# EXPERIENCES OF IMPLEMENTING ENERGY MANAGEMENT SYSTEM – ISO 50001

Raymond Ltd. Textile Div.
Chhindwara

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# Raymond's Profile


Incorporated in 1925, **Raymond Limited** presently has five divisions comprising of Textiles, Denim, Engineering Files & Tools, Aviation, Designer Wear, and Prophylactics and Toiletries. With a capacity of 45.28 Million Meters in wool & wool-blended fabrics, Raymond commands over 60% market share in worsted suiting in India and ranks amongst the first three fully integrated manufacturers of worsted suiting in the world.

The Chhindwara Unit is one of the three production units of the Textile Division. The installed capacity of Chhindwara unit is 128 looms and 33528 spindles. The unit has a work force of more than 2900. The plant is located on a 100 acre plot with a built-up area of 140,000 sq meters and a green belt area of 65%. The plant is well equipped with the most modern machinery, ensuring high efficiency and productivity. The work force is adequately skilled, well trained and competent. The unit became operational in the year 1991. A well-equipped in-house laboratory is maintained for carrying out the various quality tests of in-coming, in-process and the final products.

# Raymond Ltd. Chhindwara - Existing Management Systems

**ISO 14001:2004**

**ISO 9001:2015**

**OHSAS 18001-2007**

**ISO 50001-2011**

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# JOURNEY TOWARDS ENERGY MANAGEMENT SYSTEM

**3**

- Receive ISO 50001 Certificate
- Certification audit was carried out in February 16.
- Pre Audit was carried out in January 16
- Management Review Meeting was done in December 15.

**2**

- Conducted Internal Audit in November 15.
- Internal Audit Training to the team members.
- Evaluate Progress & Reassess
- Preparation of Action Plan & it's Implementation
- Baseline energy performance & Set Goals- Data has been collected at department level with improvement in monitoring.

**1**

- EnMS manual has been prepared.
- Formation of EnMS team members and appointment of MR.
- Training programs organized for various stakeholders.
- Established Energy Policy
- We have started the preparation for ISO 50001 implementation from March 2015.

# Best practices in Energy Management

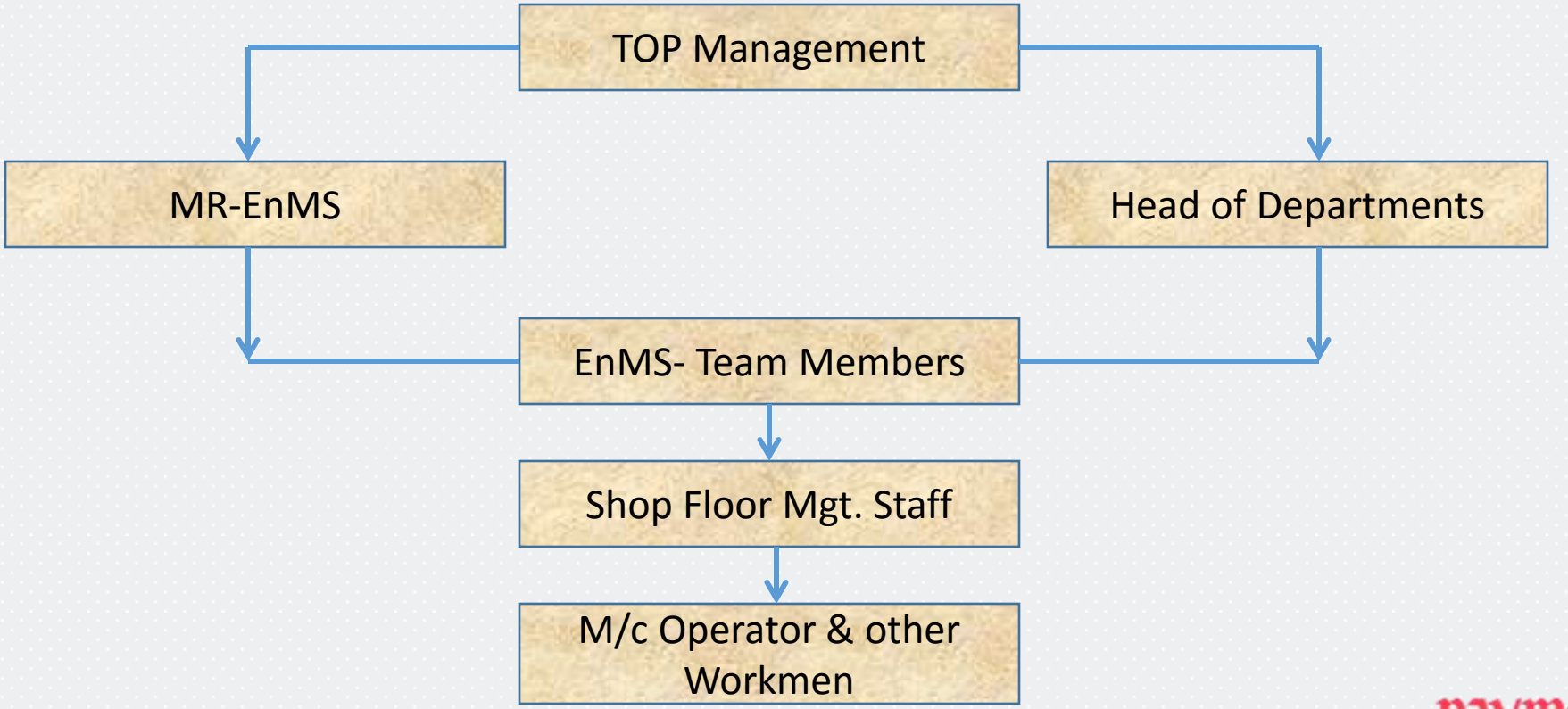
- Data-driven approach
- More strategic deployment of energy efficiency technologies. (e.g. advanced monitoring systems)
- Integration of energy efficiency practices into daily organizational operations .
- Continual improvement of energy performance.
- Greater reliability of sustained energy savings.

# Before Implementation of EnMS ISO 50001:2011

## Responsibility

1) Before implementation, EC activities carried out by only Engg. dept.
2) No one was taking active participation in EC activities except Engg. team.

## After Implementation of EnMS Responsibility governed as under-



# Awareness

## Before

1) Awareness scale was inadequate from production side workmen & Mgt. Staff.
2) Many people was unaware about the types of energy used in the unit, they know energy means only electricity.

## After

Conducted the Awareness training programme for

1) All Dept. HOD's
2) EnMS Team Members
3) Shop floor Mgt. Staff
4) Operators/Workmen/Technicians etc.

All the employees informed about the energy usages, types & its importance i.e. **Electricity, Coal, Steam, Air, Diesel,& LPG** of their respective departments.

# Monitoring

## Before

1) At user department, all types of energy usages was not monitored on daily basis i.e. Consumption Vs. Production earlier which was captured by only Engg. team.
2) In user dept, steam energy & LPG consumption was not monitored by dept. level.
3) Losses of Energy also was not monitored by user dept.
4) Earlier Power consumption was recorded manually.

## After

1) Installed online system for Energy Meter readings for daily power consumption
2) Started daily recording/Analysis of Energy & production at user level.
3) By doing Regression analysis monitored production variable which was affecting the power consumption.
4) Energy losses arrested by removing excess light fittings, steam & air leakages

# Regression analysis of  Multi-Variables affecting the Power Consumption

1. Worsted Spinning Production

Microsoft Office
Excel Worksheet

2. Worsted Spinning Production + Humidification

Microsoft Office
Excel Worksheet

# Documentation

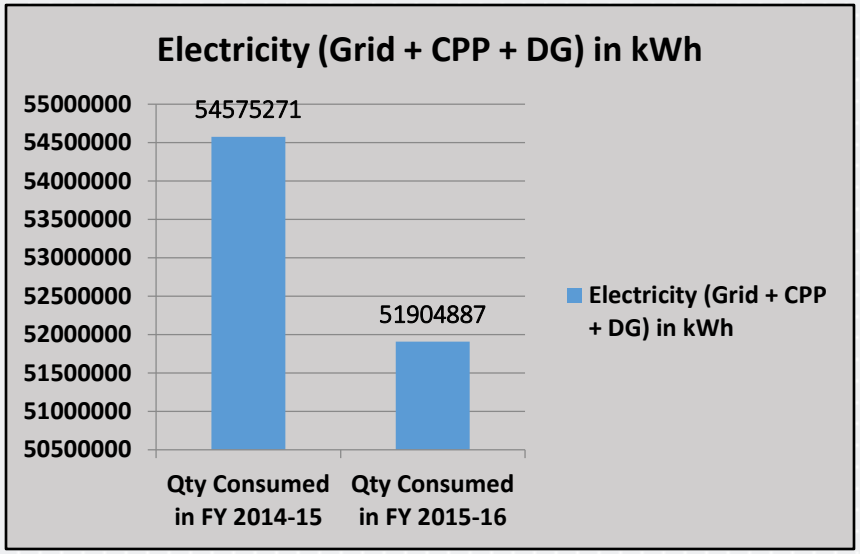
## Before

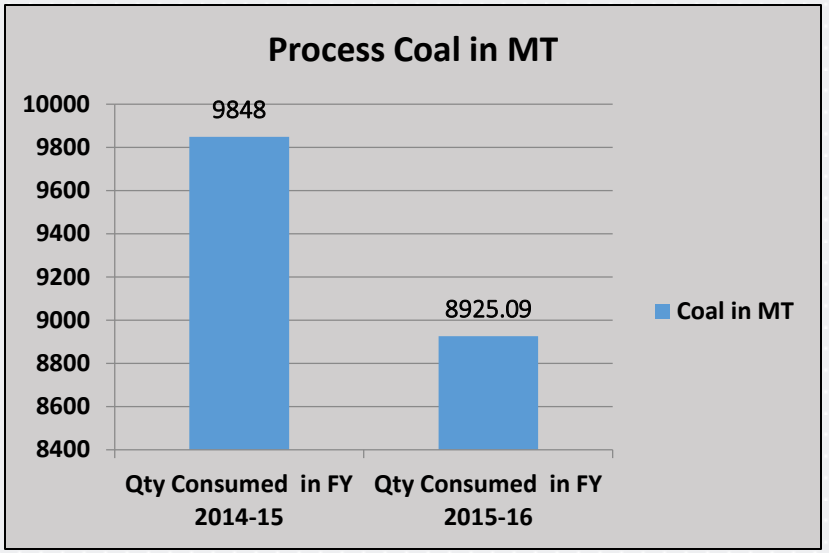
1) Documentation part was inadequate at user level.
2) All data related to energy used & its conservation was maintained by Engg. dept. only
3) Except Engg. team other employees were partially aware of legal requirements.

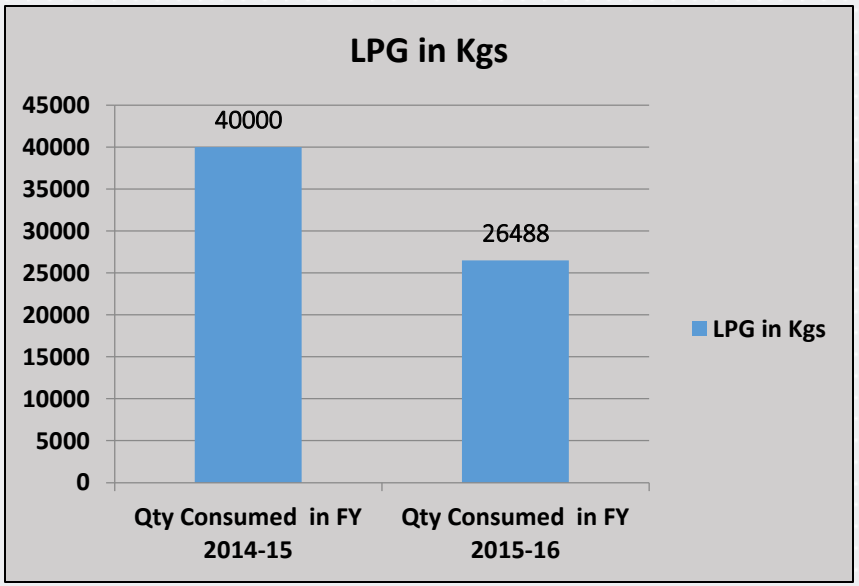
## After

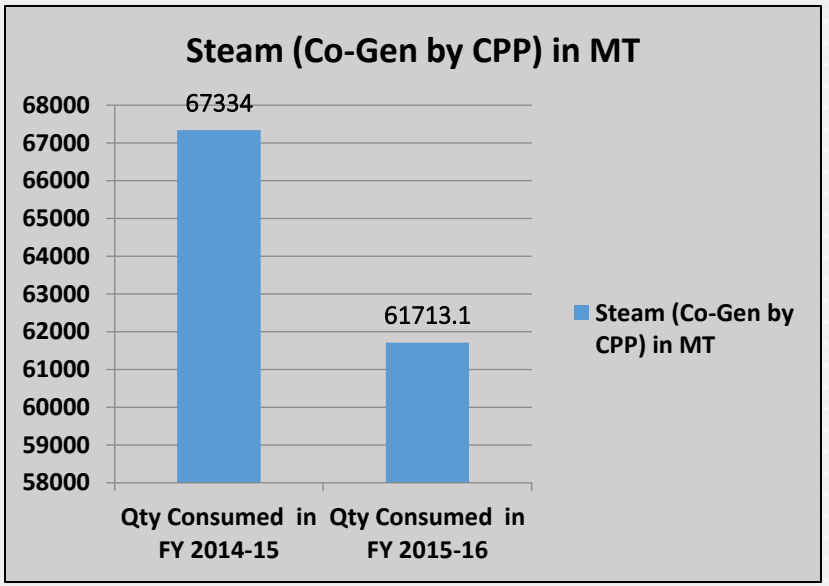
1) All the related data made available to everyone through LAN
2) All energy & it's conservation data documented at user level like
   i) EnPI- Energy performance Indicator of the dept. i. e. Spinning dept. having EnPI for elec. Energy is unit/kg & for steam is kg/kg
   ii) Energy Baseline
   iii) Objectives
   iv) Targets
   v) Action plan
   vi) SOP/Work Instruction
3) Prepared Legal Register in ISO format & made available to all on LAN

# Reviewed Energy Consumption

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# Internal & External Audit & Management Review Meeting

We have carried out Internal Audit and audit findings(CAPA) discussed in MRM and after satisfactory progress in system, management has decided to go for ISO certification from external Agency.
Management had appointed M/s. DNVGL as external Agency. They carried out pre- audit and after satisfactory compliance of the pre-audit findings, M/s. DNVGL recommended for final certification audit.
After the successful completion of certification audit findings, M/s. DNVGL has recommended for ISO 50001:2011 certificate

## How we achieve this?

- Commitment from top management
- Sustained energy awareness
- Participation from all levels
- Consensus before action Single goal for the whole team

# Recognization & Awards

Clean Energy Ministerial
**Energy Management Leadership Awards-2016**

The Clean Energy Ministerial's Energy Management Working Group (EMWG) has been driving the global dialogue on quality ISO 50001 implementation since 2010.

Our unit **Raymond Ltd. Chhindwara** has been recently received prestigious Energy Management Insight Award for helping to build global insight on the benefits of energy management systems in industrial and commercial facilities.


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# Benefits of Implementation of ISO 50001

- Involvement of all Stakeholders.
- A significant improvement of the energy performance level from an initial energy baseline. Achieved 8 % savings in energy.
- Being a designated Consumer the system helps in PAT implementation.
- A systematic approach (plan-do-check and act) that leads to continuous energy efficiency improvement.
- Develop a policy for more efficient use of energy
- Fix energy efficiency targets and objectives to meet the policy
- Use data to better understand and make decisions concerning energy use and consumption

- Measure the results of energy efficiency improvements.
- Provide a structured approach to controlling & managing a sustainable Energy.
- Enhance awareness of staff & tenants
- Reduce use of energy and emission
- Increase financial efficiency
- Understanding and support by top management
- Continual contribution to community & environment

# THANK YOU

ENVIRONMENT IS LIFE

JOIN HANDS – PRESERVE IT

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