

Electrotherm (India) Limited

Operational Excellence



Electrotherm is a research-driven company having four divisions – Engineering & Projects, Steel & Pipes, Electric Vehicles and Renewables. The oldest is Engineering and Projects (E&P), in which Renoir was engaged to undertake the Parivartan Project. Catering to both domestic and international customers, E&P is a leading manufacturer of melting and refining furnaces with over 50% of the induction furnace market in India.

“No organization can remain competitive in the market place without excellence in its operations. Project Parivartan has laid a strong foundation for us in this area.”

Avinash Bhandari
Joint Managing Director

Key Results

Planning compliance improved by 100% from 44% to 88%.

Vendor Delivery Compliance improved over 120% from 42% to 96%

Reduced unnecessary Purchase Receipts from 22,128 to 6,525 – a 70% reduction

Parts Per Million (PPM) improved by 70% from 22,356 to 6,794

Inventory turn improved by 38% from 2.10 to 2.90

Goods Receipt Compliance improved by 77% from 53% to 94%

PROJECT GENESIS

Electrotherm wanted to be future ready by improving systems and process to kick-start operational excellence drive across the organization.

In particular, Electrotherm felt that the Engineering and Projects division offered significant opportunity and invited Renoir to support them in their endeavours. After discussion, the objectives for the Project were formed:

- Develop fit-for-purpose Management Control System to improve operational efficiency and interdepartmental interfaces across the organization.
- Improve data and information flow to ensure better decision making.

The Project went through 8 weeks of Focus Process® covering 8 departments, starting from Marketing, Sales (i.e. bringing orders to projects), Design, Planning, Production, Procurement, Stores and Dispatch. To validate the opportunity, Renoir started by mapping the ‘As-Is’ end-to-end work order process with overall lead times taken by each department. This helped to understand non valueadding activities in the entire process and define a scope for improving lead times. Based on the findings of the process and management control systems reviews with the various departments, Renoir then conducted multiple data studies to validate and quantify the opportunities. It was evident both from the As-Is process reviews and the data studies that there was a clear misalignment between departments which was resulting in increased work order lead time. This led to departmental fire-fighting with no one person or department monitoring the end-to-end process.

Material availability also was identified as one of the major reasons for delays. Apart from materials, there were other contributors to delay. Delays in planning and design (in releasing drawings required by procurement which in turn affected materials availability) also played their part.

PROJECT APPROACH

To ensure all identified opportunities were realised, the following activities were undertaken:

- Streamlining end-to-end planning of work orders to ensure inter-departmental alignment.
- Re-structuring of the planning department to create a section within Planning department to monitor the progress of the end-to-end work order cycle and to escalate all delay issues at short intervals.

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“Project Parivartan has created a motivation among the employees and showed them way to analyze the issues and make them understand how the internal processes can be changed to align towards the strategic objectives of the ET- ENP division”

Narendra Dalal
Chief Technical Officer

“Operational excellence is basic hygiene of any organization and no strategy can be executed until organization is excelling in operations. With the Project Parivartan “A journey of organizational transformation” we have laid a milestone for consistent alignment of capabilities and internal processes with the customer value propositions as the core.”

Harish Mukati
Head of Operations

- The new role of Project Coordinator was created within Planning Department. These Project Coordinators are assigned for one vertical which will typically have 10-15 work orders at a time.

To assist the project coordinators, an improved planning system was designed to capture all the activities required for dispatching an order and which also covered material planning.

IMPLEMENTATION

A total of 46 new system elements were designed and implemented across the entire value stream to ensure that opportunities identified during Focus Process® were covered. Two-person taskforces in each department and full time support from Renoir consultants ensured that initial concerns from the various departments were addressed at the earliest and subsequently ensured ownership. The implementation phase involved the entire organization from shop-floor to board level. As such, this phase involved the grassroots level of skilled and unskilled workers and covered top management. Initiatives like inventory optimization, work order costing and 5S. Senior management fully supported the implementation effort which, in turn, eased the change management effort.

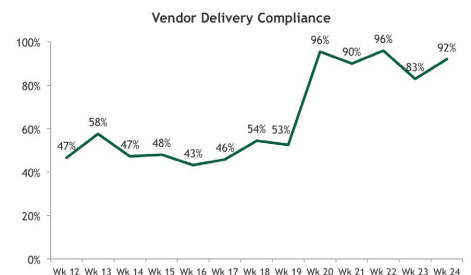
In order to improve skill levels, a set of training sessions were carried out involving approximately 100 staff from middle management. Training sessions included:

- Communicating with Impact
- PDCA and Root Cause Analysis
- Problem Solving
- 5S
- Failure Mode Effect Analysis
- Lean Manufacturing
- Six Sigma

In the Procurement Department, multiple systems were implemented relating to vendor management and buyer performance management. Weekly departmental performance reviews with the Department Head were installed and are based on objective KPIs. Regular reviews with the vendors are now undertaken to evaluate their performance using a tool which has resulted in improved vendor delivery compliance and has increased Procurement’s level of service to the Production.

PROJECT RESULTS

The major gap identified during the Focus Process was lack of alignment between departments resulting into various types of delays at different stages during planning and execution. PARIVARTAN helped in streamlining departmental communication for improved end to end planning and encouraged team working culture within the organization. As a result of improved planning and elimination of non-value adding activities work order lead time reduced and material availability improved to all time high.



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#	KPI	Baseline	Now (WK 24)
1	Plan Compliance - Overall	52%	92%
2	Plan Compliance - Steel Melting Furnace Domestic	35%	95%
3	Plan Compliance - Steel Melting Furnace Export	42%	96%
4	Plan Compliance - Foundry Furnace	93%	83%
5	Plan Compliance - Induction heating & Hardening	38%	95%
6	Inventory Turn	2.10	2.90
7	Part Per Million (PPM)	22,356	14,424
8	Open PRs	22,128	6,525
9	Vendor Delivery Compliance	42%	92%
10	Re-order Level (ROL) Compliance	73%	76%

THE RENOIR GROUP

Renoir Consulting is a world leader in sustainable, implemented change. Founded in 1994, Renoir has offices located in North and South America, UK, Europe, Turkey, Middle East, Southern Africa, India, Pakistan, China, South East Asia and Australasia. With over 350 fully employed and highly trained consultants, their work across a wide range of industry sectors gives them a broader perspective of the issues facing your business, allowing them to be sensitive to your unique challenges, culture and specific business issues. This cross-pollination ensures truly effective, rapid and sustainable solutions.

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