

ENVIRO INTERNATIONAL CORPORATION

DUST SUPPRESSION SYSTEM



Enviro International is a project based company with a prime interest in Air pollution Control Equipment, Dust Suppression System, Belt Conveyors and Material Handling systems, Pneumatic Conveying System, Ventilation Systems. Enviro International Corporation is promoted to provide one shop solution for Air Pollution and Air Ventilation System and Material Handling Systems. The use of these equipment is increasingly being extended to dedusting and conveying of material preparation plants in the various industry.

DUST SUPPRESSION SYSTEM

We offer Dust Suppression system for Stock Yard, Belt Conveyor line for power plant & other industries, Wagon Tippler, Belt transfer points, Reclaimer Hopper, Screen, crusher, etc.

We offer Plain Water system and the Dry Fog System also. Stock yard Sprinkling System etc – Sprinkling System is used for Stock Yard Area or Raw Material Storage Area.

Dry Fog System

Dry Fog Dust control Systems have been in operation worldwide. It makes dual fluid (air and water) atomizing nozzles control virtually all breathable and fugitive dust.

THEORY AND APPLICATION :

The "Dry Fog" Dust Control System works on the principle of agglomeration. The Dust particles released from a Material Handling/Processing Plant which become air borne are made to pass through a blanket of extremely fine Fog. The dust particles and the Micronics size Fog droplets collide and adhere to each other, thus increasing their mass. After a series of such collisions, even the breathable and fugitive dust ranging from 1 to 800 microns mass agglomerates to become heavier enough to settle. The lower capital, operating and maintenance cost compared to De-dusting Bag House System made it popular in the industries. Easy installation in existing plants. In most cases, the system can be installed while the plant operates at full capacity. No major plant modifications are required for installation of the system. Water addition to the process is as low as 0.1% of the weight of the material being handled. No requirement of Chemical.

Plain Water Dust Suppression System

The dust suppression system in the coal handling plant is a wet dust suppression system. Wetting Agents are chemicals that are added to water to improve the rate at which spray droplets wet dust particles.

This system consists of three main parts like Water Pump, Water Tank, etc. Spray headers with pipe lines & pumping system. Control units with electrical systems.

Spray header with pipe lines pumping system includes solution pumps, isolating valves, spray nozzles, and pipe lines. The solution pumps are used to supply pressurized water to spray headers. The required quantities of nozzles are used to spray water. Control units with electrical systems consists of sensing units, control panels. Coal flow is sense by sensor. The control panels are consisting of various relays and transformer.

Operation of DS System

Auto control or manual control governs the system. It has to be insured that main tank is filled with water. The water is pumped by feed water pump from main tank to feed water tank. the system in recalculation. The sensing system for controlling spray at proper header ensures spraying solution if conveyor is running with coal. And will not allow spraying solution if conveyors are running empty, the solenoid valve headers are energized if conveyor is running with coal. If all or some of the solenoid valves are not energized the system will realize pressure through pressure relief valve, which protects the system. A solenoid valve is provided with bypass line, which operates when none of the spray header solenoid valves are operative.

Stock yard Sprinkling system

Sprinkling system is used for dust suppression of stockpile. Water is sprayed on the stockpiles to keep the coal damped and prevent dust to flying around. Sprinklers Irrigation systems is used to control dust on outdoor stockpiles, but when the stockpiles are excavated, dust will arise as the drier material in the pile is exposed and moved around. An sprinkler system uses a lot more water than a fogging system – almost 10 times, sprinkling system is chosen after a lot of considerable planning and forethought. One Sprinkler can move around its axis and can throw the water even up 20-50 m away.

FOG CANON

We in association with our team of engineers and designers developed a cutting age technology for Fog Canon and offers different types of Fog Canon. Fog canon is widely used in India and overseas for suppression of flying dust on various application and disinfection. Unlike other types of dust suppression.

Fog canon is normally mounted on a trolley and it can be moved from one location to other location as it is on wheels. In industrial application, for dust suppression, most widely used application is Stock yard Area, Dirty mines, Tripper/Truck unloading in mines and ground hopper, wagon trippers, Reclaimer hoppers, any locations where dust is flying and open too, waste water evaporation. In open area, only and only Fog canon is used widely, as other methods of catching dust fails poorly on this fronts.

We offer various type of Fog canon, and every Fog canon is individually designed and manufactured as per client requirement and applications, Fog canon can be fixed type and rotating type. In fixed type, Fog canon will suppress the dust in single direction, while in Rotating type, it can rotate and suppress the dust in different directions. Fog canon rotate around on its axis by 90 deg, 180 deg or up to 330 Deg. as per client requirement, we individually design and manufacture the fog canon. We supply Fog canon for a throw away range up to, 35m, 50m, 60m, 70m, and 100m, 120m, and supplies both fixed type and auto rotating type. Degree of movement can be 0 -180 Deg, 0 -355 Deg even fixed too.

TRUCK MOUNTED FOG CANON, MIST CANON

We supply Truck-mounted Fog Cannon, complete with all accessories for air-borne dust suppression system, mounted on new Truck Chassis (with built-up Driver's Cabin), suitable to suppress air-borne fine dust of Coal, Iron Ore, Limestone, Fertilizer, etc. and other cargo, while handling, transporting and stacking of such cargo at port or industry, EIC Truck-mounted Fog Cannon Mist Machine (including Chassis, Water Tank, suitable Diesel Generator (DG) Set or hydraulically driven, Rear Sprinkler, High Pressure Pump, Hose, Nozzle, The machine fitted with 1 (one) no. Multi-stage Centrifugal Pump set, fabricated Water Tank, suitable for horizontal throw range of Water Mist from 20 metres to 50 metres and vertical peak up to 12 metres. If the machine is supplied with DG Set than, Suitably rated DG Set with Alternator and all other arrangements (to take the load of Fog Cannon and Pump Sets) in acoustic enclosure, as per the relevant Indian Standards, shall be fitted with residential type silencer. The complete assembly shall be fitted firmly on the Chassis unit.

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