A Hearty Welcome to Prague from Your Hosts

Kevin & Sigrid Donovan

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GWA Supplies

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The Speakers

David Morgan, Business Manager; ZF Services UK Limited

David Morgan had worked in the automotive sector for nearly 20 years before joining ZF Services UK Limited in 2003 as a technical sales engineer. He supported the industrial, marine, rail and defence markets until 2008, when David became part of the team responsible for implementing a multi-brand wind turbine gearbox overhaul facility. In his current position of business manager David is responsible for the business strategy and development of the wind market, ensuring ZF meets and exceeds its customers’ needs now and in the future.

Alexandru Strobel, Application Engineer, Wind - Main Shaft & Generator Applications; SKF GmbH

Alexandru worked for more than 8 years at SKF GmbH in the Application Engineering department where he was initially responsible for Industrial Electrical Applications (all kinds of electric motors and generators). In 2010 SKF introduced the global All Department for Renewable Business where Alexandru became the global contact person for wind turbine gearbox business. Among technical support of strategic Wind Turbine OEMs he is responsible to capture and document all relevant application knowledge, identify and share Product- and Technology-Development needs.

Benn Faulkner, Director; Renewable Advice

Benn Faulkner, a mechanical engineer, has worked in the wind industry since 2002. All this time he has been dealing with NHG, reinforced plastic blades of NEG Micon, and Polymer blades from LM, to epoxy blades from Vestas, Servon and GE, to name but a few. Benn’s career prior to founding Renewable Advice focused on blade O&M for NEG Micon and Vestas as well as blade production development for Repower (Servon). The knowledge gained through this time has been utilised effectively to support manufacturers to identify production quality, prove Z/F and health and safety issues and also to develop a team of blade maintenance personnel to look after blades throughout Europe and the USA.

Markus Billmann, Application Group Manager; Fraunhofer ISIB

Markus Billmann worked for more than 8 years at Semikron Elektronik GmbH in the power electronics development department. He was part of the ISK-1 and ISK-2 development team. In 2010 he joined the Fraunhofer Institute for Wind Energy and Building Physics (Fraunhofer IWW) as a research associate. In 2012 he became a member of the Power Electronics Department at the Fraunhofer ISIB in Erlangen. Since 2008 he has been involved in MFC & design topology issues for grid-connected and island-connection turbines as well as offshore wind power applications. Today he is focusing on troubleshooting and in power electronics reviews.

Gary McCougour, Turbine Engineering Maintenance Manager; RES

Gary has been involved directly with renewables since 2007, firstly as an Engineer Surveyor with a large Insurance company that worked closely with RES, and then joined RES in January 2011 as an Asset Manager for the North Scotland Onshore Wind Farm sites and also as the Lifted Appointment Person, initially reviewing lifting documentation and giving advice, then building up the current lifting team and overseeing the training program. In 2011 Gary assumed his current role which sees him provide support to the Wind Farm Asset Management and wider Operations Management teams and also heads the lifting team. Since February 2016 the lifting team not only reviews lifting documentation but also carries out full lifting operation.

Karl Patzelt, Head of Sales & Nigel Parlor, Business Manager UK; Ireland, Benelux, ROMO Wind

Following graduation as a mechanical engineer from the Technical University of Vienna, Karl secured senior project management and sales positions in international automotive, IT and mechanical escalator sectors. In 2009 he moved into wind as Director Sales for Vestas and later joined 2011 with ROMO Wind. Karl spends a lot of his time travelling across Europe and the US supporting customers and local Business Managers. Nigel has an electrical engineering degree, an MBA and more than 30 years experience in the energy industry with blue-chip businesses like E.ON, Powergen, QinetiQ and South Wales Electricity. He joined ROMO Wind in 2015 from Romans Technology where he helped to develop their wind industry OEM service offerings. Nigel is based in ROMO Wind’s office in Nottingham supporting wind farm owners and operators.

The Agenda

Welcome and Preliminaries

Kevin Donovan, GWA Supplies Limited (Host and Organizer)

Clifford McSpadden, GWA Supplies Limited (Moderator)

09.00h

Gearbox technology

David Morgan, ZF Services UK Limited

As wind turbines continue to increase in MW capacity designing a drive train that can meet the ensuing demands becomes even more complex. ZF will present and discuss the latest developments in gearbox technology advance-

ments that enable the new generation of gearboxes to meet these challenges including bearing and gear configuration, dynamic testing, up power serviceability and intelligent ‘gearbox technology’.

09.50h

A new lease of life

Michael Wilkinson, DNV GL

In the UK today, 30% or 20% of installed wind power capacity is over 10 years old. With so much infrastructure so far through nominal design life, the industry requires robust procedures and analytical tools in order to navigate operation of turbines up to and beyond year 20. An integrated approach to asset life extension is presented, aimed at addressing a number of the main areas that contribute to the present day design and operation challenges.

11.00h

ABB 600/120 KW 2 Speed Generators – Modifications and workshop trials to the NDE bearing assembly

Paul Sheldon, RWE

The presentation will explain the modifications carried out on the non-drive end bearing assembly to try and eliminate the catastrophic bearing failures that have taken place for many years causing rotor and stator damage. Two small follow-on presentations will provide information on:

• Nord-lock super bolt trial to eliminate stud fatigue on drive end
• E3khoff N60 low speed oil leak

12.00h

Lunch Break

14.20h

FRT Retrofit for older turbines – providing one key component

Markus Billmann, Fraunhofer ISIB

Older turbines often do not meet FRT requirements. Instead of a “Fault Ride Through” they use their crowbar, shut down the turbine and get off the grid. Especially smaller turbines suffer from new grid code demands. Often many components are “ready for FRT”, but the brake chopper as part of the IGBT inverter is missing and turbine control cannot handle FRT. A small key component is presented – an autarky operating auxiliary power supply to feed a brake chopper with internal control. Providing auxiliary supply directly from the DC-link is mandatory to have a brake chopper working, even if grid and rest power supply is down. Basic principles are described of a new wind turbine which might help in many cases to fulfill FRT requirements.

15.00h

Lifting Operation Overview for Onshore Wind Farms

Gary McCougour, RES

This presentation will give a simple overview of lifting operations on an onshore wind farm; discussing the level of planning and documentation expected to be carried out and received, the access and equipment requirements on site, and also the final checks to be made to ensure a safe and successful lifting operation.

15.25h

Optimising turbine performance - How do you do it?

Karl Patzelt & Nigel Parlor, ROMO Wind

The presentation will describe the experience in both delivering optimisation solutions and measuring the level of improvement from others. It will demonstrate the business case for an improved wind speed measurement to avoid owners simply guessing what their turbines are doing. Examples will illustrate how the ipSin Guardian concept can greatly assist in precisely monitor all turbines in their wind farm are working according to the OEM’s warranted specifications and to quickly identify performance issues.
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