

# Ventilation Supplied During Inspection and Repair Project at Water Treatment Works

When a hazardous atmosphere threatened to halt urgent work, RVT provided effective ventilation which kept the job on track.

July 2020



Location:  
Water Treatment Works

Featured Product Range:



Ventex® Ventilation  
Solutions

## Providing effective ventilation during vital inspection and repair works

A Water Treatment Works, which provides 200 million litres of water a day to over 3 million homes and businesses, urgently required inspection and repair works on a large water contact tank just below ground level. Therefore, the specialist subcontractor on this project approached RVT for a solution.

### The Challenge

To keep the water clean, a very small dose of chlorine is added systematically to the water in the tank. The tank was drained for the urgent inspection and repairs but, due to a faulty valve, there was chlorine entering the empty tank. This created an extremely hazardous atmosphere, making entry into the tank impossible without significant RPE and breathing apparatus. A solution was required where safe entry

## Case Study Key Facts

- This large Water Treatment Plant supplies water to over to over 3 million homes and businesses in England.
- Urgent inspection and repairs were required on a large water contact tank.
- Due to a faulty valve, there was chlorine entering the empty tank, creating an extremely hazardous atmosphere.
- Powerful Ventex® 600S high pressure fans created a positive pressure environment, continuously pumping clean air into the tank. This forced out the contaminated air, allowing site operatives to carry out the inspection and repairs safely.

could be achieved without the encumbrance of other bulky equipment. To add to the challenge, the inspection and repairs required completion in just one day

## The Solution

Following a site survey and analysis, RVT proposed a strong positive pressure and air-change system, effectively utilising the 'lanes' in the tank as a duct. This was achievable thanks to hatches at each end of the lanes which served as ideal entrance and exit points for the air.

A pair of powerful Ventex® 600S high pressure fans and flexible duct runs were sited at these hatches to purge the tank with a high air change rate. To create a positive pressure environment, clean air was continuously pumped into the tank via the entrance points, and then the contaminated air was leaked out through the exit points. This system was quick to install, extremely effective, and allowed the work to go ahead without delay and with no risk to site operatives' health.



RVT's Ventex® 600S high pressure fans on site.

## Ventex® Centrifugal Fan 600S



The Ventex® 600S is a powerful Centrifugal fan, designed to provide very high airflow through long duct runs. This makes it ideal for forced ventilation or extraction from very inaccessible areas such as deep shafts, long tunnels and large basements.



Clean air being pumped in via flexible ducting through the entrance hatch

### The 3 C's Method:



- **Capture the hazard** - Extract contaminated air out of the work space.
- **Contain the hazard** - Ensure that the work area remains under pressure as this will help to control air movement (either positive or negative pressure depending on the application).
- **Control the hazard** - Force in clean air to dilute the hazard.