



Proposed programme for technology upgradation and green-house gases emission abatement in Ferozabad glass industries cluster

The small scale industry (SSI) in India, although found to be playing a critical role in providing employment opportunities, mobilizing local skills and capital resources, has been observed to be generally less efficient in material and energy utilization when compared to enterprises of similar scale in developed countries. In terms of energy efficiency, the Ferozabad glass industry presents a grim picture necessitating immediate technological intervention. A recent study by a UNIDO expert has revealed that Ferozabad small-scale cluster consumes 107% more energy than international level.

In view of the vast scope for energy efficiency enhancement and consequent protection of environment, particularly in the context of Ferozabad falling under the environmentally threatened Taj Trapezium Zone, this Glass industry cluster has been identified for implementing a comprehensive programme on technology upgradation. The programme envisages a holistic approach covering various facets of local glass industry cluster activities viz; upgradation in technology and quality, efficiency in fuel consumption and consequent abatement in Green House Gases (GHG) emissions, safety of work environment, adoption of international standards and modern management, exposure to international markets, capacity building etc. so as to ensure sustainable development. The development phase of the project shall be funded by the Ministry of Small Scale Industries, Government of India. The tested technologies shall be evaluated at the end of the development phase and a programme for replicating the technological development in the other glass units shall be prepared. The development phase shall be funded by Govt. of India, SIDBI and the Industry Association.

The tested and proven technologies shall be replicated in the technology transfer and facilitation phase for which a detailed project document will be prepared for support from international donors by UNIDO.

The main objective of the proposed programme is technological up-gradation of glass industries at Ferozabad by strengthening technological and manufacturing capacity through adaptation of energy efficient technologies and their demonstration :

- ❖ to reduce GHG emissions through energy efficiency measures.
- ❖ to improve significantly the working environment and health of workers in glass manufacturing processes in general and in the ancillary operations in particular, and
- ❖ to ensure sustainability of these small and cottage industries in the context of globalization.

The following five areas have been identified for technology development :

- a. Development and installation of energy efficient 12 pot furnace (open pot and close pot)
- b. Development and installation of auxiliary furnaces like "sikai bhatti" and "pakai bhatti" used for bangle making
- c. Improvement in combustion technology by furnace design development, use of improved construction material, instrumentation and retrofitting
- d. Bangle joining
- e. Mould development.

