**Press Information**

**Sign up now for HBM’s educational webinars**

*Test and measurement specialist, HBM’s latest batch of webinars are now available for registration.*

**February 2020**

The first session in February addresses the stringent regulations on emissions, which are making it more difficult for the marine industry to stay cost effective. HBM’s [**Accurate Load Measurements in Marine Engines**](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.hbm.com%2Fen%2F8714%2Faccurate-load-measurements-in-marine-engines%2F&data=02%7C01%7Clisa.mueldner%40hbkworld.com%7C1b2d2d6f5b4e418e20c708d7a59f9b12%7C6cce74a3397545e09893b072988b30b6%7C0%7C0%7C637159977236207479&sdata=lykgDXuAF8oMMC9nBXgG57tK45o2JbzR%2FouT1FeT5lg%3D&reserved=0) webinar demonstrates how accurate load measurements can ensure that ships meet the new standards while remaining competitive.

Many industries, including automotive and aerospace, have started merging their NVH and powertrain departments to include the user’s experience into their designs. Engineers looking to learn about testing for noise and vibration and electrical quantities at the same time, can join HBM’s [**Understanding Source of Noise of Electric Engines**](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.hbm.com%2Fen%2F8720%2Funderstanding-source-of-noise-of-electric-engines%2F&data=02%7C01%7Clisa.mueldner%40hbkworld.com%7C1b2d2d6f5b4e418e20c708d7a59f9b12%7C6cce74a3397545e09893b072988b30b6%7C0%7C0%7C637159977236217475&sdata=60BhQcn974Kp5qeguNSwnw5Pdepgoq7JSu%2FWUjR4nIQ%3D&reserved=0) webinar.

The company’s [**Structural Dynamics Measurements and Analysis**](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.hbm.com%2Fen%2F8722%2Fintroduction-to-structural-dynamics-measurement-and-analysis%2F&data=02%7C01%7Clisa.mueldner%40hbkworld.com%7C1b2d2d6f5b4e418e20c708d7a59f9b12%7C6cce74a3397545e09893b072988b30b6%7C0%7C0%7C637159977236217475&sdata=jTFauUvxSknASLsCJZ%2F%2By9f%2Fe7yFmKCT3pQEmooiUqo%3D&reserved=0) webinar provides attendees with an overview of structural dynamics measurement, analysis techniques and applications to help them understand - and optimise - the dynamic behaviour of structures. Topics will be explained in an easy-to-understand manner with a focus on examples and practical aspects.

[**Accelerometers for Beginners**](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.hbm.com%2Fen%2F8229%2Faccelerometers-for-beginners-selection-proper-use-and-care%2F&data=02%7C01%7Clisa.mueldner%40hbkworld.com%7C1b2d2d6f5b4e418e20c708d7a59f9b12%7C6cce74a3397545e09893b072988b30b6%7C0%7C0%7C637159977236227470&sdata=taipQBSbwymPR9UiBRe%2BLY8pwK0dH6hig7MVU3bR3wc%3D&reserved=0) will cover selection, correct usage and care of accelerometers. Attendees will learn about the factors that must be considered for accurate measurements, including expected vibration level, required frequency and dynamic range.

For a short introduction to strain gauge based sensors, the company is running a session called [**Building sensors based on strain gauge technology**](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.hbm.com%2Fen%2F8742%2Fbuilding-sensors-based-on-strain-gauge-technology%2F&data=02%7C01%7Clisa.mueldner%40hbkworld.com%7C1b2d2d6f5b4e418e20c708d7a59f9b12%7C6cce74a3397545e09893b072988b30b6%7C0%7C0%7C637159977236237480&sdata=HHUW1hxwyKDz0iLxaACOLcnBbfcZUJYfK3lRGtS7C6w%3D&reserved=0). Participants will learn how to identify the right strain gauge for their application.

Operating Deflection Shapes (ODS) analysis determines the vibration patterns of a structure under operating conditions, providing very useful information for understanding the dynamic behaviour of structures. Attendees can learn more on HBM’s [**ODS – Vibration Patterns under Operating Condition**](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.hbm.com%2Fen%2F8740%2Fods-vibration-patterns-under-operating-conditions%2F&data=02%7C01%7Clisa.mueldner%40hbkworld.com%7C1b2d2d6f5b4e418e20c708d7a59f9b12%7C6cce74a3397545e09893b072988b30b6%7C0%7C0%7C637159977236237480&sdata=N1EDP3jFUrFeRiu%2FY3yd1uJwDvpfae8SPJZbsnSAGJo%3D&reserved=0) webinar, which covers the concept of ODS analysis, describes the different types (Time ODS, Spectral ODS and Non-stationary ODS analysis) and explains how operating deflection shapes and mode shapes are related.

In full-scale iron bird testing, all mechatronics systems and actuators need to be tested together with additional sensor installations measuring force, displacement, temperature, pressure and other quantities validating functionality, performance and reliability. [**Signal measurement in full-scale aircraft testing (Iron bird)**](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.hbm.com%2Fen%2F8744%2Fmixed-signal-measurement-in-full-scale-aircraft-testing-iron-bird%2F&data=02%7C01%7Clisa.mueldner%40hbkworld.com%7C1b2d2d6f5b4e418e20c708d7a59f9b12%7C6cce74a3397545e09893b072988b30b6%7C0%7C0%7C637159977236247463&sdata=UPhe1VISVup0CWmRoozD%2BTxVjWKnyKQU6RiylUeMvDs%3D&reserved=0) webinar will guide delegates through the typical, overall requirements in high-channel count mixed signal measurement - the so-called Iron Bird Test – depicting what a data acquisition setup might look like and how to get more insights on their data.

The final webinar during February is [**Electrical & Optical Strain Gauges in Wind Turbine**](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.hbm.com%2Fen%2F8746%2Fpros-and-cons-of-electrical-and-optical-strain-gauges-in-offshore-wind-turbine-applications%2F&data=02%7C01%7Clisa.mueldner%40hbkworld.com%7C1b2d2d6f5b4e418e20c708d7a59f9b12%7C6cce74a3397545e09893b072988b30b6%7C0%7C0%7C637159977236247463&sdata=YSKvTvFhLlzIOg0tB6H5koPHxL7%2B%2FrNbe%2F7KXnPArRA%3D&reserved=0), which will help attendees understand the possibilities - and limitations - of different strain gauge types, utilized in the harsh environment surrounding offshore wind turbine applications. It covers sensor selection and installation – and also teaches attendees how to avoid expensive mistakes in measurement system configurations for monopiles, jackets and gravity base structures.

Further information and HBM’s full webinar calendar is available on the training section of HBM’s website: [**https://www.hbm.com/en/3157/webinars/**](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.hbm.com%2Fen%2F3157%2Fwebinars%2F&data=02%7C01%7Clisa.mueldner%40hbkworld.com%7C1b2d2d6f5b4e418e20c708d7a59f9b12%7C6cce74a3397545e09893b072988b30b6%7C0%7C0%7C637159977236257456&sdata=Yok%2BQZENVkjOlcYBPUdzrLnyUXpvpsOO%2FuhefnMfYWU%3D&reserved=0)

**About HBM Test and Measurement**Hottinger Baldwin Messtechnik GmbH (HBM Test and Measurement, founded in Germany in 1950) is today the technology and market leader in the field of test and measurement. HBM’s product range comprises solutions for the entire measurement chain, from virtual to physical testing. The company has production facilities in Germany, USA, China, and Portugal and is represented in over 80 countries worldwide.

For more information, please visit [www.hbm.com](http://www.hbm.com/)

**About HBK – Hottinger, Brüel & Kjær**

HBK – Hottinger, Brüel & Kjær, home to the HBM Test and Measurement and Brüel & Kjær Sound and Vibration brands, is a subsidiary of UK-based Spectris plc (www.spectris.com), which has annual sales of £1,5 bn and employs approximately 9,800 people worldwide.

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