

# Technology Initiatives Clean Air in Open Pyre Crematoria



## Air Pollution Control Unit for Green Crematoria



Air Purifying Technology  
for Hot Spot Locations



## Air Pollution in Crematoria of Delhi

Delhi has about 56 traditional cremation grounds where Hindus cremate bodies by burning massive piles (300-400 kg) of firewood) in the open, billowing out clouds of black smoke into the sky. It also generates large quantities of ash which flows into the Yamuna.

Particulate emissions PM10 and PM2.5 alongwith NOx, Ozone, Benzene etc., are high in nearby regions of cremation grounds



### Highlights of the system

In view of the high local emissions from crematoria, CSIR NEERI developed technology to mitigate it. The air pollution mitigation system for Green Crematoria has been developed and installed at VIP Pyre 3,4,5,6 of Nigam Bodh Ghat New Delhi. The system comprises of:

- The Pyre Fume collection and handling system (canopy, ID, High Volume Exhaust )
- The Pyre Fume Processing/cleaning system (filters and reactive scrubbers and associated units)
- The Pyre fume Processing Utility systems (Electrical/Instrumentation/sensors)
- The Pyre Fume Processing Waste Handling systems (ETP, Solid waste processing)



## Salient Features

- Innovative and Efficient design of scrubbing system offering reduced emission of smoke, oil/grease GHG and particulates
- Capture of flue gases at a temperature more than 200°C using a especially designed canopy.
- Further improvement comprises of specially designed common hood and additional blower for treatment of toxic emissions produced during cremation of COVID bodies along with a properly designed chimney for safer release of exhaust.
- The residence time for flue gases in the scrubbing unit designed is more than 5 seconds to ensure high efficiency of gas/dust/liquid scrubbing.
- Efficient demister pads for retaining moisture oil/grease
- Current capacity of 4 open pyres can be scaled up for higher loads.
- The tar/solids generated can be collected & disposed safely.
- Waste liquid are recycled after treatment in ETP for one week before final disposal in sewer line



# Benefits

## Environment

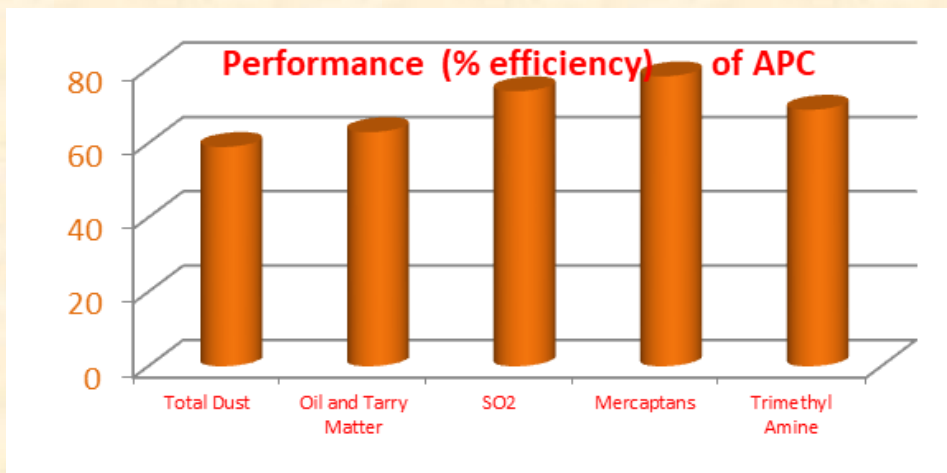
- Aids in achieving the commitment under Swachh Bharat Mission and direct connect with SDG 13: Climate change UNFCCC.
- Can potentially reduce the burden of huge emissions at more than 50 open pyre crematoria in Delhi and other cities: SDG 10 & 17 thereby reducing exposure of toxic air pollutants to air.

## Improvement in Quality of Life

- Improved Air Quality in and around the crematoria.

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Emission results of technology demonstrated at VIP Open Pyre at 3,4,5,6 of Nigam Bodh Ghat New Delhi is given below:



The outlet emissions from Green crematoria complies with the concentration based General Emission standards of CPCB; PCLS/4/2000-2001 July 2000.

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