Welcome to Techflow Enterprises

Furnace Fume Extraction Systems

Quick Inquiry

About

Furnace Fume Extraction Systems

Techflow Enterprises Pvt Ltd is one of the biggest and most trusted suppliers of products like Air pollution control device, Air pollution control equipment, Bag filter, Pulse jet dust collector, Pulse jet bag filter, De-dusting system, Bag house, Cassette type filter, Reverse air cleaned bag filter, Silo Vent filter, Fabric Filter, Dust Recovery system, online cleaning bag filter, Off line cleaning bag filter, Centrifugal fans and blowers, Flue gas emission control system, furnace fume extraction system, welding fume extraction system and pneumatic conveying system, Electro static precipitator, ESP in India with exports all around the world.

Techflow Enterprises Pvt Ltd has been serving many industries like Foundry, Particle board plants, Steel mills, steel plants, TMT making industry, dryer, Aluminium plant, aluminium smelting, Waste to energy plant, WTE, mineral industry, DRI plant, rubber recycling, cement mill, cement plant, crushing plant, boiler flue gas, ceramic plant, kiln, pharmaceutical plant, Food Plant, Dairy Plant, cattle feed plant and many more industries.

Discover more

Applications

Fume Extraction System And Filtration System For Furnace

FES for AOD (Argon oxygen decarburization Furnace)

- **Primary Fume Extraction System for AOD Furnace -** AOD also known as Argon Oxygen Decarburization furnace is a system in which water cooled or a normal top draft suction hood is provided at the top of furnace vessel to extract the fumes generated during melting operations. This hood further goes to the gas cooler or heat exchanger or to the spark arrestor to eliminate the excess heat or sparks from the fumes. Then the fumes which are cooled down go to the pulse jet bag filter or bag house or air pollution control system where SPM or dust or fumes get filtered and then clean air passes through the centrifugal fan, to atmosphere via stack or chimney. The outlet emission after installation of these systems can be controlled to as low as 2 mg/nm3 depending on the pollution control norms of that particular location.
- **Secondary Fume Extraction System for AOD Furnace -** Despite installing primary Fume Extraction System in Induction Furnace, some fumes still escape during the operation of scrap charging, pouring and additives additions. These fumes tend to make a cloud at the top of the shed. In secondary fume extraction system, we install many hoods at the top of the shed with automatic dampers throughout the shed. These dampers are opened as per the need arises and form furnace platform or they can sense the fume and get open automatically and extract the fume from the top of the shed and take it to the pulse jet bag filter or bag filter or air pollution control system. After the filtration of fumes and gases it goes to atmosphere through ID fan and stack or chimney. The outlet emission after installation of these systems can be controlled to as low as 2 mg/nm3 depending on the pollution control norms of that particular location.
- **Dog House Fume Extraction System for AOD Furnace -** Dog House Fume Extraction System is a unique approach where one can eliminate the requirement of secondary furnace fume extraction system. This system comprises of travelling large sized hood which captures all the fumes at all stages of operations like charging, additives, and pouring. In this method; charging of the scrap needs to be done compulsorily through travelling vibro-feeder, molten metal needs to be collected tapping to ladle. Once the fume is extraction process completes; the next operation is same as primary or secondary fume extraction system. The outlet emission after installation of these systems can be controlled upto as low as 2 mg/nm3 depending on the pollution control norms of that particular location.

FES for EAF (Electric Arc Furnace)

- EAF also known as Electric Arc Furnace comes with a top cover and this cover contains the primary suction hole known as the 4th hole. The fumes generated inside the furnace needs to be extracted through this hole only but as it is a completely closed furnace, the temperature of the fumes extracted are very high thus water cooled ducts are must to during installation. Once the fumes are extracted, it has to travel to the gas cooler or heat exchanger in order to cool down the temperature and then to the pulse jet bag filter or bag house to filter the fumes. Once the furnace fumes are filtered, it goes through atmosphere via ID fan and stack or chimney. The outlet emission after installation of these systems can be controlled to as low as 2 mg/nm3 depending on the pollution control norms of that particular location. EAF Furnaces generally need both Primary and Seconcary FES as dog house type fume extraction system is not possible with this furnace.

FES for LRF (Ladle Refining Furnaces)

- The prime requirement of these furnaces is to raise the temperature of the molten metal or to adjust the properties of the molten metal. Fumes generated in this operation are comparatively low and can be controlled by primary fume extraction system which comprises of suction hood, pulse jet bag filter and centrifugal fan or blower. The escaped fumes in this operation can be captured through a central secondary fume extraction system installed at the top of the shed.

FES for Induction Furnaces

- **Primary Fume Extraction System for Induction Furnace -** Induction furnaces are the widely used furnace system to melt the steel at a global level. In this system; a top draft or a side draft suction hood is provided at the top or side of the furnace vessel to extract the fumes generated by the furnace at the time of melting. This hood further goes to the gas cooler or heat exchanger or to the spark arrestor to eliminate the excess heat or spark from the fumes. Then the fumes which cool down go to pulse jet bag filter or bag house or air pollution control system where SPM or dust or fumes get filtered and then clean air travels through the centrifugal fan and to atmosphere via stack or chimney. The outlet emission after installation of these systems can be controlled to as low as 2 mg/nm3 depending on the pollution control norms of that particular location.
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FES for Zinc Furnaces

- Zinc Furnaces are generally induction or gas fired furnaces. Here the fume extraction system is generally used for recovery of fumes as they are product for the Melter. Only primary fume extraction systems are used to collect the zinc powder in the form of zinc through the bag filter discharge and packed directly. The outlet emissions after installation of these systems can be controlled upto as low as 2 mg/nm3 depending on the pollution control norms of that particular location.

FES for TRF (Tilting rotary furnace) & Skelner furnaces

- A common application of Tilting rotary furnace and Skelner furnace is in aluminium recycling and aluminium smelting plants. Fume Extraction System for TRF and Skelner furnaces are generally complied of fixed suction hood, wet scrubber and pulse jet bag filter. The outlet emissions after installation of these systems can be achieved upto as low as 2 mg/nm3 depending on the pollution control norms of that particular location.

FES for Exothermic Reaction Furnace

- The Furnace Fume Extraction System are installed for collecting fumes from Exothermic Reaction Furnaces because there are always more than one exothermic reaction furnaces installed. The Fume Extraction System for Exothermic Reaction Furnace are generally with travelling suction hood, gas cooler, centrifugal fan and pulse jet bag filter. The emissions after installation of these systems can be controlled to as low as 2 mg/nm3 depending on the pollution control norms of that particular location.

CNC Plasma and Laser Cutting

- Fume extraction systems for CNC laser or plasma cutting are generally used for the purpose of capturing and filtering the fumes generated during the cutting operation. This arrangement generally comprises of suction and cutting table, pulse jet dust collector of centrifugal blower and pulse jet cartridge filter.

Welding Fume Extraction

TECHFLOW provides optimum solution for issues related to fumes which are generated during different kinds of welding operations like TIG, MIG, SMAW, Brazing and Soldering. We at Techflow provide feasible and finest solutions for the fume extraction during welding operations as mentioned below:-

- Central welding fume extraction system for multiple station of SMAW welding This system is comprises of various suction arms for welding fumes, ducting, pulse jet cartridge filter or pule jet dust collector and centrifugal fan or blower with automation of dampers and blower.
- **Mobile welding fume extraction unit -** This is a stand alone unit comprises of flexible 360 Deg Rotating arm, Filter cartridge and centrifugal blower, wheels to travel and many other accessories.

Centrifugal fans and blowers for steel plant

Techflow is a Supplier of various industrial grade centrifugal fans and blowers used for following applications:-

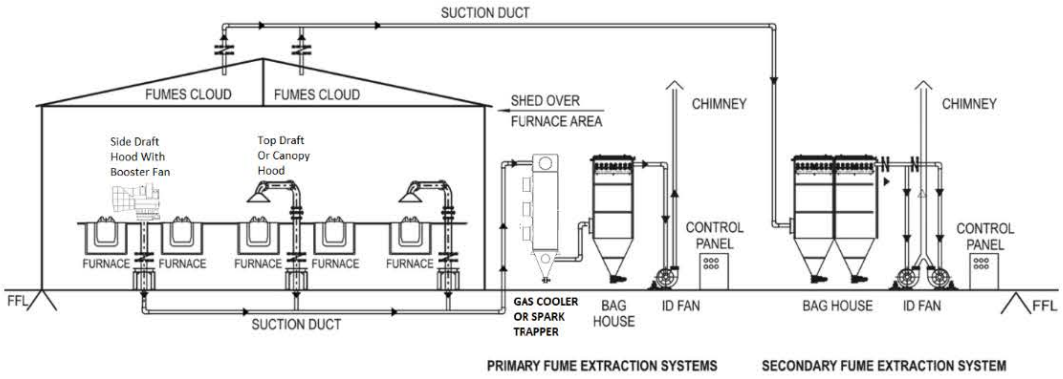
- ID fan
- ABC Fans
- ID Fan for ESP
- Nose Cooling Fans
- Kiln Fans
- Other Processing Fans and blower

Dust collection systems / Air pollution control system / bag filters for various application of steel plant, DRI plant, Crusher houses, captive power plant

TECHFLOW is a manufacturer and supplier of dust extraction systems, de-dusting system, pulse jet bag filters for crushing plants like DRI plant, Stone Crushing, Mineral Grinding to control the dust particles at following points:-

- JAW crushers
- Silo venting
- Vibro Screens
- Hopper Discharge
- 5.Belt Transfer
- Belt to Bin Transfer

Schematics: Furnace Fume Extraction systems



Furnace Air Pollution Control System

Induction furnace & arc furnaces are offered to control their resulting pollution control by exctraction thro' swilling/ water cooled hoods or third hole. The extracted hot fumes & gases (often flame laden) are taken away to TECHFLOW air pollution treatment & furnace air pollution control systems. The TECHFLOW furnace pollution control system consists of Primary cyclone / secondary air-water cooler & finally thro' a pulse-jet or reverse air bag house. A powerful ID fan & duct-stack system is provided as ordered.

The workers / employees find it uncomfortable to work in the polluted environment and as a result affects their output and efficiency.

Air pollution Control System for

- Induction Furnace
- Arc Furnace
- AOD Furnace

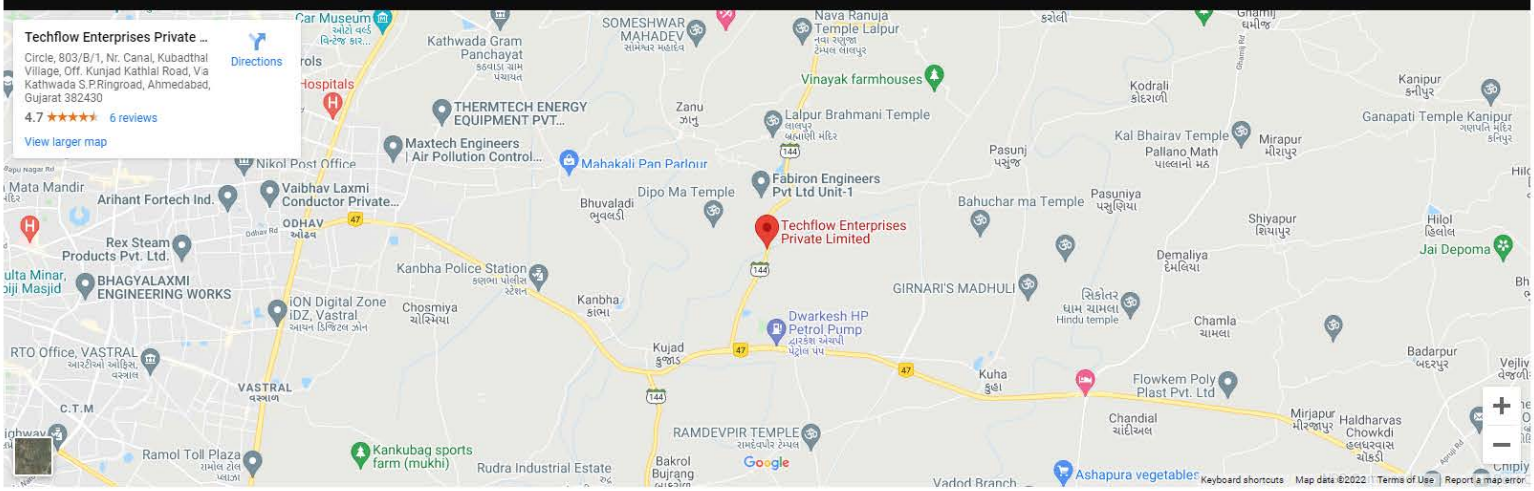
Download Brochure

Download Brochure

Installations

Options For Furnace Air Pollution Control System

- Induction Furnace Fume Extraction & Filtration(Ferrous & Nonferrous)
- AOD Furnace Fume Extraction & Filtration
- EAF Furnace Fume Extraction & Filtration
- ZINC Oxide Furnace
- Exothermic Reaction Furnace



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TECHFLOW

Healthy Air-vironment Always .....Anywhere!

Components & Spares

- Rotary Air Lock Valves
- Dome Valve
- Wear Resistant Bends
- Aeration Pad
- Welding Fume Extraction System
- Vent Filters Dust Aspiration Units
- Motorised Shaker Dust Collectors

Industry Specific Solutions

- Foundry, Steel & Sponge Iron
- Wood, Laminates & Particle Board Plants
- Master Batch / Plastics / Pigments / Paints
- Mineral / Mining
- SAW Pipe Manufacturing
- Food, Spices, Tobacco, Agriculture, Dairy & Cattle Feed

Corporate Office

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Direction

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Working Days - Monday to Saturday - Timing - 8:30 a.m. to 5:00 p.m.