



Client:



Location:

Knottingley, West Yorkshire



Products Used:



VENTEX®
Ventilation



RAVEX®
Fume Extraction

Protecting the health of workers during an annual outage at an energy-from-waste plant

Project Overview

Enfinium is one of the UK's leading innovators in resource recovery and recycling, committed to transforming waste for a climate-positive future. With 4 Energy from Waste operational facilities across the UK, and 2 in construction, Enfinium diverts 2.3 million tonnes of unrecyclable waste from landfill each year.

During planning of an annual outage, Enfinium identified hazardous activities such as welding, burning, cutting and grinding within the grate area and confined spaces could put workers at high risk of exposure to the fumes generated during these tasks.

Challenge

Whilst planning for the outage, Enfinium identified two major challenges caused from the hot works being carried out.

Firstly, the risk to contractor worker's long-term health if they were exposed to harmful fume. Research conducted by the International Agency for Research on Cancer found that exposure to welding fumes, including mild steel welding, can cause lung cancer. With the works being carried out within a confined space, the exposure risk was heightened.

Secondly, the reduction in productivity. If fumes were left to build up, this would impact gas levels and visibility, increasing the need for breaks which could impact the outage timeline.

Products installed:



VENTEX® Centrifugal Fan 200S-HP

Suitable for hot, flammable or abrasive applications, this centrifugal fan extracts dust and fume, or provides a fresh air supply where needed.

Provides an impressive airflow of up to 1,800m³/hr, and with an outlet diameter of 200mm, it can ventilate areas with limited access.

For ease of use, the unit comes with a light on top of it that flashes to alert those nearby when it is in use.



DUSTEX® SuperFilta 40

The DUSTEX® SuperFilta 40 is a versatile high-flow filtration unit designed to effectively capture dust and fumes from demanding, large-scale projects.

Solution

RVT Group Consultants who specialise in industrial hazard controls, visited the facility to assess the work area and to understand what challenges could arise, before recommending a fully compliant, temporary hire solution that was suitable for Enfinium's requirements.

We recommended and installed our VENTEX® Centrifugal Fan 200S-HP, paired with 100mmØ flexible hoses, and a DUSTEX® SuperFilta 40, drawing the contaminants through a pulse-jet filter cleaning system, and in-line HEPA filtration unit.

The filtration system we used offered 3-stage HEPA filtration, the most efficient filter available on the market. The fan captures airborne hazards such as welding fume, burning fume, and smoke, and filters out harmful particles, before expelling safe, clean air.

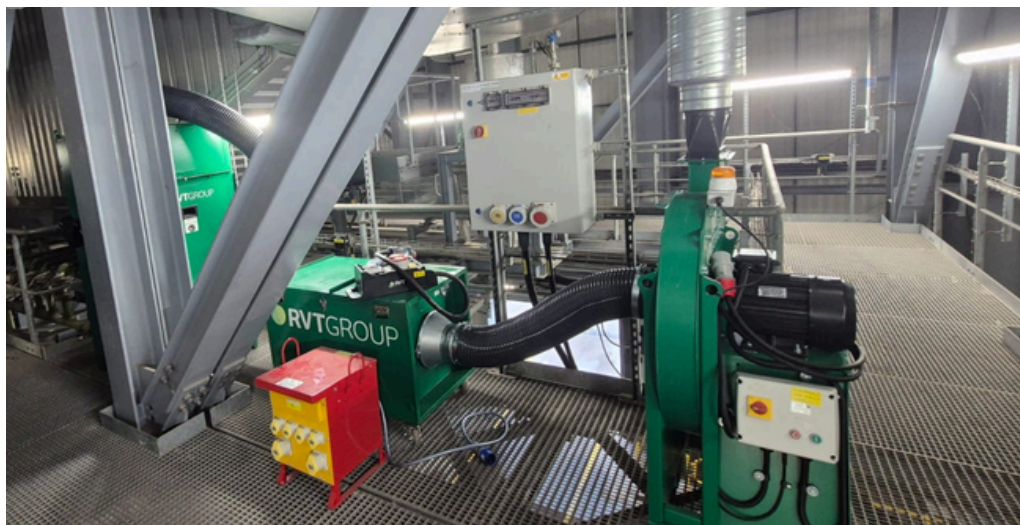
HEPA filters an impressive 99.97% of 0.3-micrometer air particles.

HEPA filtration was imperative on this outage to protect the workers from the hazardous fumes, and keep the environment comfortable to work in.

We used 100mmØ flexible hoses on this outage to help minimise obstructions, and for the ease of relocation as the work progressed. Alongside this hosing, we used magnetic capture hoods which enabled Enfinium's contractors to maintain full flexibility as works progressed to different locations.



The outage was delivered successfully, with the work force protected, and excellent productivity levels maintained, even with emerging works.



[Struggling with fumes on your project? Get in touch today >](#)