Wind Energy
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HUMBER REVISITED
REGIONAL UPDATE

MARINE OPERATIONS
OFFSHORE SERVICES

SAFETY AT WORK
VITAL FOCUS

OPERATIONS & MAINTENANCE
ONGOING NECESSITY

FIRE SAFETY IN WIND TURBINES

With the size of turbines increasing, the wind industry needs to learn about the importance of fire safety in wind turbines

Fire is the second leading cause of accidents in wind turbines after blade failure. As our reliance grows on wind turbines, keeping them fully operational and at reduced levels of risk becoming more important and as a result, so does safety management. Ten to 30 percent of all loss-of-power-generation incidents in wind power plants are due to fire. Fires in wind turbines not only lead to a loss of business continuity and a negative impact on the company's reputation but also, most importantly, are a critical safety issue.

LARGER TURBINE PREDICTIONS
With predictions of much taller and more powerful turbines and thus fewer per project, ensuring that they are in working order is essential, because the larger and fewer the turbines, the more costly they will be to operators in the event of fire damage. Due to the height and location of wind turbines, classic firefighting methods come up against their limits and therefore fire extinguishing systems that use gases such as carbon dioxide, inert gases or clean agents such as FM-200 and Novec 1230, which are especially appropriate for dealing with fires in electrical systems because they extinguish the fire quickly whilst not damaging the electrical systems or the compartment in which they are being discharged.

FIRE EXTINGUISHING SYSTEM MAINTENANCE
However, it is important to note that such fire extinguishing systems require maintenance to ensure they are fully operational and ready in event of a fire. ISO 14520-1:2015(E) assumes that these systems accidentally discharge and leak. 6.2.4.2 Contents indication: "Means shall be provided

to indicate that each container is correctly charged." Followed by "9.2.1.3 The storage container contents shall be checked at least every six months as follows. a) Liquefied gases: for halocarbon agents, if a container shows a loss of agent in quantity of more than five percent or a loss of pressure (adjusted for temperature) of more than ten percent, it shall be refilled or replaced."

CONTINUED ADVANCEMENT
Focused on continued advancement of safety technology, Coltraco have now developed the Permalevel Multiplex, a fixed fire suppression monitoring system, designed for continuous contents verification. The system is designed to ensure that fire suppression systems are always fully operational and that no accidental discharge has occurred, which could affect the effectiveness of the overall fire protection system in the event of a fire. With guaranteed systems operations, adaptability for purpose, 24/7 remote access to the systems status, an uninterruptible power supply (UPS) and remote real-time monitoring, the system offers the efficiency that is needed in a wind turbine.

For regular inspection, the Portalevel MAX is a handheld ultrasonic liquid level indicator, which can service a cylinder in 30 seconds (in contrast to 15 minutes by traditional manual

weighing) with accuracy of up to 1.5mm off the true liquid level. The system builds on Coltraco Ultrasonics 30 years' experience in designing, manufacturing and supporting ultrasonic liquid level indicating equipment, in 108 Countries and numerous market sectors and environments. The development programme was born out of the desire to further improve on Coltraco's existing eight designs and taking on board feedback and opinions of our customers.

REDUCING RISK
The company provide smart Firetest solutions which enable wind turbine owners and operators to improve their fire safety management and reduce the risks to human life, business continuity caused by any downtime and thus minimise risk to reputation by delivering a Safesite.

Coltraco