



## POWER AND INCINERATION PLANTS: CLEANING, TRANSPORT AND RECOVERY

A DISAB unit means spillage handling solutions that are economical, efficient and environmentally-friendly. DISAB vacuum technology reduces downtime caused by plant breakdown or interruption of the production process, enabling speedy repairs and minimal downtime.

### *Some type of projects in within power plants and power distribution*

- Cleaning 'dead spaces' within boiler areas for maintenance and inspection
- Dry removal of fly ash from the penthouse, inlet and outlet ducts of precipitators or bag houses
- Recovery of wet or dry coal spills in receiving, handling and process of coal
- Removal of 'blow sand' in desert substations
- Dry removal of fly ash from hoppers, louvres and stacks
- and many more





## **CASE: City of Oslo's new waste to energy facility**

### **A typical project in an energy plant**

The City of Oslo's new waste to energy facility at Klemetsrud, designed and built by Hitachi Zosen Inova, one of Europe's leading suppliers of waste to energy plants, is now in full operation.

### **Doubling Klemetsrud's capacity**

The new incineration facility at Klemetsrud is in addition to two existing ones, and can turn 20 tonnes per hour of community and industrial waste into valuable energy, thereby doubling Klemetsrud's capacity to 310,000 tonnes of waste per year. The 300 gigawatt per hour/year of energy generated is utilised primarily for the district's hot water heating network.

The facility handles primarily municipal solid waste, but it also accepts infectious waste from hospitals, low risk non-hazardous waste that demands special treatment such as non-hazardous waste such as pharmaceuticals, contraband and confidential documents, and packaging, pallets and cardboard from commercial businesses. Over 90% of the waste received at the Klemetsrud facility is municipal solid waste.



### **The DISAB Centralised Vacuum System**

Incinerating 20 tonnes of waste per hour inevitably generates significant volumes of ash-based dust and waste spillages. The DISAB Group's centralized vacuum system is based on standard DISAB-designed components and comprises 86 inlet valves, to which flexible suction pipes can be connected with the appropriate extension pipes and nozzles for cleaning anywhere within the waste incineration facility.



A pipe network of 1300 meters connects the inlet valves back to the DISAB waste separator (a BEASS-15 Big-Bag separator) where the collected waste is then unloaded into 'big-bags' or euro-bags suitable for collecting dust, ash or waste.

Creating the system's huge suction is the well proven 37 kw DISAB PES 101/37 vacuum power source, placed in an area of the facility where there is no risk of dust explosions. The rest of the system is designed in line with ATEX regulations, eliminating any further risk of dust explosions. The system is designed to handle dust and spillages of particles between 0-30mm and 800-1500 kg/m<sup>3</sup> in terms of density, and transport all the dust and waste up to 250 kg/h from the most distant suction inlet.

Christian Suter, the project leader for Hitachi Zosen Inova, was impressed with the DISAB Group's experience and competitive approach to the project: "The DISAB Group was chosen by Hitachi Zosen Inova for their experience in both the energy sector and in centralized vacuum cleaning system design and installation, and their commercial competitiveness."