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- ABS, 1997, Rule Requirements for Materials and Welding, PART 2, *American Bureau of Shipping*, New York, N.Y. 10048, USA.
- Adamczuk, P.C., Machado, I.G., Mazzaferro, J.A.E., 2017, Methodology for predicting the angular distortion in multi-pass butt-joint welding. *Journal of Materials Processing Technology*, 240, pp. 305-313.
- Ali, N.B., Tanguy, D., Estevez, R., 2011, Effects of microstructure on hydrogen-induced cracking in aluminum alloys, *Scripta Materialia*, 65, pp. 210–213.
- Ashby, M.F., Jones, D., R., H., 2013, *Engineering Material 2*, An Introduction Microstructures and Processing, 4th edition, Butterworth-Heinemann Linacre House, Jordan Hill, Oxford OX2 8DP 225 Wildwood Avenue, Woburn, MA 01801-2041.
- ASME, 2001, Materials Part C – *Specifications for Welding Rods, Electrodes, and Filler Metals*, American Society of Mechanical Engineers, p 230, 2001.
- ASM Handbook, 1998, *WELDING, BRAZING, AND SOLDERING*, Volume 6, ASM INTERNATIONAL, p. 2596.
- AWS D1.2, 2014, *Structural Welding Code-Aluminum*, American Welding Society, USA.
- Bajpei, T., Chelladurai, H., Ansari, M., Z, 2017, Experimental investigation and numerical analyses of residual stresses and distortions in GMA welding of thin dissimilar AA5052-AA6061 plates, *Journal of Manufacturing Processes*, 25, pp. 340-350.
- Bollinghaus, T., Herold, H., Cross, C.E., Lippold, J.C., 2008, *Hot Cracking Phenomena in Welds II*, Springer-Verlag Berlin Heidelberg.
- Borrego, L.P., Costa, J.D., Jesus, J.S., Loureiro, A, R., Ferreira, J. M., 2014, *Fatigue life improvement by friction stir processing of 5083 aluminum alloy MIG butt welds*, Theoretical and Applied Fracture Mechanics, 70, pp. 68-74.
- Brien, A.O, 2004, *Welding Handbook, Welding Processes, Part 1*, Ninth Edition Volume 2, American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.
- Broek, D., 1987, *Elementary engineering fracture mechanics*, 4th revised edition, Martinus Nijhoff Publisher, P.O. Box 163, 3300 AD Dordrecht, The Netherlands, p.71.
- Broek, D., 1988, *The practical use of fracture mechanics*, Kluwer Academics Publishers, p.8.
- Bugio, T.M.A., Martins, R.F., Neves, L.L.d, 2013, Failure analysis of fuel tanks of a lightweight ship, *Engineering Failure Analysis*, 35, pp. 272-285.
- Brumm, S., Bürkner, G., 2015, *Gas metal arc pulse welding with alternating current for lightweight materials*, Materials Today: Proceedings, 2S, pp. S179-S187.
- Callister, W.D., Rethwisch, D.G., 2012, *Fundamentals of Materials Science and Engineering*, An Integrated Approach, 4th Edition, John Willey & Sons, Inc.
- Chandra, K., Kain, V., 2013, Welding failure of as-fabricated component of aluminum alloy 5052, *Engineering Failure Analysis*, 34, pp. 387-396.

- Chen, D., Chen, M., Wu, C., 2015, Effect of phase difference on the behavior of arc and weld pool in tandem P-GMAW, *Journal of Materials Processing Technology*, 225, pp. 45-55.
- Chen, J., Wu, C.S., Chen, M. A., 2014, *Improvement of welding heat source models for TIG-MIG hybrid welding process*, *Journal of Manufacturing Process*, 16, pp. 485-493.
- Chen-fu, F., Xiao-hui, M., Qing-xian, H., Feng-jiang, W., He, R., Hai-song, W., Yu, G., Ming, M., 2012, Tandem and GMAW Twin Wire Welding of Q690 Steel Used in Hydraulic Support, *Journal of iron and steel research, International*, 19(5), pp. 79-85.
- Chen, J., Zong, R., Wu, C., Padhy, G. K, Hu, Q., 2016, Influence of low current auxiliary TIG arc on high speed TIG-MIG hybrid welding, *Journal of Materials Processing Tech*, 243, pp.131-142.
- Cormack, E.C., 2012, The effect of sensitization on the stress corrosion cracking of aluminum alloy 5456, *Thesis*, Department of Mechanical and Aerospace Engineering, Naval Postgraduate School, Monterey, California.
- Dieter, G. E. dan Djafrie, S., 1992, *Metalurgi Mekanik Jilid 1*, Erlangga, Jakarta.
- Doksanovic, T., Dzeba, I., Markulak, D., 2017, Variability of structural aluminum alloys mechanical properties, *Structural Safety*, 67, pp. 11-26.
- Dowling, N.E., 2013, *Mechanical Behavior of Materials: Engineering Methods for Deformation, Fracture, and Fatigue*, 4th edition, Pearson Education Limited.
- Farag, M.M., 2014, *Materials and Process Selection for Engineering Design*, 3rd edition, CRC Press Taylor & Francis Group, 6000 Broken Sound Parkway NW, Suite 300 Boca Raton, FL 33487-2742.
- Fauzi, E. R. I., Jamil, M. S. C., Samad, Z., Muangjunburee, P., 2016, Microstructure analysis and mechanical characteristics of tungsten inert gas and metal inert gas welded AA6082-T6 tubular joint: A comparative study, *Trans. Nonferrous Met. Soc. China*, 27, pp.17-24.
- Fontana, M.G., 1987, *Corrosion Engineering*, Third Edition, p.172, McGraw-Hill.
- Gaur V, Enoki M, Okada T, Yomogida S. A study on fatigue behavior of MIG-welded Al-Mg alloy with different filler-wire materials under mean stress. *International Journal of Fatigue*. 2018;107:119-129.
- Ghosh, A., Yadav, A., Kumar, A., 2017, Modelling and experimental validation of moving tilted volumetric heat source in gas metal arc welding process, *Journal of Materials Processing Technology*, 239, pp. 52-65.
- Goeke, S., Kaufmann, H., Hedegard, J., Lundin, M., Goeke, S. F., 2015, <https://www.researchgate.net/publication/266214551>, accessed date: January 17, 2018.
- Gray, T., Camilleri, D., McPherson, N., 2014, *Control of welding distortion in thin-plate fabrication*, Wood Publishing, U.K.
- Gungor, B., Kaluc, E., Taban, E., Sik, A., 2014, Mechanical and microstructural properties of robotic Cold Metal Transfer (CMT) welded 5083-H111 and 6082-T651 aluminum alloy, *Materials and Design*, 54, pp. 207-211.

- Hadadzadeh, A., Ghaznavi, M.M., Kokabi, A.H., 2013, The effect of gas tungsten arc welding and pulsed-gas tungsten arc welding processes' parameters on the heat affected zone-softening behavior of strain-hardened Al-6.7Mg alloy, *Materials and Design*, 55, pp. 335-342.
- Haelsig, A., Kusch, M., Mayr, P., 2012, New findings on the efficiency of gas shielded arc welding, *Weld World*, 56, pp. 98-104.
- Hashemzadeh, M., Garbatov, Y., Soares, C. G., 2017, Analytically based equations for distortion and residual stress estimations of thin butt-welded plates, *Engineering Structures*, 137, pp.115-124.
- HE, Y.Z., Wang, D.P., Wang, Y., Zhang, Z., 2016, Correction of buckling distortion by ultrasonic shot peening treatment for 5A06 aluminum alloy welded structure, *Transaction of Nonferrous Metal Society of China*, 26, pp. 1531-1537.
- Huang, L., Wu, D., Hua, X., Liu, S., Jiang, Z., Li, F., Wang, H., Shi, S., 2018, Effect of the welding direction on microstructural characterization in fiber laser-GMAW hybrid welding of 5083 aluminum alloy, *Journal of Manufacturing Processes*, 31, pp. 514-522.
- Ilman, M.N., Kusmono, Iswanto, P.T., 2013, Fatigue crack growth rate behavior of friction-stir aluminum alloy AA2024-T3 welds under transient thermal tensioning, *Materials and Design*, 50, pp. 235-522.
- Ilman, M.N., Kusmono, Muslih, M.R., Subeki, N., Wibowo, H., 2016, Mitigating distortion and residual stress by static thermal tensioning to improve fatigue crack growth performance of MIG AA5083 welds, *Materials and Design*, 99, pp. 273-283.
- Ilman, M.N., Triwibowo, N.A., Wahyudianto, A., Muslih, M.R., 2017, Environmentally assisted fatigue behaviour of stress relieved metal inert gas (MIG) AA5083 welds in 3,5% NaCl solution, *International Journal of Fatigue*, 100, pp. 285-295.
- Izumoto, E., Nishimura, R., 2011, Environment-induced cracking of Al-Cu alloy (AA2017P-T3) under constant load in distilled water and sodium chloride solutions, *Corrosion Science*, 53, pp.886-893.
- Jones, D.A., 1992, *Principles and Prevention of CORROSION*, Mcmillan Publishing Company, New York.
- Kanemaru, S., Sasaki, T., Sato, T., Mishima, H., Tashiro, S., Tanaka, M., 2014, Study for TIG-MIG hybrid welding process, *Weld-world*, 58, pp. 11-18.
- Kanemaru, S., Sasaki, T., Sato, T., Era, Tetsuo, Tanaka, M., 2015, Study for the mechanism of TIG-MIG hybrid welding process, *Weld World*, 59, pp. 261-268.
- Karunakaran, N., Balasubramanian, V., 2011, Effect of pulsed current on temperature distribution, weld bead profiles and characteristics of gas tungsten arc welded aluminum alloy joints, *Trans. Nonferrous Met. Soc. China*, 21, pp. 278-286.
- Katsas, S., Nikolaou, J., Papadimitriou, G., 2005, Microstructural changes accompanying repair welding in 5xxx aluminium alloys and their effect on the mechanical properties, *Materials and Design*, 27, pp. 968-975.

- Khan, I.M., 2007, *Welding science and technology*, New age international (P) limited, Publishers,
- Kim, S.J., Kim, S.K., Park, J.C., 2010, The corrosion and mechanical properties of Al alloy 5083-H116 in metal inert gas welding based on slow strain rate test, *Surface & Coatings Technology*, 205, pp. S73–S78.
- Kou, S., 2003, *Welding metallurgy*, 2nd edition, John Wiley & Sons, New Jersey.
- Kumbhar NT, Sahoo SK, Samajdar I, Dey GK, Bhanumurthy K. Microstructure and microtextural studies of friction stir welded aluminum alloy 5052. *Materials and Design*. 2011;32:1657-1666.
- Kwon YJ, Shim SB, Park DH. Friction stir welding of 5052 aluminum alloy plate. *Transactions of Nonferrous Metals Society of China*. 2009;19:s23-s27.
- Lee. H., Kim, Y., Jeong, Y., Kim, S., 2012, Effects of testing variables on stress corrosion cracking susceptibility of Al 2024-T351, *Corrosion Science*, 55, pp.10–19.
- Li, S., Dong, H, Shi, L., Li, P., Fe., Y. 2017, Corrosion Behavior and Mechanical Properties of Al-Zn-Mg Aluminum Alloy Weld, *Corrosion Science*, 123, pp. 243–255.
- Liang, Y., Shen, J., Hu, S., Wang, H., Pang, J., 2017, Effect of TIG current on microstructural and mechanical properties of 6061-T6 aluminum alloy joints by TIG-CMT hybrid welding, *Journal of Materials Processing Technology*, 255, pp.161-174.
- Lin, S., Nie, Z., Huang, H., Li, B., 2010, Annealing behavior of a modified 5083 aluminum alloy, *Materials and Design*, 31, pp. 1607-1612.
- McEvily, A.J., 2013, *Metal Failures: Mechanisms, Analysis, Prevention*, John Wiley & Sons.
- Marsetio, 2014, Membangun dan memperkokoh keamanan nasional dengan visi maritim, *Sarasehan Roadmap Pembangunan Kelautan dan Kemaritiman*, UGM – Yogyakarta, 28 Agustus 2014.
- Mathers, G., 2002, *The welding of aluminium and its alloys*, Woodhead Publishing, pp. 19-27.
- Mudjijana, Ilman, M.N., Iswanto, P. T., 2017, *International Annual Engineering Seminar (InAES)*, Yogyakarta, Indonesia, pp. 1-7.
- Mudjijana, Wibowo, W., Wisnujati, A., 2014, *Kelompok industri manufaktur sampan (canoe) dengan bahan paduan aluminium*, Laporan akhir IPTEKS bagi Masyarakat (Ib.M), LPPM UGM, November 2014.
- Paik, J., K., 2007, Empirical formulations for predicting the ultimate compressive strength of welded aluminum stiffened panels, *Thin-Walled Structures*, 45, pp. 171-184.
- Paik, J., K., 2007, Characteristics of welding induced initial deflections in welded aluminum plates, *Thin-walled Structures*, 45, pp. 493-501.
- Paradowska, A., Finlayson, T.R., Price, J.W.H, Ibrahim, R., Lienert, U., and Harland, C., 2006, Studies of Residual Stress Distributions in Single Bead on Plate using High Energy synchrotron Radiation and Neutron Scattering, *National Congress 17 th*, Australian Institute of Physics.

- Peasure, P. and Watanapa, A., 2012, Influence of Shielding Gas on Aluminum Alloy 5083 in Gas Tungsten Arc Welding, *Procedia Engineering*, 29, pp. 2465-2469.
- Ping, Y., Jiaxiang, X., Kang, Z., Xiaojun, W., Qiang, Z., 2016, Symmetrical transition waveform control on double-wire MIG welding, *Journal of Materials Processing Technology*, 229, pp. 111-120.
- Radaj, D., 1992, *Heat Effects of Welding, Temperature Field, Residual Stress, Distorsion*, Springer-Verlag, Berlin.
- Rao, K.S., Reddy, G.M., Rao, K.P., 2005, Studies on partially melted zone in aluminum-copper alloy welds-effect of techniques and prior thermal temper, *Materials Science and Engineering A*, 403, pp. 69-76.
- Roberge, P. R. 2000. *Handbook of Corrosion Engineering*. New York: McGraw-Hill.
- Ravisankar, A., Velaga, S.K., Rajput, G., Venugopal, S., 2014, Influence of welding speed on residual stress during gas tungsten arc welding (GTAW) of thin sections with constant heat input: A study using numerical simulation and experimental validation, *Journal of Manufacturing Processes*, 16, pp. 200-211.
- Rout, P.K., Ghosh, M.M., Ghosh, K.S., 2014, Effect of solution pH on electrochemical and stress corrosion cracking behavior of a 7150 Al-Zn-Mg-Cu alloy, *Materials Science & Engineering A*, 604, pp.156-165.
- Saad, S., 2014, Pengelolaan sumberdaya kelautan, Direktur Jendral Kelautan, Pesisir, dan Pulau-pulau Kecil, *Sarasehan Roadmap Pembangunan Kelautan dan Kemaritiman*, UGM – Yogyakarta, 28 Agustus 2014.
- Schenk, T., Richardson, I.M., Kraska, M., Ohnimus, S., 2009, A study on the influence of clamping on welding distortion, *Computational Materials Science*, 45, pp. 999-1005.
- Shankar, K. & Wu, W., 2002, Effect of welding and weld repair on crack propagation behaviour in aluminum alloy 5083 plates, *Materials & Design*, 23, pp. 201-208.
- Sproesser, G., Pittner, A., Rethmeiner, M., 2016, Increasing performance and energy efficiency of Gas Metal Arc Welding by a high-power tandem process, *Procedia CIRP*, 40, pp. 642-647.
- Sumi, Y., 2014, Fatigue crack propagation in marine structures under seaway loading, *International Journal of Fatigue*, 58, pp. 218-224.
- Teng TL, Chang PH, Tseng WC. Effect of welding sequences on residual stresses. *Computers and Structures*. 2003; 81:273-286.
- Treathewey dan Chamberlain, 1991, *Korosi untuk Mahasiswa dan Rekayasawan*. Gramedia Pustaka Utama, Jakarta.
- Undomphol, 2007, *Aluminium and its alloys*. Suranaree University of Technology.
- Wang B, Chen XH, Pan FS, MAO JJ, Fang Y. Effects of cold rolling and heat treatment on microstructure and mechanical properties of AA5052 aluminum alloy. *Transactions of Nonferrous Metals Society of China*. 2015;25:2481-2489.
- Wang, L.L., Wei, H.L., Xue, J.X., DebRoy, T., 2018, Special features of double pulsed gas metal arc welding, *Journal of Materials Processing Technology*, 251, pp. 369-375.

- Winarto, 2011, Buku Pegangan (Handbook) *Teknologi Pengelasan*, untuk Enjiner Las Muda, Japan International Cooperation Agency.
- Woelke, P.B., Hiriyur, B.K., Nahshon, K., Hutchinson, J.W., 2017, A practical approach to modelling aluminum weld fracture for structural applications, *Engineering Fracture Mechanics*, 175, pp. 72-85.
- Xueping, D., Huan, L., Huiliang, W., Jiquan, L., 2016, Numerical analysis of arc plasma behavior in double-wire GMAW, *Vacuum*, 124, pp. 46-54.
- Yang, Y.K. dan Allen, T., 2013, Direct visualization of β phase causing intergranular forms of corrosion in Al-Mg alloys, *Materials Characterization*, 80, pp. 76-85, Elsevier.
- Yang, D., Li, X., He, D., Nie, Z., Huang, H., 2012, Microstructural and mechanical property characterization of Er modified Al-Mg-Mn alloy Tungsten Inert Gas welds, *Materials and Design*, 34, pp. 655-659.
- Yuliadi, M.Z., 2015, *Diskusi dengan General Manager of Technology*, P.T. PAL Indonesia, Jl. Ujung-Surabaya 60156 Indonesia, 2 Pebruari 2015.
- Zain, H., 1982, Peraturan Menteri Tenaga Kerja dan Transmigrasi Republik Indonesia No: PER.02/MEN/1992, Tentang Kualifikasi Juru Las di Tempat Kerja, Kementerian Tenaga Kerja dan Transmigrasi RI.
- Zhang, H.J., Zhang, G. J., Cai, C.B., Gao, H.M., Wu, L., 2009, Numerical simulation of three-dimension stress field in double-sided double arc multipass welding process, *Materials Science and Engineering A*, 499, pp. 309-314.
- Zhu, C., Tang, X., He, Y., Lu, F., Cui, H., 2018, Effect of preheating on the defects and microstructure in NG-GMA welding of 5083 Al-alloy, *Journal of Materials Processing Tech.*, 251, pp. 214-224.