

NEW INITIATIVES/INNOVATIVE SCHEMES

MINISTRY OF STEEL

UNDP/GEF PROJECT ON ENERGY EFFICIENCY IMPROVEMENT IN THE STEEL RE-ROLLING SECTOR IN INDIA

The Ministry of Steel secured a grant of US \$ 0.28 million in March 2001 under focal area “Climate Change” for the development of project proposals on “energy efficiency improvement in the steel re-rolling sector in India.” The steel re-rolling sector mainly comprises small and medium enterprises (SMEs) with 75% units in the small scale sector. There are more than 1200 working units in the country. They form part of the secondary steel sector with contribution of over 57% of steel in the market.

Extensive survey of the issues associated with the current performance level of the steel re-rolling sector was carried out to identify the barriers that are responsible for technological obsolescence and poor energy efficiency levels of the industry in comparison to developed countries.

The GEF Council approved the Project in May 2003 for a technical assistance grant of US \$ 6.75 million and the Project Document has been signed in April 2004.

Project Objectives

The global development objective of the project is to increase end – use energy efficiency of steel re-rolling units (SRRM) sector and to reduce associated emissions of greenhouse gases (GHG). The immediate objective of the project is to accelerate the penetration of environmentally sustainable energy efficient technologies through removal of barriers, which would ultimately lead to large scale commercialization of energy efficient technologies in the sector.

Project Strategy

Major thrust of the project is on promotion of sustainable and viable energy efficient (EE) technologies in a market – driven manner. This would be achieved through reduction of transaction cost of EE technologies, opening up innovative channels for financing of EE Projects, development of human resources at local, regional and national level, facilitating communication among

institutions and assistance to SMEs in the sector to develop market – based bankable energy efficiency projects. The five-fold strategy aimed at SMEs in the sector shall cover:

Technological Demonstration – This project will demonstrate energy efficiency and environmental effectiveness of 5 low cost technology packages in 30 model units in 5 geographical clusters covering more than 13 States. This is expected to enhance its replicability in industry.

Cluster Approach – This would involve development of business and commercial networks (business support system), encouraging cooperative procurement of technologies and services, information dissemination and experience sharing.

Institutional Support – A self-sustained technology information resource and facilitation center (TIRFAC) would be set up to provide various technical assistance (TA) services to the SMEs in post project period.

Financial Support – Innovative-financing mechanisms like Energy Service Companies (ESCOs) and third party financing would be introduced for the first time in the industry that has a high risk-perception.

Market Development – Capacity building of all stakeholders including financial and technical support to domestic equipment manufacturers (DEMs).

Project Launch

The project was formally launched during the Climate Technology Bazaar organised by Ministry of Environment & Forests and CII in Hotel Ashoka in November 2003. The ground activities of the project will start with Inception Workshops planned at 3 locations (Delhi, Nagpur, Bangalore) in the month of August 2004.

STEEL AUTHORITY OF INDIA LIMITED(SAIL)

Roadmap for growth and profitability

SAIL is on its way to turnaround and high profitability. The cost reduction measures and betterment of Techno-economic parameters has helped SAIL on its path to turnaround. To sustain the performance and grow in future, SAIL is developing a Strategic Roadmap.

The plan, envisages –

- **Growth** – by maximizing the utilization of assets and de-bottlenecking
- **Cost reduction** – by operational improvement and technological interventions in selected areas.
- **Quality enhancement** – by process control and modern facilities.
- **Systems improvement** – by IT interventions and procedural improvements
- **Corporate Responsibility** – by commitment to Environment management and interventions to ensure adherence to CREP targets
- **Input management** - through initiatives to develop new Iron Ore mines and long term tie-up for supply of Coal.

The Plan is for the period upto 2012.

ROURKELA STEEL PLANT (RSP)

New initiatives

The major reforms and interventions at Rourkela Steel Plant are aimed at enhancing the motivation of the employees and addressing all HRD issues that generally hamper performance and progress.

The ten priorities, spelled out in the mission are:-

- (i) Employee motivation and employee pride.
- (ii) Leadership practice.
- (iii) Environment relations and organisational image.
- (iv) Plant Maintenance and Equipment Health.
- (v) Small Investment Schemes for maintaining current operations.
- (vi) Sustained operation and consistent production.
- (vii) Strengthening secondary streams of cash generation.
- (viii) Operational and purchase cost reduction.
- (ix) Sustaining the benefits of Operation Vijay the turnaround project of RSP.
- (x) Enhancing Gross Margin and Net Sales Realisation.

RASHTRIYA ISPAT NIGAM LIMITED (RINL)

Some of the new initiatives aimed at enhancing performance, reducing costs, improving realizations and profitability, etc. taken during the year 2003-04 and proposed to be taken in future in various areas are as under.

Operations

- Introduction of oxygen enrichment in blast furnaces utilizing the surplus oxygen available for improving the production of hot metal
- Use of semi-soft coal as a partial replacement of costlier medium coking coal for coke manufacturing
- Setting up of fourth coke oven battery to meet the enhanced requirement of coke
- It is also proposed to take up other initiatives like
 - ❖ Injection of natural gas in blast furnaces along with oxygen enrichment to increase production of hot metal and reduce coke rate.
 - ❖ Introduction of EMS (Electro-magnetic stirrer) in the continuous casting department
 - ❖ Installation of degassing facilities in SMS for developing new grades of steel meeting the requirements of automobile industries and for different forging applications
 - ❖ Use of metallized charge like DRI to increase the production and productivity of blast furnaces
 - ❖ With a view to improving the knowledge base and augmenting the on-going R&D efforts, it is proposed to go for technological tie-up with reputed international consultants/company

Energy Management

New initiatives like usage of coke oven gas in place of coal tar fuel in CRMP, installation of additional stream for LD gas recovery plant, upgradation of SCADA system, etc., are proposed to be taken up.

Environmental management

- VSP joined hands in the formation of Indian Steel Slag association to ensure 100% utilization of slag, to disseminate slag related information and to promote slag products
- Scheme for utilization of township sewage water in the plant as make-up water was initiated

Employee instantaneous recognition scheme (EIRS)

A scheme for providing instant recognition to an employee for outstanding contribution or special initiative was introduced during the year. The individual's efforts are recognised by presenting a corporate gift to him by the HOD in a function.

Godavari water pumping scheme

To ensure uninterrupted process water supply to VSP, Godavari water pumping scheme has been taken up. The project is being implemented on BOOT basis by M/s L&T Ltd. with APIIC as a nodal agency. A 56 Km pipeline is being laid from the inlet pump house built in the Godavari river up to the Yeleru canal. VSP is extending financial support of Rs.240 cr. by way of loan to APIIC. The work is in progress and expected to be completed by June/July 2004. VSP's additional requirement of process water on expansion will also be met through this scheme.

NATIONAL MINERAL DEVELOPMENT CORPORATION(NMDC)

1. NMDC has introduced CCTV system to monitor the operation of process plant in place of physical supervision by the operators which has helped in improving the operations & productivity.
2. NMDC is replacing the existing 50 T Dumpers by 85 T/120 T Dumpers to improve manpower and machine productivity through a quantum jump.
3. Programmed Logical System (PLC) has been introduced in process plants which is helping in minimization of breakdowns and idle time.

4. Hot Seat Change over Scheme, Computerized attendance system are contributing for better Human Resource Management and Manpower Productivity.

MANGANESE ORE (INDIA) LTD.(MOIL)

- About 2/3rd of the company's production of manganese ore is through underground mining. The handling of run of mine (rom) ore in underground mines was earlier done manually. During this year the company has introduced an electrically operated Side Discharge Loader (SDL) at its Balaghat mine, initially on an experimental basis, for mechanical handling of the r.o.m. ore in underground mines. This is the first time that the ore handling process has been mechanised and an electrically operated equipment has been introduced at the underground working face in the company's mines. The experiment has been successful, resulting in improvement in the labour productivity, handling costs and also the rate of mining and consequent improvement in safety. Encouraged with this, the company is now planning to introduce more such equipment in its underground mines in a phased manner.
- The company had earlier introduced hydraulic sand stowing in place of manual back filling of the voids created in underground mines. However, this had resulted in the sand particles adhering to ore and thereby deteriorating its quality. The company has therefore installed a " Scrubber" on the surface for effective washing of the r.o.m. material from underground mines. This is for the first time that such an equipment has been used for processing of the r.o.m. manganese ore, and this has resulted in effectively eliminating the sand particles and thereby resulting in substantial improvement in the quality of ore.
- The company has previously been using "cut & fill method" of mining for its underground mining operations, involving simultaneous back-filling of the voids created in underground mines. The company has now introduced a new method called sub-level open stoping which involves large scale blasting of the ore bearing material without the requirement of simultaneous backfilling of the mined-out area. This method is at an experimental stage.

HINDUSTAN STEELWORKS CONSTRUCTION LIMITED(HSCL)

- The Company is in the process of getting ISO 9001:2000 certification. Final Audit has already been conducted.
- Action is on for swapping of high-interest debts with low-interest debts

BIRD GROUP OF COMPANIES

1) Sponge Iron Plant.

In view of growing demand of sponge iron, the company is diversifying its activities by setting up a Sponge Iron Plant at Thakurani. Work for commissioning a 100 TPD capacity (30000TPA) Sponge Iron Plant is in progress. The company has taken advantage of the infrastructural facilities available for the purpose. The plant is expected to be commissioned shortly.

2) For the purpose of upgrading unsaleable manganese ore fines to saleable high grade manganese ore fines the company is proposing to set up a Beneficiation Plant. M/s. M N Dastur & Co., a Consultancy Firm was engaged for preparation of the Feasibility Report which has since been submitted and is under examination.

TATA IRON & STEEL COMPANY (TISCO)

Domestic Management Programme

TISCO has started a new innovative programme for the wives of their employees called the Domestic Management Programme. The programme is aimed at bringing about synergy within the family by imparting certain skills to the wives of the employees of the Organisation, while empowering them to manage change emanating from increased corporate responsibilities faced by their husbands.

The Domestic Management Programme at Tata Steel is run by Basera, a trust for women empowerment alongwith the Corporate Communication Division of the Organisation. Over 180 programmes have so far been held for the employees' wives and another 32 extended to non-employees by the Community Development and Social Welfare Department. 16 pilot programmes have also been conducted for Tata Steel's associated companies. As a result 17000 women have already been benefited by this programme.

The programme is designed to address the basic needs of a housewife and is conveniently spread over three half days so as to enable them to attend it. The following sessions were designed as part of the programme structure:-

- a) Inter-personal relationships
- b) Domestic budget
- c) Domestic safety and environment
- d) Drugs and AIDS awareness
- e) Health and healthy family
- f) Rights and duties
- g) Positive thinking
- h) Our Company today

A visit to the Tata Steel Works is also included in the programme. After each programme a feedback session is conducted so that the queries, responses and experiences of the participants add value to the process.

This programme is aimed at the notion that a happy family life is essential for increased efficiency at work. To make that happen, it was necessary to bring the wives also to the same wavelength as the company's work environment and its goals. This is the strategy of Tata Steel to merge the small families into the big family and work together for the better prospects of the organisation is beginning to yield rich dividends.