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DAFTAR PUSTAKA

Ahmadi, E., Ebrahimi, A. R., & Hoseinzadeh, A. (2020). Microstructure Evolution and Mechanical Properties of 2219 Aluminum Alloy A-TIG Welds. *Physics of Metals and Metallography 2020 121:5*, *121*(5), 483–488. https://doi.org/10.1134/S0031918X20050026

Ajezi-Sardroud, R., Mostafapour, A., Ajezi-Sardroud, F., & Mohtadi-Bonab, M. A. (2022). Effect of Active Flux on Aluminum 6061 and its Mechanical Properties by Gas Tungsten Arc Welding Process. *International Journal of Engineering*, *35*(08), 1501–1508. https://doi.org/10.5829/ije.2022.35.08b.06

Aluminum Association. (2002). *Alloy and Temper Designation Systems for Aluminum (ANSI H35.1-1988)* (Vol. 80, Issue 21, p. 370).

American Welding Society. (2003). *Practices for Gas Tungsten Recommended Practices for*.

Callister, W. D., & Rethwisch, D. G. (2017). Material Science and Engineering An Introduction Tenth Edition. *WileyPLUS*.

ESAB. (2021, November 9). *Aluminum Alloy Types & What They Mean - ESAB US*. https://esab.com/us/nam_en/esab-university/articles/understanding-the-aluminum-alloy-designation-system/?utm

Glodež, S., & Aberšek, B. (2020). *The Life of Cracks: Theory and Application*.

Howse, D. S., & Lucas, W. (2000). Investigation into arc constriction by active fluxes for tungsten inert gas welding. *Science and Technology of Welding and Joining*, *5*(3), 189–193. https://doi.org/10.1179/136217100101538191

Ilman, M. N., & Sehono. (2023). *Ilmu dan Tekologi Pengelasan*. UGM PRESS.

Janssen, M., Zuidema, J., & Wanhill, R. J. H. (2002). *Fracture Mechanics* (2nd ed.). VSSD.

Klobčar, D., Tušek, J., Bizjak, M., Simončič, S., & Lešer, V. (2016). Active flux tungsten inert gas welding of austenitic stainless steel AISI 304. *Metalurgija*, *55*(4), 617–620. https://hrcak.srce.hr/157380

Kumar, R., Vettivel, S. C., & Kumar Kansal, H. (2021). Effect of SiO2 flux on the depth of penetration, microstructure, texture and mechanical behavior of AA6063 T6 aluminum alloy using activated TIG welding. *Bulletin of the Polish Academy of Sciences: Technical Sciences*, *69*(1). https://doi.org/10.24425/BPASTS.2020.136215

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Kushlaf, H. A., Eldghaies, H., Bhieh, N. M., & Husain, I. K. (2024). The Effect of Activated Flux in TIG Welding Process on the Quality of Weld Geometry of Austenitic Stainless Steel. *International Science and Technology Journal*. https://doi.org/10.62341/hana0658

Lumley, R. N. (2011). Fundamentals of aluminium metallurgy: Production, processing and applications. In *Fundamentals of Aluminium Metallurgy: Production, Processing and Applications*. https://doi.org/10.1533/9780857090256

Mandal, N. R. (2002). Aluminium Welding. *Woodhead Publishing Limited*.

Mathers, G. (2002). *The welding of aluminium and its alloys*. Woodhead Publishing Limited.

Messler, R. W. (2004). *Principles of Welding: Processes, Physics, Chemistry, and Metallurgy*. Wiley-VCH.

Patel, K., & Kahar, S. D. (2024). Effect of SiO2 and TiO2 Flux on Metallurgical and Corrosion Properties of the Activated TIG Welded AA7004 Aluminum Alloy. *Russian Journal of Non-Ferrous Metals 2023 64:1*, *64*(1), 1–8. https://doi.org/10.1134/S1067821224600054

Ramana, M. V., Krishna, M., Kumar, B. V. R. R., Kumar, E. P., Dilip, Y., & Teja, V. N. S. (2023). Investigation on Joint Properties of AA5083 Aluminium Alloy Welded using A-TIG Process. *AIP Conference Proceedings*, *May 2023*. https://doi.org/10.1063/5.0161200

Singh, S. R., & Khanna, P. (2021). A-TIG (activated flux tungsten inert gas) welding: – A review. *Materials Today: Proceedings*, *44*, 808–820. https://doi.org/10.1016/J.MATPR.2020.10.712

Tseng, K. H., & Chen, K. L. (2012). Comparisons between TiO2- and SiO2-flux assisted TIG welding processes. *Journal of Nanoscience and Nanotechnology*, *12*(8), 6359–6367. https://doi.org/10.1166/JNN.2012.6419

Vidyarthy, R. S., & Dwivedi, D. K. (2016). Activating flux tungsten inert gas welding for enhanced weld penetration. *Journal of Manufacturing Processes*, *22*, 211–228. https://doi.org/10.1016/j.jmapro.2016.03.012

Widodo, E. W. R., Anggara, D., Al Amin, M. K., & Al Jawwad, M. I. (2023). Hardness Analysis of Aluminium 5083 A-TIG Welding Due to The Effect of Active Flux and Current. *Journal of Welding Technology*, *5*(1), 6–10. https://doi.org/10.30811/jowt.v5i1.3886

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You, X., Xing, Z., Jiang, S., Zhu, Y., Lin, Y., Qiu, H., Nie, R., Yang, J., Hui, D., Chen, W., & Chen, Y. (2024). A review of research on aluminum alloy materials in structural engineering. *Developments in the Built Environment*, *17*, 100319. https://doi.org/10.1016/J.DIBE.2023.100319