

2009 年度業績 一望月 正人

学術論文・解説記事

1. 岡野成威, 望月正人, 豊田政男, 局所冷却を伴う温度場で生じる溶接残留変形とその低減効果, 溶接学会論文集, 第 28 卷, 第 1 号, 72-29, 2010
2. 樋口良太, 望月正人, 豊田政男, 鋼材の微視的不均質を考慮した応力解析のための FEM-MD 結合数値解析法の提案, 溶接学会論文集, 第 28 卷, 第 1 号, 28-38, 2010
3. 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
4. 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
5. 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
6. 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
7. 樋口良太, 望月正人, 豊田政男, 三角錐圧子による押込み試験を利用した材料の微小領域における応力-ひずみ関係の推定方法の提案, 溶接学会論文集, 第 27 卷, 第 2 号, 115-123, 2009
8. 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
9. 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
10. 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
11. 望月正人, 「プロセスメカニクス」からの次世代溶接技術への夢, 溶接技術, 第 58 卷, 第 1 号, 76-84, 2010
12. M. Mochizuki, Computational Welding Mechanics from Mega- to Micro-Scoptic Structures,

Proceedings of the 20th PAM Users' Conference in Asia '09, VM23, 2009

13. 望月正人, 三上欣希, 岡野成威, 伊藤真介, 橋本匡史, 柴原正和, 溶接変形・残留応力の基礎と現状, 溶接学会平成 21 年度秋季全国大会技術セッション - 溶接技術の基礎と現状 テキスト, 23-44, 2009
14. 望月正人, 溶接力学 I -1 - 材料強度の基礎, 平成 21 年度溶接工学夏季大学 テキスト, 39-56, 2009
15. M. Mochizuki, Characteristics and Perspectives of Welded Construction and Joints Using Ultra-Fine Grain Steel, Proceedings of NIMS Week 2009, UFG-2, 2009
16. 望月正人, 三上欣希, 溶接・接合工学の最近の動向 - 継手性能の評価・静的強度評価, 溶接学会誌, 第 78 卷, 第 5 号, 450-452, 2009
17. 安田功一, 井上裕滋, 王昆, 望月正人, 西尾一政, 小関敏彦, 佐藤嘉洋, 溶接・接合工学の最近の動向 - 鉄鋼材料の溶接, 溶接学会誌, 第 78 卷, 第 5 号, 414-417, 2009

国際会議プロシーディングス

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

受賞

1. H. Kitano, S. Okano and M. Mochizuki, ASME PVPD Student Paper Award, 2009.7.19
2. 望月正人, 溶接学会国際協力賞, 2009.4.23
3. 望月正人・三上欣希・岡野成威・伊藤真介, 日本保全学会 産学協同セッション 論文賞・金賞, 2009.8.5
4. 三上欣希・望月正人, 関西原子力懇談会優秀発表賞, 2010.3.12

シンポジウム開催状況

1. 溶接構造シンポジウム 2009, 主な招待講演者: 豊田政男 大阪大学名誉教授, 参加人数 215 (外国人参加者数 8)