

Thermal power plants

Thermal power plants produce a significant amount of waste and have a negative environmental impact in terms of wastewater and air emissions. Huge amounts of fly ash byproduct is the most significant pollution problem. Existing capacities for thermal power plants will expand significantly in the near future, and the Indian government is applying significant pressure for action in the following areas, each of which require technology solutions:

- Fly ash utilization
- Coal benefaction
- Upgrading/retrofitting of existing power plants
- Fluidized bed firing (for small power plants and for the utilization of residues from coal benefaction)
- Primary measures for nitrogen oxide removal
- Flue gas desulphurization
- Fabric filters (for smaller blocks)
- Continuous waste gas measuring devices (SO₂, NO_x, dust, CO, CO₂, O₂).

Iron and Steel Foundries

Foundries emit significant levels of pollution including solid hazardous wastes and air emissions. They are considered to be an export-oriented growth industry, and therefore modernization of the existing plants is necessary, and supported by special measures in several states. Pollution prevention equipment can be integrated into new production technology as it is introduced. This will require technology solutions in the following areas:

- Semi-automatic moulding machines for mechanization in small foundries
- Sand regeneration
- Automated core production processes
- Coated electrodes for electric arc furnaces
- Hot gas filtration
- Efficient sand coolers
- Improved sand mixers
- Heat recovery for heat treatment furnaces
- Metal filters
- Spectrometers
- Full mould casting processes.