## .HMC. TRUCK UNLOADING HOPPER COLD FOG DUST SUPPRESSION SYSTEM

.hmc. Cold Fog TRUCK UNLOADING HOPPER DS system is a plain filtered water high pressure Dust Suppression system. (Application) Truck Unloading Hopper (coal) normally installed at truck unloading hopper.

## **Principle of Operation:**

The pump is to be activated manually (optional auto system if required) spray will activate automatically once the unloading of truck starts in the hopper.



<u>Pre-Wetting DS System – Waiting Trucks</u> (Optional)

The Fogging type spray nozzle fitted on the entrance of the receiving pit area will spray to moisten the top layer of the trucks.

Further in order to form a water curtain around the entire periphery specially designed atomizing nozzle shall be installed & activated at the same time with an extra high pressure small discharge pump (nozzle discharge 0.05 to 0.25 lpm @ 70- 100 bar pressure)

Dust generating points will be properly placed with spray headers and nozzles which produce fine mist sprays. The Air borne dust oncoming in contact with the fine mist type water particle, which becomes heavy and settle down with the original material flow.

## **Clarified Water for CFDS System**

Ro quality treated water required for CFDS system to omit nozzle chocking & scale formation in the pipline.

COMPLETE SYSTEM CONSISTING OF ELECTRICAL ACTUATOR / SPRAY HEADER / CFDS NOZZLE / FILTER / SS-304 BALL VALVE / HIGH PRESSURE WATER PUMP / MCC PANEL / SS-304 PIPES & REQUIRED INSTRUMENTS.



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The TUH Spraying actuation shall be controlled from operators cabin by pushing the LPBS switch to energize the normally closed high pressure solenoid valve (Automation through sensor – optional). The Spraying will be started / stopped through Solenoid Valve mounted on the Solenoid Boxes for each header. Specific solenoid valves will get energized based on the truck movement and will get de-energized through a pre-set timer (adjustable). The system shall be suitably interlocked by solenoid box with the truck unloading mechanism so that the spraying time should be throughout the complete operation of unloading. Total suppression system shall act in such a way that the water curtain shall cover the entire periphery of the hopper.



