

Energy efficiency technology transformation in metal casting in South India

New Delhi

February 2nd 2011

Metal casting sector in India

- ❖ 5000 units (1200 in South India) located in clusters
- ❖ One of the most energy intensive SME sectors, huge scope for energy savings and CO2 reduction
- ❖ Growth of the economy spurring demand for castings in automobile, textile, agriculture (pumpsets), municipal infrastructure (pipes) etc.
- ❖ Shifting of production from industrialised to developing countries

Cleaner technology development, demonstration and diffusion in metal casting sector

- ❖ Partnership with Swiss Agency for
Development and Cooperation (SDC)

Technologies developed and demonstrated in metal casting sector

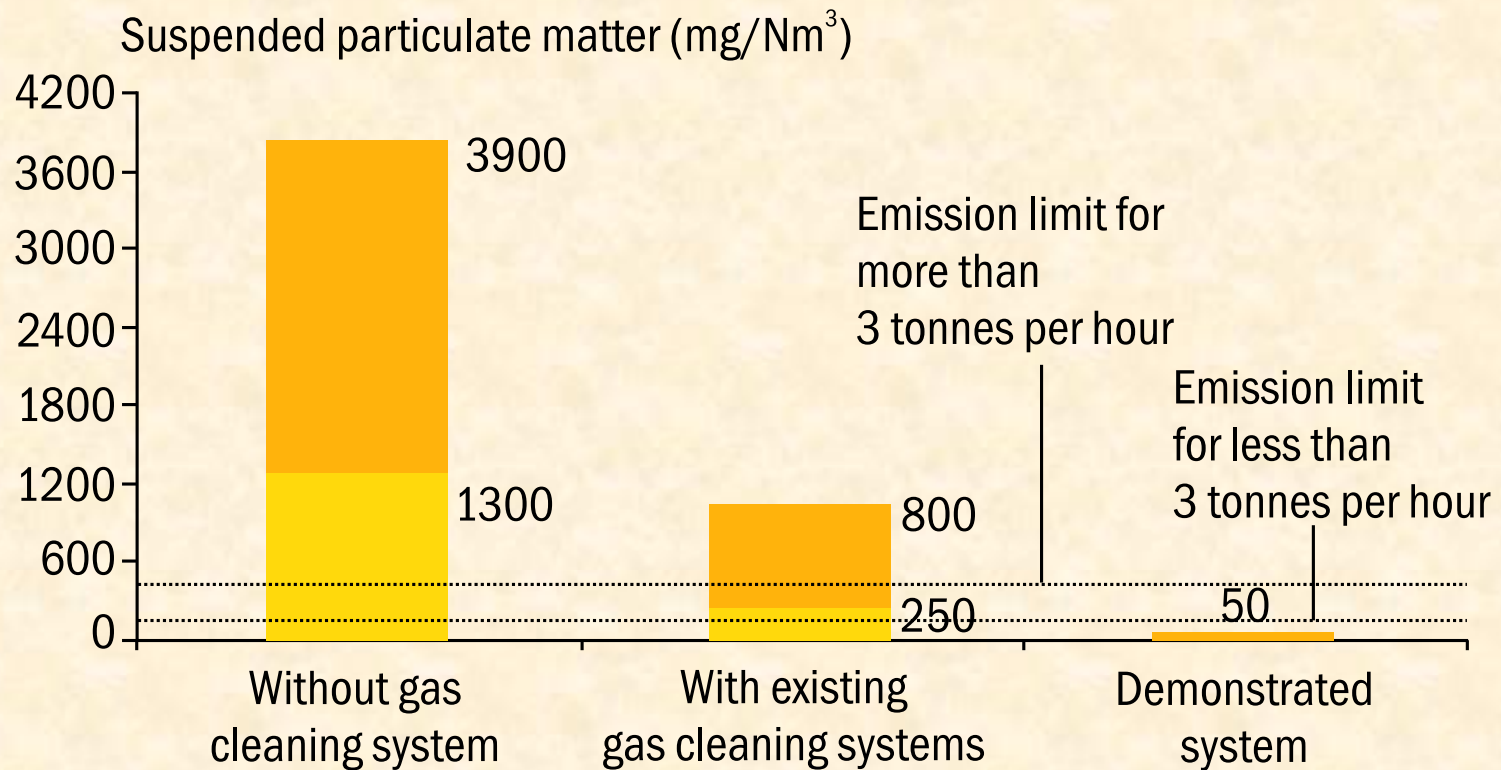


- Energy efficient melting furnace DBC – Divided Blast Cupola
- High efficiency Pollution Control System (Venturi-scrubber)



Commissioning of the demonstration plant

Environment performance



Conventional Cupola to DBC – About 30 DBCs replicated in Rajkot, Gujarat (Western India)

Then



and

Now



Downsized DBC developed for Ahmedabad cluster (Gujarat)



Replicated in 5 units Gujarat



Energy efficiency improvement in metal casting units in Coimbatore, South India

- ❖ Collaboration with Renewable Energy and Energy Efficiency Partnership (REEEP) Program

(May 2009 – April 2011)

TERI-REEEP collaboration

- ❖ Technology dissemination
 - ❖ Replication of energy efficient practices and technologies (eight replications against three targeted)
 - ❖ Hands-on training of operators and supervisors in best operating practices (over 50 personnel trained)
- ❖ Institution building, bridging knowledge gap, policy dialogue
 - ❖ Identification and capacity building of LSPs
 - ❖ Capacity building of industry associations/entrepreneurs
 - ❖ Creation of a platform for dialoguing between industry associations and financial institutions

Nelcast Limited, Punneri



Aquasub Engineering, Coimbatore



Eltex Supercast, Coimbatore



National policy workshop at Coimbatore

- ❖ Organized in association with SIEMA
- ❖ Brought together various stakeholders to a common platform
- ❖ Stakeholders:
 - Government bodies (BEE, MSME-DI, state PCBs)
 - Development agencies (SDC, REEEP)
 - FIs (SIDBI and SBI)
 - Academic and research establishments
- ❖ Deliberated on strategies to accelerate the adoption of energy efficient technologies and practices



Coimbatore workshop - Oct 22nd 2010

Opportunities for REEEP

- ❖ Success in Coimbatore presents an opportunity to extend the project to other metal casting clusters in South India
- ❖ Providing guidance and support at state level to promote cleaner technologies
- ❖ Generating awareness among cluster and state level stakeholders
- ❖ Working with existing cluster-level institutions to evolve workable and attractive financing mechanism
- ❖ Identifying and strengthening of LSPs
- ❖ Providing customised energy efficient technology designs to meet cluster specific requirements

Thank you

Prosanto Pal

TERI, New Delhi

prosanto@teri.res.in