Maintaining a safe air supply at Dover Eastern Docks

January 2018

The project

- Inspection of, and repairs to, the concrete slab forming the base of the Eastern Docks at Dover
- Contractor: Jackson
- Requirement: Safe ventilation during sub-surface works

The Port of Dover

- Dover is Europe's busiest passenger port
- It handles around 13 million travellers and 5 million vehicles every year
- During WWII, the area now occupied by the Eastern Docks was home to motor torpedo and motor gunboats of the Royal Navy
- In 1953, Dover's first two drive-on, drive-off ferry berths were opened at the Eastern Docks – up until then, cars and coaches were lifted by crane on and off ferries
- Despite concerns about the impact of the Channel Tunnel, business through the docks has continued to grow

Work being carried out underground

Dover is the busiest port in Europe, handling around one-sixth of all the goods traded in and out of the UK. Civil engineering company, Jackson, has a long-standing relationship with the docks. One of Jackson's recent jobs was to inspect and repair the concrete slab that forms the base of the Eastern Docks. Their workers within the undercroft beneath the concrete slab required a safe and steady air supply during the works. RVT were called on to deliver it.

The challenge

The greatest difficulty to overcome was the lack of access points through which ventilation could be provided. The enclosed working area extended to nearly 80 metres, and it was vital to ensure every part of it received an adequate supply of fresh air. Apart from the oxygen levels being depleted as a consequence of the workers' activity, any lingering fumes and gasses had to be dispersed to keep the area safe.

Benefits of the RVT solution

- Reliable supply of fresh air for workers underground
- Flexible ducting ensured the air could be routed through to the furthest end of the working area
- The pressure generated by the fan ensured a flow of fresh air back through the whole of the working area, removing stale air and fumes

" RVT provided an excellent level of service throughout the project. The equipment supplied was in in good condition, well maintained and easy to set up. It provided us with a reliable forced air solution throughout the duration of our project."

Jamie Boast,
Project Manager,
Jackson Civil Engineering

Further information

Port of Dover

Jackson Civil Engineering

The solution

In order to ensure fresh air reached even the remotest area of working, a powerful fan was needed. The 450CF model, with an airflow rating of 20,500 meters per hour, was brought in as it is purpose-designed for driving fresh air through long lengths of ducting. In this case, 76 metres of 600mm ducting was attached, ensuring air was driven to the furthest end of the works area. The pressure created by the fan ensured that the fresh air displaced any residual fumes or contaminated air all the way back through the work area. The whole set-up was powered by Jackson's own generator.