# Case study 708

## Power station protected by Andrews Ventilation

Groundbreaking developments in waste conversion technology have led to a sharp increase in the number of renewable energy facilities opening in the UK. In 2014, construction began on a plasma gasification plant in the Tees Valley – the first of its kind in the UK. By September 2015, the first of two sites was fully operational and handling approximately 1,000 tons of waste every single day.

Here, non-recyclable products are heated at temperatures often exceeding 400°C – but this has implications for the long-term integrity of the plant's structure. Intense heat produced within the plant itself makes concrete walls and supporting columns more susceptible to damage, so steps were taken to reduce the risk of this occurring. Our client was therefore looking for a high capacity cooling solution that would remain in place until a permanent system could be source and installed.

In response, Andrews Ventilation Hire provided five FV100 fans, seven FV600 fans and two FV900 fans which generated a combined air flow of more than 120,000m³ every single hour. Each unit was strategically placed in a specific area, drawing cold air from outside before blasting it onto concrete surfaces to keep them cool. Failure to do so could have caused concrete to crack or expand due to thermal differentials and potentially cause other problems further down the line.

The equipment we provided was required for approximately two months and worked perfectly to prevent any structural deficiencies from developing. Our proposal therefore enabled a crucial facility to remain online at all times and continue providing electricity to more than 100,000 homes in the North East.

Air flow (max) 19,000 m3/h
Power supply 415 V 3 ph 50 Hz
Plug type BS4343 3 ph 5 pin 16 A
Generator size 35 kVA
Duct length (max) 40 metres
Duct size Inlet 600mm Outlet 450mm
Noise level (max) 74 dBA @ 1m
Weight 465kg
Dimensions (mm) 1,552 x 1,152 x 1,965
Control Manual
Average power consumption 7.1 kW/h