

## **Publications and Presentations**

1981 Workers Institute Soltau "Wind energy converters " Participants DIY- and generally interested persons. How to build your own wind generator, with special emphasis on rewinding and connecting generators (German)

1984 "Measurements on 12 Wind Energy Converters" Part 1 of the final report of the research project "Survey and evaluation wind energy converters in the Federal Republic of Germany", Project No. BMFT 323-4003-03-E 8145A7 (German)

1984 EWEC Hamburg, Walter Stephenson, Georg Böhmeke " Inventory and Evaluation of Experience made with WEC in Western Germany" (English)

Sept. 1991 Helsinki University of Technology (HUT)"Wind energy and wind energy converters" (Englisch) Oral presentation for students, general overview.

"Icing test and rework of WECS for use on Lapland's fjells" (Englisch)  
Böhmeke, Georg; Peltola, Esa Boreas North Wind - Pohjatuuli. Hetta, 10 - 13 Febr. 1992 . Nemo; Ilmatieteen laitos; VTT. Hetta (1992), 219 - 232

"Wind power plants in the weather conditions of Northern Finland" (Englisch)  
Böhmeke, Georg 1992. VTT, Espoo. 86 p. + app. 8 p. VTT Research Notes : 1354 (Also video of an ice accretion, taken with a rotating camera fixed to a blade)

"Development of wind technology for the Finnish climate" (Englisch)  
Böhmeke, Georg. Wind Energy: Technology and Implementation Proceedings of Amsterdam Ewec '91. Amsterdam, 14 - 18 Oct. 1991. EWEA/NEWIN. Amsterdam (1991), 114 - 117

Exhibition poster (Englisch)  
Böhmeke, Georg; Makkonen, Lasse; Walsh, Marcus Wind Power '91. Palm Springs, CA, USA, 24 - 27 Sept. 1991. American Wind Energy Association, U.S. Department of Energy. USA (1991), 8 p.

DEWEK 1994 written contribution "Countermeasures against structure-born noise in wind energy converters" (in German) Page 394-354 of the conference proceedings, second part. Overview and achievements of the Tacke Windtechnik wind turbines. Isolation on elastomeric elements was in that time very new, first series machine in 1992. It resulted in the most silent machines on the market and became then quickly general practice.

12.12.1995 Oral presentation "Design methods for wind energy converters" (German), Fachhochschule Lübeck. Overview what design tools and calculation methods are used in WEC design. Audience: Students.

1997 EWEC Dublin. Böhmeke, Boldt, Beneke "Direct drive, geared drive, intermediate solutions - comparison of design features and operating economics" Basics of the Multibrid-concept and comparison with conventional drives (English). The very first introduction of the slow-speed concept prior to the commercial phase.

4.5.1999 "Introduction to wind energy" (Englisch) Oral presentation. Audience: Managers of the energy business, the event organized by the utility Pohjolan Voima OY

25.3.2000 Oral presentation "Simplified load assumption calculations and related safety equipment" (Finnish), Audience: DIYers and generally interested people. Organizer: Finnish Wind Energy Association.

Article in the journal VINDÖGAT, Spring 2000

"Gearbox damage - why?" Explanation of the most important damage mechanisms and design measures (Original German, published in Swedish, later translated to Finnish)

Article in the journal TUULENSILMÄ "Development Tendencies in the Wind Power Branch" (Finnish) February 2000. Market and technology tendencies, forecast.

DEWEK 2000 Poster "Minimizing the yaw loads by optimized slip brake torque control" (German) The ideas were realized in the WWD machines and also implemented into the Samsung 7MW turbine.

Exhibition and Fair "Energy" in Tampere 19.10.2000. Oral presentation "Wind Energy Converter Concepts" (Finnish), Audience: Engineers from the energy branch.

Exhibition 6.-8. February 2002 "Electricity, Telephone, Light and Sound", Jyväskylä. Oral presentation "Concepts and Components of Variable-Speed Drives of Wind Energy Converters" (Finnish). Audience: Mostly Electrical Engineers.

23.10.2002 HUT Helsinki University of Technology "Wind Energy Converters" Overview over all technical and economical issues (Finnish). Audience: Students of Physics or Energy-related subjects.

EWEC 2003 Madrid, oral presentation: "Development and operational experience of the wind energy converter WWD-1" (Englisch)

11.11.2003 HUT Helsinki University of Technology "Operation Control, Supervision and Safety Devices of Wind Energy Converters" (Finnisch) Audience: Students of Mechanical Engineering.

EWEC 2004 London, Poster " Development of the WWD3 Wind Energy Converter" (English)

April 2005 Oral presentation (3h) "Design and manufacture of rotor blades" (Finnish)

April 2006 Same presentation, but in english. Audience: Students of different subjects related to energy generation and conversion.

5.4.2006 "Design Philosophy and Market Aims of WINWIND" (German and English), contribution to a publication of company Oevermöhle, Germany.

16.4.2010 "Windpower Concepts and Tendencies" (in Finnish), oral presentation in course of the seminar "Tuulivoima tutuksi" (Come to know the wind power) organized by VTT and TKK

22-23.10.2012 Chairman of a conference on drive trains in Bremen, Germany, organized by IQPC. Own presentation on structure born noise issues on gearboxes (english)

21.2.2013 Presentation on the 5 years anniversary of WINDNOVATION, "From the homemade windmills of the 1970ties to present high-tech developments", one hour, german language. Audience mostly engineers from aircraft, rotorblades, composites.

14.10.2013 Two presentations on the IQPC conference on drive trains of wind turbines. One as a gap-filler, dealing with efficiencies of hydrostatic drives. One as a co-author together with Dr. Karl-Heinz Hanus, ESM: Structure-born noise aspects of wind turbines (english).  
Audience: Engineers from wind-power companies and component deliverers.

25.3.2016 Windpower event in the town Dali in the province Yunnan:  
"Technical developments and tendencies of wind power in Central Europe."  
Powerpoint, ca 40 pages, ca 1hour. The most important milestones from 1981 to today with background and explanations. Audience: Wind farm developers and utility persons, local government representatives. (english, chinese translation).