

England: Wind Monitoring Systems

Ensure workforce safety and regulatory compliance on cranes



To gain access to more reliable weather information, the Port of Tyne added two new weather stations to its existing station. Every minute, or on demand if required, the stations transfer data to the port's computer network to assist port operations.

The Port of Tyne is the UK's second largest coal port and Europe's largest wood pellet handler. Several cranes are in operation at the port, all of which must, by law, monitor wind speed and direction to ensure safe working conditions. For many years, Port of Tyne has trusted the reliability of Campbell Scientific monitoring systems to comply with regulations and to keep its workforce safe.

The monitoring stations include an ultrasonic anemometer for measuring wind speed and direction, which is reliable, robust, and ideal for harsh marine environments. The anemometer is mounted at the top of the crane and sends wind data to a CR200X datalogger, which is fixed outside the driver's cabin, nearer the bottom of the crane. The readings are transmitted via an RS-485 connection to ensure good signal quality over relatively long distances. Before the operator enters the cabin, wind conditions are checked to determine if operations at that altitude can go ahead. A CD295 DataView II Display is attached to the datalogger's enclosure and provides all the necessary information at a glance.

Information on the wind conditions are also transmitted to the port operation office, and these are monitored via real-time displays, just in case the wind conditions change whilst the crane is in operation.

An NL200 Network Link Interface is used to enable a TCP/IP connection between the datalogger and the operation office, and LoggerNet and RTMCPRO software are used to create and run user-friendly, graphical screens that provide real-time monitoring and control capabilities. This data display software presents the wind data at the top of the crane to the port operator who can instruct the crane operator to exit the cabin, should the wind conditions worsen during operation.

Case Study Summary

Application

Providing real-time weather information for port operations

Location

Port of Tyne, Northeast Coast of England

Products Used

LoggerNet, RTMCPRO

Contributors

Campbell Scientific Ltd.

Measured Parameters

Wind speed and direction

Related Website

Port of Tyne

RTMCPPro is also able to run graphical and visual alarms to assure the highest safety standards.

This Campbell Scientific wind monitoring solution is applied at many ports and harbors across Britain, ensuring safe operations and regulatory compliance.



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