 -30 days to produce Material	As per Priority of Customer	we needs to having a minimum 100 mt Stock with each Product Line & Alloy I.e. Circle/ Roofing/Geq/Foil Stock. 1050 /1100 / 5052 Alloys, Cause If Any of the Customer Come to US then they will never switch to other.	Production Team	Nov-16
	Payment not getting on time	External	Payment delay	Customer not sanction the payment on time .	Communication with customer for payment	Depositing min 30 percent of payment against orders, cause if they don't buy the material we will divert the material else melt the material, else to have token money so that we can keep customer in our court .	HOD	Ongoing
	Material late Lifting	External	Stock increase	Customer Not Ready to lift order Material	Having a schedule of Customer	To Supply & Produce material as per Schedule only. If Customer make late to lift the material then Late lifting Charges will be Applicable	Marketing Executive& Production	Under process

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Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Date of completion	Responsibility
Marketing (Domestic)	Material delaying	Internal	Dispatch delay	1.Machine breakdown 2.Quality not as per customer	Informing order the priority	To advance inform about order details in pipeline, there must be a visit of our executive or technical person visit to find the actual need of party & to have visit summery which have full details of customer Needs & Material .	Marketing Executive & Technical Head.	Jan-17
	One time customer	External	no fluency	customer switch to other company	To satisfied customer	Needs to focus on all of the customer, Needs to filter all the details & Re-contact all of the customers which details we having.	Marketing Executive	Oct-16
	C" Form Liability	External	customer not giving the C" form on time	Tax Lose to Us	following with customer to get C" Form.	we need to Charge CST @ 5.5% from Customer & 3.5% will be refundable after receiving of C" form .(only for new Customers cause old & Loyal customer not Agree for the same) or Keep a token Money Amount .	Marketing Executive	Oct-16

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Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Date of completion	Responsibility
PACKING AND SHIPPING	Pricing	Internal	Loss to company	Mismatch in hard of list pricing & software list pricing	Item/Section rate pick thru software	To evaluate actual cost of packing then to fix price for per kgs & Wt as 250& Above.	HOD	Ongoing
	Wrong weight	Internal	Loss to company	Weighting scale difference here & outside	Weighting scale checking on daily basis manually.	Weighting scale to fix on +/- 0.01% tolerance	Packing & technical Incharge	Completed
	Excess/less bundles	Internal	Loss to company & Customer	Counting not Properly	Checking by shipping & Packing staff	Cross check by security staff	Packing/Shipping & security	Completed
	Material late lifting	External	Inventory Increase	Customer not ready to lift order material as per schedule	Having a schedule of customer	To produce material as per customer requirement & supply as per schedule. If Customer make late to lift the material then late lifting charges will be applicable.	Marketing & production team	Ongoing

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Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Responsibility	Date of Completion
Cast House	Receive of Poor Oil Quality of Calorific Value/Sediments/Viscosity	External	Higher FO Consumption	Supply of Poor Quality Oil by the Vendor	In-house Checking of Specific Gravity, Moisture	(1) To provide Facility for checking Calorific value, Sediments and Viscosity (2) Black List the vendor if consistently receive bad quality FO	(1) HOD QA (2) HOD Purchase	Jul-16
	Low temperature of FO at burner	Internal	Improper fuel burning, Higher Fuel consumption	(1) Failure of Oil Pre heaters (2) Failure of Temperature Controller(3) Heat Loss on the FO pipe line	Heating the FO at service Tank and H&P unit, Monitoring of FO temperature	To Provide cartridge heaters with temperature controller on service tank and Self regulating Trace heaters on FO pipe lines	HOD Electrical	Jul-16
	Mixing of scrap of different Alloys	Internal	Composition deviation	(1) Scrap is not identified at different machine centers before dispatch to Foundry (2) Scrap is not off loaded at identified Locations	Coordination with differ machine centers, Sampling of scrap and Offloading at designated area	To Provide Area Identification, Scrap color Codification, Training	HOD Cast House	Jul-16
	Failure of TC/Temperature Indicator/Controller/	Internal	Increased FO consumption & Improper Alloying	Thermocouple & Temperature controller is not Maintaining properly	Calibration of TIC by External party	To Provide Temperature monitoring check list, To provide SCADA and Furnace automation	HOD Cast House	Jul-16

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Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Date of completion	Responsibility
Cast house	Low Purity Nitrogen in Degasser	Internal	Casting defect	No Provision to check the Dissolved Hydrogen level in Molten Metal	Monitoring of Nitrogen Purity	(1) To Provide Nitrogen purity Remote Display and Alarm (2) Provide Oxygen Gas Analyser to check the Purity (3) Provide Hydrogen Gas Analyser to check the Dissolved Hydrogen level in Molten Metal	HOD Cast House	Jul-16
	CFF Failure	Internal	Casting defect	No Provision to monitor Inclusion Level	Checking the CFF Surface	To Provide PODFA Unit for inclusion level checking	HOD Cast House	Sep-16

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Process	Issues	Internal /external	Impact of issues	Potential cause of issue	Current system to control	Recommended action	Date of completion	Responsibility
Stores	Item Below Min Level	Internal	Delay in Maint repair	1- Excess Consumption due to abnormal uses of materials 2 -Delay in Supply	Monthly review of consumption pattern	Daily review of consumption pattern	HOD	Feb-17
	Physical stock not matching with Records	Internal	Delay in Breakdown	1-Wrong Entry 2-Wrong Item Issue 3-Unskilled Manpower	1- Two Step Checking of incoming material 2- Six Days issued item checking in night shift 3- Training giving to new Joinee	1- Three Step Checking of incoming material 2- Seven Days issued item checking in night shift 3- Effectiveness monitoring after 2 month	HOD	Feb-17