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Articles in peer-reviewed scientific journals

- [1] H. Aarbogh, M'Hamdi, A. Mo, and H. G. Fjær. A simplified method for establishing constitutive equations and flow stress data for welding stress modelling. Accepted for publication in the *Science and Technology of Welding and Joining*, August 2007.
- [2] J. Liu, Z. L. Zhang, and B. Nyhus. Residual Stress Induced Crack Tip Constraint. *Engineering Fracture Mechanics*, **75**:4151-4166, 2007.
- [3] X. B. Ren, Z. L. Zhang, and B. Nyhus. A parametric study on crack-tip constraint induced by residual stresses. Submitted to the *International Journal of Solid and Structures*, May 2008.
- [4] Morten I. Onsøien, Mohammed M'Hamdi, and Asbjørn Mo. The CCT diagram for an offshore pipeline steel of X70 type. Submitted to the *Welding Journal* in April 2008.

Conference papers

- [5] O. M. Akselsen, R. Aune, V. Olden, and G. Rørvik. Evolution of Residual Stresses in Welding of Supermartensitic 13 % Cr Stainless Steels. *Proceedings from the 15th Annual International Offshore and Polar Engineering Conference (ISOPE 2005)*, Seoul, South Korea, June, 2005.
- [6] M. M'Hamdi and H. G. Fjær. A micro-macro approach for the thermal, metallurgical and mechanical modelling of the welding of duplex stainless steel structures. In M. Bellet and Ch.-A. Gandin, editors, *Modeling of Casting, Welding, and Advanced Solidification Processes XI*, pages 847-854, TMS, 2006.
- [7] H. M. Aarbogh, M. M'Hamdi, A. Mo, and H. G. Fjær. On using the Satoh test for extracting parameters in constitutive equations for modelling welding stresses in phase transforming steels. In H. Cerjak, H. K. D. H. Bhadeshia, and E. Kozeschnik, editors, *Mathematical Modelling of Weld Phenomena 8*, pages 105-118, Verlag der Technischen Universität Graz, Austria, 2007.
- [8] H. G. Fjær, J. Liu, M. Mhamdi, and D. Lindholm. On the use of residual stresses from welding simulations in failure assessment analyses for steel structures. In H. Cerjak, H. K. D. H. Bhadeshia, and E. Kozeschnik, editors, *Mathematical Modelling of Weld Phenomena 8*, pages 997-1011, Verlag der Technischen Universität Graz, Austria, 2007.
- [9] X. B. Ren, Z. L. Zhang, and B. Nyhus. Residual Stress-induced Crack-tip Constraint: A Parametric Study. *Proceedings of the 17th European Conference on Fracture*, Brno, Czech Republic, September 2-5, 2008.

Technical reports

- [10] H. G. Fjær and D. Lindholm. WeldsimS Reference Manual. Documentation for software under development. First published 29 September 2005; continuously updated. Institute for Energy Technology.
- [11] M. Onsøien. Dilatometry of X70 steel specimens during weld thermal cycle simulation. SINTEF Report No. STF80MK F06054, February 2006.
- [12] M. M'Hamdi. Modelling of heat transfer and transformation kinetics during welding of low-carbon steels. SINTEF Report No. STF80MK F06030, February 2006.
- [13] Jun Liu. Literature review on residual stress treatment in integrity assessment. SINTEF Report No. STF80MK F06057, March 2006.
- [14] K. Lippe and M. I. Onsøien. Satoh testing of X70 pipeline steel. SINTEF Report No. STF80MK F06250, August 2006.

Oral presentations at international conferences (no written paper)

- [15] A. Mo, B. Nyhus, and Z. Zhang. Short presentation of the project RESIA – Residual Stress Simulation for Integrity Assessment. *The 2005 T.A.G.S.I. Symposium*, Cambridge, 27 April 2005.
- [16] M. Onsøien. Phase transformation of X70 pipeline steel. Presented at the *2006 FABTECH International & AWS Welding Show*, Atlanta, USA, 31 October – 2 November 2006.
- [17] Z. L. Zhang. Recent Developments in the Study of Crack Tip Constraints. *Eighth International Conference on Fundamentals of Fracture*, 3-7 October, 2008, Hong Kong.

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Seminars and workshops organised by the RESIA Team

- [18] *Industrially oriented Workshop with the purpose of identifying relevant R&D approaches.* Invited speakers from Norwegian off-shore industry together with the RESIA Project team. Gjerdrum, 17-18 January 2006. [More info](#) (pdf document in Norwegian).
- [19] Gjennomgang av STORFORSK-prosjektet RESIA. Open seminar with Norwegian off-shore industry, Trondheim 20 March 2007.

Project presentations at dedicated national or international meetings or seminars

- [20] B. Nyhus. Planer for RESIA og mulige følgeprosjekter. *Meeting on strategic initiative within fracture mechanics analysis in SINTEF* with representatives from Statoil, Hydro, Technip, NTNU and SINTEF. Trondheim 30 March 2005.
- [21] B. Nyhus. RESIA presentation given on *R&D project meeting on hydrogen embitterment (HISC2)* in the presence of representatives from Statoil, Hydro, DNV, NTNU and SINTEF. Trondheim 30 June 2005.
- [22] B. Nyhus and J. Ødegård. RESIA presentation given on meeting on *Japanese-Norwegian R&D Agreement on co-operation* in the presence of representatives from JFE Steel Corporation, NIPPON steel, Sumitomo Metals, Tokyo Gas, SINTEF, and NTNU. Tokyo 23 August 2005.
- [23] B. Nyhus, Zhiliang Zhang, and J. Ødegård. RESIA presentation given on meeting on *R&D Agreement on co-operation between CNPC Research Institute of Tubular Goods, Xian Jiaotong University, SINTEF, and NTNU.* Xi'an, China, 25 August 2005.
- [24] A. Mo. Brief Presentation of the project RESIA. *Industrially oriented Workshop organised by the RESIA Project Team with the purpose of identifying relevant R&D approaches.* 17-18 January 2006.
- [25] B. Nyhus. RESIA Workpackage 1 – Integrity assessment. *Industrially oriented Workshop organised by the RESIA Project Team with the purpose of identifying relevant R&D approaches.* 17-18 January 2006.
- [26] H. Fjær. RESIA Workpackage 2 – Finite element backbone. *Industrially oriented Workshop organised by the RESIA Project Team with the purpose of identifying relevant R&D approaches.* 17-18 January 2006.
- [27] M. M'Hamdi. RESIA Workpackage 3 – Constitutive models. *Industrially oriented Workshop organised by the RESIA Project Team with the purpose of identifying relevant R&D approaches.* 17-18 January 2006.
- [28] B. Nyhus. RESIA og mulige følgeprosjekter mot hyperbarisk sveising. *Meeting between Statoil, Technip and SINTEF with the purpose of discussing R&D strategic aspects related to hyperbaric welding.* Trondheim 4 January 2007.
- [29] B. Nyhus. Presentasjon av RESIA og mulige følgeprosjekter mot PWHT, HISC og sveiseprosedyreutvikling. *Meeting between DNV and SINTEF with the purpose of establishing a closer collaboration on integrity assessment.* Oslo 13 February 2007.
- [30] A. Mo. Project Overview RESIA. *Structural physics Group Seminar, University of Oslo.* 14 February 2007.
- [31] H. Aarbogh. A Simplified method for establishing constitutive equations for welding stress modelling. *Structural physics Group Seminar, University of Oslo.* 14 February 2007.
- [32] B. Nyhus. RESIA presentation. *Meeting on hyperbaric welding* with representatives from StatoilHydro, Technip, ISOTEK, Helmut Schmidt Universität in Hamburg, and SINTEF. Trondheim, 6-7 December 2007.
- [33] B. Nyhus. Short presentations of the RESIA Project. *Seminars with CNOOC and CPOE/CNPC (Chinese oil companies) on possible cooperation.* Beijing, 3 and 4 March 2008.