Introduction

BILT is India’s largest Pulp and Paper Company and is the only Indian company to feature in a list of the top 100 paper companies worldwide. The Shree Gopal unit’s turnover is about ₹ 500 crores and it manufactures a wide range of writing, printing and industrial papers, coated paper and boards; the annual production of paper and coated board is 81000 MT and 8500 MT, respectively. The plant is situated in Yamuna Nagar District, Haryana. It was acquired by the Late Lala Karam Chand Thapar in 1936 before India became independent.

Over the years, rebuilding, expansion, and diversification have taken place with an emphasis on industrial relations and sustainable development. The Unit is poised to increasing its output, efficiency of operations, and better serving its customers.

Journey towards Implementation of management systems


The unit has a well-organized CSR department working for development in villages near the plant. It has invested large sums in forestation schemes aimed at maintaining the ecological balance of the surroundings.

Implementation of ISO 50001: 2011 (EnMS) at Unit -Shree Gopal

Implementation of the Energy Management System, which began in May 2012, was made easier by the fact that other management systems, QMS, EMS, OHSAS and FSC, had already been established there for some time.

The CGM and Unit Head initiated the process of implementing ISO 50001; a consultant, Quality Growth Services (QGS), from New Delhi was hired to train mill employees and contractors through programs. QGS first held a meeting with the top management in which a structured road map was made, and roles and responsibilities defined. The consultant also trained internal auditors and management staff who would assess implementation in the future.

A core energy management team was formed and Mr. Ramesh Kumar, DM (R&D), was appointed as Management Representative (MR) for ISO 50001.

Figure 1: Shree Gopal’s journey towards implementation of Management Systems

Implementation roadmap of ISO 50001

An action plan for smooth implementation of ISO 50001 was prepared by the top management in conjunction with QGS. Details of the Implementation Plan for ISO 50001:2011 from May, 12 to December, 12, 2012, are shown in Table 1.

Regular training/awareness programs were held for all employees acquainting them with preparation of manuals, procedures, legal registers and documentation related to EnMS, including documentation of current energy use in all departments of the mill.

The pre audit of ISO 50001 was carried out between October 12th and 13th 2012, and a certification audit, from the 11th to the 14th of December, 2012. Involvement, commitment and teamwork made ISO 50001 certification possible in a short span of six months.

Actions taken according to requirements of ISO 50001:2011

- Identification of type of current energy use, its consumption and evaluation in comparison with previous data.
- Identification of areas of significant energy use to draw up an Improvement Management Program.
- Installation of energy meters wherever required for recording energy use.
- Daily monitoring, recording and circulation of energy used data to all concerned.
- Insulation of all pipe lines, tanks, condensate return lines wherever it was missing.
- Making an energy baseline and comparison on a monthly basis.
- Awareness/training programs held regularly on shop floor.
Mr. M.K. Gupta
Chief General Manager and Unit Head, Unit-Shree Gopal, Yamuna Nagar (Haryana)

Unit Shree Gopal, where old paper machines are in operation and no such type of mill is certified with ISO 50001 to set a benchmark to work upon that. We set our own targets on the basis of best plant efficiencies to draw an energy performance indicator and also drawn energy base line data to further study the plant efficiency for effectively implementation of Energy Management System. The reduction in energy use has also contributed in the reduction of coal consumption with a final goal of reduction in GHG generation and production cost. An effective and systematic implementation of management system gives us a sense of proud feeling. This is a journey and we are always ready to implement any system which positively impacts our people, society, environmental sustainability and most importantly future of Unit-Shree Gopal.

Benefits of implementing ISO 50001

- Better understanding and effective use of energy consuming equipment.
- Promotion of energy management best practices within the unit as well as in daily life.
- Adoption and implementation of new energy efficient technologies.
- Reduction in product cost by improving energy performance.
- Reduced GHG emissions by reductions in coal consumption.
- Spread of culture oriented towards energy saving among employees.
- Improved bottom line within the unit.
- Achievement of PAT targets by adopting PDCA cycle.

Figures 2-5 displays the achievements as a consequence of implementing ISO 50001.

Challenges faced in implementing ISO 50001

Although implementing ISO 50001 was relatively smooth because all employees were well versed with the other management systems already in place (ISO 9001, ISO 14001, OHSAS 18001 and FSC), a major challenge was to involve and educate the bottom tier of operations and workers without whose involvement progress could not be achieved. This challenge was met by regular and effective training by local resource persons and expertise from outside the plant, both of which helped greatly.

Table 1: Action Plan for implementing the ISO 50001 Energy Management System

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Activity</th>
<th>Responsibility</th>
<th>May, 12</th>
<th>June, 12</th>
<th>July, 12</th>
<th>Aug, 12</th>
<th>Sep, 12</th>
<th>Oct, 12</th>
<th>Dec, 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kick Off meeting of ISO 50001:2011</td>
<td>QGS + Top Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Review with Core Team</td>
<td>QGS + Core Team</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Finalizing the Timeline and responsibilities</td>
<td>QGS + MR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Review of Energy Aspect with Core Team, Identify IMP &amp; OCPs</td>
<td>QGS + MR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Energy Management Awareness/Trainings</td>
<td>QGS + Core Team</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Completion of Procedures, Manual and Legal registers</td>
<td>MR + Core Team</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Identifications of improvement programs and making action plans</td>
<td>QGS + Core Team</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Finalization of all documents and internal auditors training program</td>
<td>QGS + MR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Internal audits, compliance of observations &amp; MRM</td>
<td>QGS + Identified auditors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Pre-Certification Audit by DNV</td>
<td>Certification Body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Compliances of Observations of Stage 1 audit raised by DNV</td>
<td>HDQs/Functional Heads</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Final Certification Audit by DNV</td>
<td>Certification Body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2: Total energy used in toe (2011-2014)
Figure 3: SPC per tonne of paper (2011-2014)
Figure 4: Total coal used in tonnes (2011-2014)
Figure 5: Total water used per tonnes of paper (2011-2014)