

Hansen Transmissions Selects nCode DesignLife for Wind Turbine Gearbox Fatigue Analysis

As the demand for wind energy is rapidly increasing, so is the need to make wind turbines more robust and cost-effective. The availability of the wind turbine is a key driver for the end customer. Wind turbines are also becoming larger in order to generate more electricity per installation, and this in turn is causing robustness to become an essential issue.

In response to these demands, Hansen Transmissions, an established global gearbox manufacturer, has selected nCode DesignLife as its solution for the computed aided fatigue analysis of wind turbine gear components. Hansen Transmissions is using nCode DesignLife software to help ensure that gearbox designs meet stringent durability targets required for wind turbine operation.

Hansen has extensive expertise in the design and manufacture of gearboxes, a key component of wind turbines. The load and torque characteristics of wind applications make the understanding of fatigue critical for long term performance and durability. Hansen has relied on a number of specialist fatigue engineers within the company, using software developed in-house.



By moving to DesignLife software, Hansen can now readily capture and optimize the fatigue and durability analysis process. DesignLife helps the engineers across the company assess more design variants more rapidly, reducing development and test cycles, and overall costs. DesignLife works seamlessly with the ANSYS® software used by Hansen for FEA analysis.

Hansen undertook an extensive benchmarking of DesignLife against other commercial software. Dr. W. Meeusen, Hansen's Head of Product Technology, said "We selected DesignLife because it combines an intuitive interface, the analysis functionality we needed for rotating machinery, as well as the ability to use complex load cases. nCode engineers worked with us during the evaluation process, ensuring that the DesignLife solution meets our needs." Jon Aldred, nCode's

DesignLife product manager said "Wind energy is a rapidly growing market for nCode because durability is a key design issue in wind turbines and their sub-systems. Fatigue failures shall be avoided because they are very expensive in terms of repair costs and down time. Hansen Transmissions' decision to purchase DesignLife for a critical part of their product development process demonstrates that DesignLife is well suited to these applications."

About HBM nCode products

nCode products are provided by HBM, a world-wide technology and market leader, offering products and services across the entire measurement spectrum, from virtual to physical. For over 25 years, nCode has been the leading brand for durability and data analysis solutions. Its technologies aid customers understand product performance, accelerate product development and improve design. The company's Product Lifecycle Performance portfolio comprises tools which enable data acquisition in the harshest environments, analysis of the most complex test data sets, and optimization of product durability. The power and ease of use of HBM technologies is a direct result of its world-class development process, expertise and in-depth experience of a broad range of industries. nCode product development is ISO9001 certified. Product support is available through nCode offices in Europe, North America and Asia. For more information, please visit www.hbm.com/ncode.

About Hansen Transmissions International

Hansen Transmissions International NV is an established global wind turbine gearbox and industrial gearbox designer, manufacturer and supplier, with a leading position (by MW supplied) in the wind turbine gearbox market.

The company supplies gearboxes to the world's major manufacturers of gear-driven wind turbines and provides durable gear drives for a wide range of industrial applications throughout the world. Both Hansen's wind energy and industrial activities have established dedicated international service networks.

In addition to its principal state-of-the-art manufacturing facilities located in Flanders, Belgium – i.e. a wind turbine and industrial gearbox plant and a fully integrated, dedicated wind turbine gearbox manufacturing facility – Hansen has a production plant for wind turbine gearboxes in Coimbatore, India and an assembly and testing plant for the Chinese market, located in Tianjin, China. As such, Hansen plans to increase its wind turbine gearbox manufacturing capabilities, from 7,300 MW per annum in the financial year 2009 to 14,300 MW, by financial year 2013.

Strong in-house R&D operations maintain Hansen's technological leadership and the company employs over 2,300 people worldwide.

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