

CURRICULUM VITAE

Personal

Morten Bjerkås
Birth 24 July 1975 Trondheim, Norway
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Education

PhD – Arctic Engineering - Norwegian University of Science and Technology (NTNU), 2002 -2005, Trondheim
MSc - Structural Engineering, NTNU, 1999 – 2001, Trondheim
BSc - Civil Engineering, Narvik Technical College (HIN) 1996 – 1999, Narvik, Norway
Officers school in North Norway (USK-BSIN) 1995 Harstad, Norway

Main skills

Engineering management
Renewable energy, structural design and marine operations
Pipeline engineering – tie-in design
Organization and analysis of measured data
Arctic engineering, prediction of global and local ice forces on offshore structures
Slender marine structures

Work experiences

2006 – pp, Reinertsen AS, Engineering Division, Trondheim, Norway.
Department Manager at Reinertsen AS, Engineering-Trondheim (70-80 persons, August 2010)
Havsul 1, PM, concept study on construction, installation and design of foundations for offshore wind, Norway. Client: Vestavind offshore.
Tie-in spools, Engineering Manager, Gorgon Upstream Development project, Client: Vetco Gray/Chevron.
Validation of a numerical ice load model, JIP, Client: StatoilHydro, 2008-2010.
Tie-in spool installation with vessel Scandi Acergy on Ormen Lange field, Template D and Hot tap tee 1, summer 2009.
Tie-in spool analyses, Shtokman Development Phase 1 FEED, Client: Doris-Engineering, Paris, France
Pipe bend studies, detailed numerical and experimental investigations, Client: Statoilhydro ASA.
Structural analysis group, Group leader, Reinertsen AS
Tie-in spool analysis, Ormen Lange Southern Field Development, Client: Statoilhydro ASA.
Trawl gear impact on subsea pipelines, FEM modelling in ANSYS, Skarv-Idun Interim, Client: BP Norge.
Flow induced and slug induced extreme noise, vibrations and forces in topside pipework for the Kristin and

Åsgard B platforms, Tyrihans project. Client: Statoil ASA.

Evaluation study of mechanically lined bimetallic pipes including the effects of temperature, pressure and fabrication, Skarv-Idun FEED, Client: BP Norway.

Static and dynamic pipelay analysis, S-lay configuration, FEM modelling in RIFLEX, Statfjord Late life, Client: Statoil ASA.

Extreme forces in fish farms, development of a tailor made 2D FE software for stress calculation. Client: Aqualine.

Global behaviour of flexible risers, FEM modelling in RIFLEX, Skarv-Idun FEED, Client: BP Norway.

2002 – 2005, NTNU, PhD studies.

Research on offshore structures for arctic conditions with focus on global ice loads, dynamic effects of ice crushing on vertical structures and loads from ice ridges to vertical structures (Supervision: Prof. Sveinung Løset). Management of the project “Ice action database”, a joint project with ExxonMobil Upstream Research (2004 – 2005). Field work on Spitsbergen with special emphasis on mechanical properties of sea ice (2003+2004).

1996 – 2 Infantry battalion, Øverbygd, Norway.

Instruction and leadership during education of infantry soldiers.

Short term courses

January 2011, Contracts and negotiations, Norwegian organization of Chartered Engineers (TEKNA) (1 day)

April 2010, Seminar on Eurocode 8 – Earthquake, NORSAR, Standard Norge, Kjeller, Norway (2 days)

April 2009, Basic Security and Emergency Course, Falck Nutec, Trondheim (4 days, valid to May 2011)

November 2008, Infantry Platoon Leader Course, level II, Norwegian Home Guard (10 days)

January 2008, Arctic offshore structures, Norwegian organization of Chartered Engineers (TEKNA) (2 days)

August 2002, Rock climbing instructor, level 1, University climbing group (NTNUI Tindegruppa) (3 days)

Visits abroad

Mai 2009, Doris Engineering, Paris, France

January 2004, University of Cambridge, Great Britain, visit Prof. Andrew C. Palmer.

June 2007, Memorial University, New Foundland, St. Johns, Canada, C-CORE, visit Prof. Ian Jordaan.

Supervisions

Tor Øyvind Lehman, 2010, Collapse of the Nygrån lighthouse, Master Thesis, Department of Structural Engineering, NTNU.

Vegard S. Bjoland, 2010, Failure of the Björnklack lighthouse, Master Thesis, Department of Structural Engineering, NTNU.

Christian Lønøy, 2009, Predefined loading functions to represent dynamic ice actions, project for PhD work at NTNU.

Arne Alberktsen, 2009, Ice action to Norströmsgrund lighthouse, Master Thesis, Department of Structural Engineering, NTNU.

Anne Cecilie Nordsve, 2008, Pipe impact from trawl gear, Master Thesis, Department of Structural Engineering, NTNU.

Languages

Norwegian, Native

English, Oral and written

Awards

Best paper award at Offshore Mechanics and Arctic Engineering (OMAE) 2010, Shanghai, China.

Memberships

Norwegian organization of Chartered Engineers (TEKNA)

Norwegian alpine club (NTK)

Hobbies

Active in rock climbing and mountaineering with several first ascents in Norway.

Cross country skiing, hunting, fly fishing

Talks given

Norway – New boundary conditions for offshore wind, North Sea Offshore Wind Mission, August 2011, Stiklestad, Norway.

Lessons learned from planning offshore oil and gas infrastructure, Supply chain conference, November 2011, Hamburg, Germany.

Selected Publications

Gürtner, A., Bjerås, M., Forsberg, J. And Hilding, D. (2010), Numerical modelling of a full scale ice event, IAHR Ice Symposium, Lathi, Finland.

Bjerås, M., Alsos, H.S, Hval, M., Lange, H. and Holden, O.M. (2010), A Pressure-Moment Capacity Curve for 16-inch Pipe Bends, The International Society of Offshore and Polar Engineers, ISOPE 2010 Beijing, China.

Bjerås, M., Albrektsen, A. and Gürtner, A, (2010), Static and dynamic ice loads in the light of new design codes, OMAE2010, Shanghai, China, June 2010 (Awarded best paper).

Gürtner, A, Bjerås, M., Kuenlein, W., Jochmann, P., Konuk, I. (2009), Numerical Simulation of Ice Action to a lighthouse, OMAE2009-80164, Honolulu, Hawaii, USA, June 2009.

Bjerås, M. (2007), Review of measured full scale ice loads to fixed structures, Offshore Mechanics and Arctic Engineering Conference, OMAE2007-29048, presented at Offshore Mechanics and Arctic Engineering conference, San Diego, USA, June 2007.

Bjerås, M. (2006), Ice actions on offshore structures – with applications of continuous wavelet transforms on ice load signals, PhD thesis, Norwegian University of Science and Technology (NTNU), 176 p.

Bjerås, M., Skiple, A. and Røe, O.I. (2006), Applications of continuous wavelet transforms on ice load signals, *Engineering Structures* Vol. 29, pp. 1450-1456.

Bjerås, M. (2006), Wavelet transforms and ice actions on structures, *Cold Regions Science and Technology*, Vol 44, pp. 159-169.

Bjerkås, M. and Skiple, A. (2005), Occurrence of continuous and intermittent crushing during icestructure interaction, In proceedings of the 18'th conference on port and ocean engineering under arctic conditions (POAC'05), June 2005, Potsdam, NY, USA, Vol 3, pp. 1131-1140.

Bjerkås, M. (2004), Global design ice loads' dependence on failure mode, *International Journal of Offshore and Polar Engineers*, Vol 14, No. 3, pp. 189-195.

Bonnemaire, B. and Bjerkås, M. (2004), Ice ridge – structure interaction, Part I: Geometry and failure modes of ice ridges, Submitted to the IAHR'04 Ice Symposium, Saint Petersburg, Russian Federation June 2004, Vol 1, pp. 123-130.

Bjerkås, M. and Bonnemaire, B. (2004), Ice ridge – structure interaction Part II: Loads from ice ridges, Submitted to the IAHR'04 Ice Symposium, Saint Petersburg, Russian Federation June 2004, Vol 1, pp. 122-129.

Høyland, K.V., Bjerkås, M. and Vernyayev, S. (2004), Mechanical properties of ice ridges and level ice, in-situ and laboratory testing, Submitted to the IAHR'04 Ice Symposium, Saint Petersburg, Russian Federation, June 2004. Vol 1, pp. 69-75.

Løset, S., Bonnemaire, B. and Bjerkås, M. (2003), Proceedings of the 17'th International Conference on Port and Ocean Engineering under Arctic Conditions (POAC), Norwegian University of Science and Technology (NTNU), Vol. 1+2.

Bjerkås, M., Moslet, P.O., Jochmann, P. and Løset, S. (2003), Global ice loads on the lighthouse Norströmsgrund in the winter 2001, International conference on port and ocean engineering under arctic conditions (POAC'03), June 2003, Trondheim, Norway, Vol 2, pp. 829-838.