

## Thomas Gellermann

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Thomas belongs to the expert network of former AZT colleagues (Allianz Center for Technology) and supports the Expert Center for Technology / Experten Zentrum für Technik (Ezt) and its clients with his expertise.

Thomas joined Allianz Center for Technology (AZT) in 2000 as a technical expert for turbomachinery. His areas of expertise are machinery diagnostics and damage investigations, especially on rotating equipment in the power generation industry. He uses the wide range of vibration analysis capabilities to troubleshoot rotordynamic problems and is also a consultant for vibration monitoring solutions. He holds the highest level of certification for vibration analysts according to ISO 18436-2, CAT IV.

Related to vibration issues of turbomachinery he has performed and managed several comprehensive investigations on steam, gas and hydro turbines, as well as load measurements on wind turbine drive trains. For many years he has been a member of the advisory panel for conferences of the Association of German Engineers (VDI) and the chairman of the working group “Measurement and Evaluation of Mechanical Vibration of Wind Turbines” of the national standard committee VDI/ NALS.

Before specializing in machinery diagnostics at AZT, he worked for 6 years at the turbine manufacturer MAN Turbo in Oberhausen as a service engineer for gas turbine units. He graduated in 1993 from the University of Dortmund with a Master degree in Mechanical Engineering.

## Thomas Gellermann

### (Scientific) Publications

- 2020 „Torsional Vibration of Turbo Sets”, Trend Paper, AGCS/ AZT 2020
- 2020 „Predictive Maintenance - Influence on insured Risks”, Trend Paper, AGCS/ AZT 2020
- 2019 „Schwingungsdiagnostik an Turbomaschinen - Ausgewählte Fallbeispiele“, in VDI Berichte 2366, 2019
- 2017 „Use of VDI 3834-1 & DIN ISO 10816-21 for vibration monitoring of large wind turbine fleets”, in VGB Powertech 7/2017 & „Schwingungsbeurteilung nach VDI 3834-1 bzw. DIN ISO 10816-21 und deren Integration in die Überwachung großer Anlagenpopulation“, in VDI-Berichte 2281, 2016
- 2017 „Analyse von gekoppelten Schaufel-Scheibenschwingungen im Rahmen von Schadenuntersuchungen“ in VDI Berichte 2295, 2017
- 2014 „Schwingungsbeurteilung und Diagnostik von Windenergieanlagen im Spiegel von Normen und Richtlinien“, VDI Berichte 2220, 2014
- 2013 „Extension of the scope of Condition Monitoring Systems for Multi-Megawatt and Offshore Wind Turbines”, in VGB PowerTech 9/2013 & „Erweiterung des Umfangs von Condition Monitoring Systemen für Multi-MW und Offshore Windturbinen“, in VDI-Berichte 2168, 2012
- 2012 „Damages to the Drive Train of Wind Turbines“, in VGB PowerTech 7/2012
- 2011 „Untersuchung des dynamischen Verhaltens des Triebstranges von Windenergieanlagen“, in VDI Berichte 2123, 2011
- 2011 „Folgen des Wassereintrags in eine einstufige Dampfturbine und dessen diagnostische Erkennung“, in VDI Berichte 2151, 2011
- 2006 „Ergebnisse von der 10-jährigen schwingungsdiagnostischen Beurteilung eines Großturbosatzes - Results of 10-Year diagnostic evaluation of the vibrations of a large turbine-generator set“, in Quantum 2/2006

## Thomas Gellermann

### **(Scientific) Presentations**

- 2021 „Hydrogen industry – opportunities and risks from an insurer's perspective “, Center for Hydrogen Safety, Asia-Pacific Conference, 2021
- 2021 „Challenges of Wind Turbine Drive Train Loads and Damages”, Bearing Application World, 2021
- „Brauchen Windturbinen Schwingungsüberwachung und Condition Monitoring?“, VDI Webinar, 2020
- „Aktuelle Schadenerfahrung mit Dampfturbinen“, VDI Schadenanalyse Würzburg, 2018
- 2018 „Wind Turbines - Lessons Learned from Claims and Risk Engineering”, VGB Conference Maintenance of WT, Munich 2018
- 2017 „Risiken und Schäden bei Montage und Inbetriebnahme von Dampfturbinen“, VDI-Konferenz Dampfturbinen, 2017
- 2015 „Anstreifschäden von Turbinenläufer - Ursachen und Auswirkungen“, VDI-Konferenz Dampfturbinen, 2015
- 2013 „Analysis and Control of Prototypical Risks of Gas and Wind Turbines”, AGCS Expert Days Munich, 2013