

2009 — MOCHIZUKI Masahito

Scientific Papers/Commentary Articles

1. Y. Mikami, M. Mochizuki and M. Toyoda, Effect of Transformation Temperature and Restraint Intensity on the Reduction of Restraint Stress by Transformation Expansion, Quarterly Journal of Japan Welding Society, Vol. 27, No. 2, 235s-239s, 2009
2. S. Okano, M. Mochizuki and M. Toyoda, Effect of Welding Conditions on Reduction of Angular Distortion by In-Process Control Welding Using Back Heating Source, Quarterly Journal of Japan Welding Society, Vol. 27, No. 2, 231s-234s, 2009
3. Y. Mikami, A. Inao, M. Mochizuki and M. Toyoda, Numerical Simulation of Transformation-Induced Microscopic Residual Stress in Ferrite-Martensite Lamellar Steel, Journal of Physics, Conference Series, 165, 12080-1-4, 2009
4. M. Mochizuki, Y. Mikami, S. Okano and S. Itoh, Computational Simulation of Weld Microstructure and Distortion by Considering Process Mechanics, Journal of Physics, Conference Series, 165, 12014-1-6, 2009
5. M. Mochizuki, G. B. An and M. Toyoda, Thermal Elastic-Plastic Analysis Considering Temperature Rise by Rapid Plastic Deformation in Undermatched Joints, Transactions of the ASME, Journal of Pressure Vessel Technology, Vol. 131, No. 3, 031202-1-11, 2009
6. K. Miyazaki, M. Numata, K. Saito and M. Mochizuki, Effect of Distance from the Center of Weld to the Fixed End on Residual Stress and Stress Intensity Factor of the Piping Weld, Transactions of the ASME, Journal of Pressure Vessel Technology, Vol. 131, No. 3, 021205-1-9, 2009
7. Y. Mikami, Y. Morikage, M. Mochizuki and M. Toyoda, Angular Distortion of Fillet Welded T Joint Using Low Transformation Temperature Welding Wire, Science and Technology of Welding and Joining, Vol. 14, Vol. 2, 97-105, 2009
8. M. Mochizuki, Computational Welding Mechanics from Mega- to Micro-Scopic Structures, Proceedings of the 20th PAM Users' Conference in Asia '09, VM23, 2009
9. M. Mochizuki, Characteristics and Perspectives of Welded Construction and Joints Using Ultra-Fine Grain Steel, Proceedings of NIMS Week 2009, UFG-2, 2009

International Conference Proceedings

1. K. Sogabe, Y. Mikami, T. Kurashiki and M. Mochizuki, An Application of Multi-Scale Analysis to the Evaluation of Microscopic Residual Stress in the Welding Joint, Proceedings of the 12th International Conference on Pressure Vessel Technology, WRS4-2, 505-511, 2009

2. J. Yamada, S. Okano, H. Mori, M. Mochizuki and K. Nishimoto, Thermal Stress and Strain Behavior during Laser Processing in Low Carbon Austenitic Stainless Steel for Joint Performance, Proceedings of the 12th International Conference on Pressure Vessel Technology, WRS3-2, 403-409, 2009
3. R. Ihara, J. Katsuyama, K. Onizawa, T. Hashimoto, Y. Mikami, M. Mochizuki and M. Toyoda, Prediction of Hardness and Residual Stress Distribution Generated by Surface Machining and Welding in Low-Carbon Austenitic Stainless Steel, Proceedings of the 12th International Conference on Pressure Vessel Technology, WRS2-4, 224-230, 2009
4. S. Itoh, M. Shibahara, M. Mochizuki and H. Murakawa, Prediction of Welding Deformation of Shell and Multiple-Pipe Components, Proceedings of the 12th International Conference on Pressure Vessel Technology, WRS1-5, 72-79, 2009
5. M. Iyota, Y. Mikami, Y. Inoue, T. Kasuya and M. Mochizuki, Cold Cracking Prevention in Pressure Vessel Steels by Low-Temperature Transformation Expansion of Weld Metals, Proceedings of the 12th International Conference on Pressure Vessel Technology, WRS1-4, 65-71, 2009
6. M. Mochizuki, J. Katsuyama, R. Ihara, Y. Mikami and K. Onizawa, Crack Growth Analysis of Stress Corrosion Cracking under Combined Stress Field due to Welding and Surface Machining, Proceedings of the 2009 ASME Pressure Vessels and Piping Conference, PVP2009-77706, 2009
7. M. Mochizuki, S. Okano and H. Shirai, Weld Residual Stress and Distortion by Considering Process Mechanics, Proceedings of the 2009 ASME Pressure Vessels and Piping Conference, PVP2009-77617, 2009
8. M. Mochizuki and Y. Mikami, Heterogeneous Microstructure Effect on Residual Stress and Fatigue Crack Resistance in Dual-Phase Materials, Proceedings of the 2009 ASME Pressure Vessels and Piping Conference, PVP2009-77446, 2009
9. H. Kitano, S. Okano and M. Mochizuki, Effects of HAZ Softening on Tensile Strength Limit in Girth-Welded Pipe Joints, Proceedings of the 2009 ASME Pressure Vessels and Piping Conference, PVP2009-77445, 2009
10. M. Mochizuki and R. Higuchi, Stress-Strain Relationship in Microstructural Region Using Triangular Pyramidal Indenter, Proceedings of the 19th International Offshore and Polar Engineering Conference, ISOPE-2009-TPC-806, 2009
11. S. Okano, M. Mochizuki, M. Toyoda and T. Ueyama, Experimental Study on Thermal Distortion Behavior during In-Process Control Welding by Additional Cooling, Proceedings of the 19th International Offshore and Polar Engineering Conference, ISOPE-2009-TPC-711, 2009
12. J. Yamada, S. Okano, H. Mori, M. Mochizuki and K. Nishimoto, Numerical Study on Strain Behavior During Solidification Evaluation of Solidification Cracking Susceptibility in Low Carbon Austenitic Stainless Steel Laser Weld, Proceedings of the 19th International Offshore

- and Polar Engineering Conference, ISOPE-2009-TPC-704, 2009
13. S. Itoh, S. Okano, M. Mochizuki and H. Murakawa, Influence of Initial Residual Stress by Rolling Process on Welding Distortion of Stiffened Plate, Proceedings of the 19th International Offshore and Polar Engineering Conference, ISOPE-2009-TPC-650, 2009
 14. Y. Mikami, A. Inao, K. Nakashima, H. Shimanuki, M. Mochizuki and M. Toyoda, Transformation-Induced Microscopic Residual Stress in Ferrite-Martensite Lamellar Steels and Its Influence on Fatigue Crack Propagation Paths, Proceedings of the 19th International Offshore and Polar Engineering Conference, ISOPE-2009-TPC-550, 2009
 15. M. Mochizuki, Y. Mikami and M. Iyota, Effect of Low Temperature Transformation Expansion on Restraint Stress of High Strength Steel Welds, Proceedings of the 19th International Offshore and Polar Engineering Conference, ISOPE-2009-TPC-549, 2009
 16. M. Shibahara, E. Kawamura, T. Onda, S. Itoh, M. Mochizuki and K. Masaoka, Measurement of Three-dimensional Welding Deformation Using Digital Image Correlation Technique, Proceedings of the International Conference on Welding Science and Engineering, 67-76, 2009
 17. R. Ihara, T. Hashimoto, M. Mochizuki and K. Nishimoto, Prediction of Residual Stress Distributions due to Surface Machining and Welding and Crack Growth Simulation, Proceedings of the International Conference on Welding Science and Engineering, 51-58, 2009
 18. M. Mochizuki, Mis-Matching Effect of Weld-HAZ on Tensile Strength Limit in High Chromium Steel Welded Pipe-Joint for Sodium Cooled Fast Breeder Reactor, Proceedings of the 12th International Conference on Pressure Vessel Technology, M2B.6, 2009
 19. T. Kawabata, H. Sakaibori, K. Ohnishi and M. Mochizuki, Mechanical Discussion on 950MPa Class Steel Plate, Welded Joint for Penstock, Report 2: Effect of Welding Conditions on Brittle Fracture Behavior and Fracture Assessment, Proceedings of the Conference on High Strength Steels for Hydropower Plants, 14.1-8, 2009
 20. M. Mochizuki, H. Kitano, S. Okano, T. Kawabata and H. Sakaibori, Mechanical Discussion on 950MPa Class Steel Plate, Welded Joint for Penstock, Report 1: Characteristics of Deformation and Strength by Numerical Welding Stress-Strain Simulation Considering Microstructural Effect, Proceedings of the Conference on High Strength Steels for Hydropower Plants, 13.1-8, 2009
 21. S. Okano, M. Mochizuki, K. Yamamoto and M. Tanaka, Approach to Link between Arc Physics and Weld Distortion through Heat Transport Phenomena, 62nd Annual Assembly of the International Institute of Welding, IIW Doc. 212-1154-09, 2009
 22. N. Ochi, S. Okano, M. Mochizuki, J. Shimamura and N. Ishikawa, Computational Analysis of Temperature Distribution in Multiple-Electrode Submerged Arc Welding, 62nd Annual Assembly of the International Institute of Welding, IIW Doc. XII-1957-09, 2009
 23. M. Mochizuki and T. Kurimura, Round Robin Tests of Weld Residual Stress using X-Ray Diffraction and Computational Simulation, 62nd Annual Assembly of the International Institute

of Welding, IIW Doc. X-1661-09, XIII-2294-09, XV-1327-09, 2009

Awards

1. H. Kitano, S. Okano and M. Mochizuki, ASME PVPD Student Paper Award, 2009.7.19