

## NEW INITIATIVES/INNOVATIVE SCHEMES

### UNDP/GEF PROJECT (STEEL)

#### INTRODUCTION

The Ministry of Steel secured a grant of US \$ 0.28 million in March 2001 under focal area "Climate Change" for development of a project proposal on "energy efficiency improvement in the steel re-rolling mill (SRRM) sector in India." The SRRM sector mainly comprises of small and medium enterprises (SMEs) with 75% share of small scale. There are over 2000 SRRM units in the country forming part of the secondary steel sector. Extensive survey of the issues associated with the current performance level of the steel re-rolling mills was carried out to identify the barriers that are responsible for technological obsolescence and poor energy efficiency levels of the industry in comparison to the 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 was signed on April 12, 2004.

#### BRIEF DESCRIPTION

The UNDP/GEF project on energy efficiency improvement in the Steel Re-rolling Mill (SRRM) sector is the first energy efficiency (EE) program in the country for SMEs. The 5- year project aims at removal of barriers to information, finance and technology with action to policy approach by the government. Simultaneously, the project will facilitate market transformation and will accelerate penetration of environmentally sustainable energy efficient technologies through successful demonstration of technology packages developed during the project development stage.

The project supports setting up of 30 model demonstration units in five geographical

clusters covering 13 States of India and would strengthen the domestic equipment manufacturers. These investments will mainly come from the private sector industry and the financial institutions.

The GEF grant (6.75 million) and support from the Govt. of India through Steel Development Fund (7.28 million) would facilitate technical assistance (TA) activities like benchmarking, strengthening of institutional arrangements, effective information dissemination and capacity building of all key stakeholders including Govt. departments and agencies.

Introduction of Energy Service



Side Discharge Loader (S.D.L.) in Operation underground Balaghat Mine

Companies (ESCOs) and innovative third party financing mechanisms is an innovative approach that would be introduced for the first time in the SME segment. A technology information resource and facilitation center (TIRFAC) has been planned to provide long term sustainability to the sector in the post project period through research, technology demonstration and development, design and business support facilities.

**INFRASTRUCTURE DEVELOPMENT**

The Project Management Cell (PMC) has been set up in the premises of Economic Research Unit (ERU) of Joint Plant Committee in Delhi. Renovation work of PMC has been completed and it is fully functional from January 2005.

The Project Operations Manual has been designed to facilitate functioning of the Project Cell and implementation of project programs in an effective, efficient and transparent manner so that the decision making process is not hampered.

The main policies laid out in the manual are based on existing establishment rules & regulations of the ministry of steel, public sector units, UNDP - Country Office and some of the policies being currently followed in the organization. The policies also take into consideration specific needs of the project and the size of team available for implementation.

**TECHNOLOGY INFORMATION RESOURCE AND FACILITATION CENTER**

**a) Hardware Center**

TIRFAC Hardware Center has been planned at NISST premises in Mandi Gobindgarh. A revised concept note on Hardware centre was considered by the Technical Sub-committee of PAC on August 27, 2004 and various alternatives were deliberated.

**b) Developing Synergy between TIRFAC Hardware Center and Industrial Infrastructure Up-gradation Scheme (IIUS) at Mandi Gobindgarh**

The project has plans to establish TIRFAC hardware center at Mandi Gobindgarh with a budget provision of Rs 8.83 Crores and Software Center at New Delhi with a budget of Rs 3.95 Crores.

Central Government has made a provision of Rs. 50 Crores for the Mandi Gobindgarh cluster under the Industrial Infrastructure Up-gradation Scheme (IIUS) for which fund is available as World Bank aid. Funds from this scheme can be obtained by forming special purpose vehicle by contributing 25 % from the industrial cluster in public-private partnership. The SRRM sector has invited UNDP/GEF Project to participate in the scheme.

Out of the Rs 8.83 Crores budget of TIRFAC hardware center at Mandi Gobindgarh, Rs 3.30 Crores is required for establishing reheating furnace and related combustion facilities including upgradation of lab facilities of NISST. A part or whole of the remaining approxi-



Construction work at Bailadila 10/11A Project

mately Rs 5.53 Crores could be earmarked towards contribution of the Ministry of Steel (MOS) for the SPV under IIUS for development of Mandi Gobindgarh cluster. This can enlarge the scope of the proposed TIRFAC Hardware Center considerably and make it a complete one.

### **c) Software center**

A memorandum of understanding (MOU) has been signed with the Indian Institute of Metals (IIM) to set up TIRFAC Software Center at Jawahar Dhatu Bhawan, IIM Delhi Chapter building located in Mehrauli Badarpur institutional area. Work for renovation and furnishing of approximately 400 sq meter space is in progress and the TIRFAC Software Center will be functional from the second quarter of 2005-06

## **IMPLEMENTATION OF MODEL UNITS**

### **a) Request for Participation (RFP)**

The project had envisaged 3 model units in the first year. However, on demand from industry the process has been initiated for implementation of 10 model units. Letters were issued to 22 units that were studied during the project development stage to solicit Request for Participation (RFP).

### **b) Project Development Agreement**

Project Development Agreement drafted in consultation with legal expert was mailed to selected units. Ten (10) units have responded with supporting documents.

### **c) Pre-measurement Studies**

Preliminary 6-decile study has been completed in six (6) units during the quarter Jan-Mar 2005 and a report on follow up action has been provided to each of the units.

### **d) Procurement of M&E Equipment**

Monitoring and Evaluation (M&E) equipment are being procured during the year 2004 - 05 as part of setting up a mobile laboratory for conducting detailed study in the model units.

### **e) Development of BFR**

Bankable Feasibility Reports (BFRs) for individual model units will be prepared by consultants based on specific needs identified during detailed study, Investment Grade Audit (IGA) and in consultations with the experts.

## **SAIL**

### **TECHNOLOGY**

To reduce coke rate and also to reduce coking coal consumption, action have been initiated for utilization of auxiliary fuels in Blast Furnaces, which will cover almost all the SAIL Blast Furnaces. This will include -

- Coal Dust Injection
- Tar Injection
- Sponge Iron Usage

### **OTHER AREAS**

1. Export of Power of about 15-20 MW from Durgapur Steel Plant to Bhilai Steel Plant has been effected from July 2004 utilizing the provisions of new Electricity Act. This is the first inter regional transfer of power by any organization other than Central/State utility.
2. To ensure long-term security of coking coal supplies, SAIL has initiated action for acquiring equity in coking coal companies and also in forging Strategic Alliances. An MoU has been signed with M/s. BHP Billiton, an Australian company in this regard.

- For iron ore mining, an MoU has been signed with KIOCL for forming Strategic Alliance.

## CORPORATE PLAN

SAIL has finalized its Corporate Plan 2012, which envisages substantial growth in hot metal production to 20 MT per annum from a current level of 13 MT per annum. The total saleable steel production is planned at 17 MT per annum, which increase in finished steel component to about 95% from present levels of about 78%. To sensitize the equipment suppliers a B2B meet was held in this regard.

## NMDC LTD.

New Initiatives/innovative Schemes of PSU

- 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.
- NMDC is replacing the existing 50 T Dumpers by 85 T/120 T Dumpers to improve manpower and machine productivity through a quantum jump.
- Programmed Logical System (PLC) has been introduced in process plants which is helping in minimization of breakdowns and idle time.
- Hot Seat Change over Scheme, Computerized attendance system are contributing for better Human Resource Management and Manpower Productivity.



## MOIL

About 2/3rd of the company's production of manganese ore is by underground method. Earlier, the handling of run of mine (ROM) ore in underground mines was done manually. The Company has during this year introduced an electrically operated Side Discharge Loader (SDL) at its Balaghat manganese mine, initially on an experimental basis, for mechanical handling of the ROM ore in underground mines. This is the first time that electrically operated equipment has been introduced at an underground mine. This is also the first time that the handling of ore in underground mine has been mechanized. 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 phase wise introduce larger number of such equipment in underground mine.

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 adhering to ore, thereby effecting its quality. The company installed a "Scrubber" on its surface for effective washing of the ROM material. This is for the first time that such an equipment has been used for processing of the ROM manganese ore, and this has resulted in effectively eliminating the sand particles.

The company has previously been using "cut & fill method" of mining for its underground mining operations, which involved simultaneous back-filling of the voids created due to mining. The company has now introduced a new method called sub-level open stopping. This involves large scale blasting of the ore bearing material, and also does not require simultaneous back-filling of the mined-out area. This method is at an experimental stage.