

WHAT CAN DISAB GROUP DO AT A WASTE TO ENERGY FACILITY



DISAB case study: Hitachi Zosen Inova and the DISAB Group

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.

In order to help achieve the highest standards of general housekeeping, a £210,000 centralised vacuum cleaning system was supplied and installed by the DISAB Group, the European market leader in applied vacuum technology for industry.

The benefits of developing a successful team

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."

Eric Hardegård, CEO of the DISAB Group felt the successful outcome resulted directly from the excellent cooperation between all parties throughout the project: "Initially, we were very pleased to have the opportunity to supply and install a centralized vacuum system, as we knew that Hitachi Zosen Inova demand top quality and efficiency from the companies they choose to work with. Achieving a high level of cooperation between all those involved at Klemetsrud was key to the final outcome."

Bengt Karlsson, the DISAB Group's Project Manager: "We're proud of what our working partnership with Hitachi Zosen Inova has achieved, and delighted that the new waste to energy facility is now fully operational. Even though it meant working in three languages - Swedish, Swiss and Norwegian - the project's execution has been highly efficient from start to finish."



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/m³ in terms of density, and transport all the dust and waste up to 250 kg/h from the most distant suction inlet.

The Klemetsrud Waste to Energy facility

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

The energy generated by the plant is utilized primarily for the district hot water heating net in Oslo (300 gigawatt hour/year), but electricity is also produced by an on-site turbine generator (70 gigawatt hour/year). In addition, electricity is also being produced at the Klemetsrud site using a gas engine powered by landfill gas originating from the nearby closed Grønmo landfill.

