



Mahmoud Abbasi
Assistant Prof. in Materials Science and Engineering
University of Kashan

Date of birth: 15 Sep 1981

Office Address: Department of Materials Science and Engineering,
Faculty of Engineering, University of Kashan, Kashan, Iran.

Tel/Fax: +983155912468

E-mail address: m.abbasi@kashanu.ac.ir

Academic degrees

Ph.D. in Materials Science and Engineering, Amirkabir University of Technology, 2012.

M. Sc. in Characterization and Selection of Metal Materials, Amirkabir University of Technology, 2007.

B.Sc. in Industrial Metallurgy, Amirkabir University of Technology, 2005.

Fields of interest

Mechanical Behavior of materials

Metal forming

FE method and simulation

Courses

Theory of dislocations

Metal forming

Simulation in Materials Science and Engineering

Mechanical properties of materials

Publications

- 1- "Analysis of microstructure and mechanical properties of different hot stamped B- bearing steels", Steel Research International, Vol. 81, 2010, pp. 216-223.
- 2- "Investigation into formability of tailor welded blank consisted of IF-steel sheets with different thicknesses- experiment and simulation", Steel Research International, Vol. 81, 2010, pp. 600-604.
- 3- "Effect of different yield criteria on prediction of wrinkling initiation of interstitial-free (IF) galvanized steel sheet", Materials and Design, Vol. 32, 2011, pp. 3370-3376.
- 4- "Formability enhancement of galvanized IF-steel TWB by modification of forming parameters", Journal of Materials Engineering and Performance, Vol. 21, 2012, pp. 564-571.
- 5- "Analysis of microstructure and mechanical properties of different high strength carbon steels after hot stamping", Journal of Materials Processing Technology, Vol. 211, 2011, pp. 1117-1125.
- 6- "Semi-hot stamping as an improved process of hot stamping", Journal of Materials Science and Technology, Vol. 27, 2011, pp. 369-376.
- 7- "Identification of GTN model parameters by application of response surface methodology", Procedia Engineering, Vol. 10, 2011, 415-420.
- 8- "Analysis of microstructure and mechanical properties of different boron and non-boron alloyed steels after being hot stamped", Procedia Engineering, Vol. 10, 2011, pp. 460-465.
- 9- "A new concept in obtaining forming limit diagram of tailor welded blanks", Journal of Strain analysis for Engineering Design, Vol. 46, 2011, pp. 740-748.
- 10- "Obtaining high formability of If-galvanized steel tailor welded blanks by applying optimum CO2 laser welding parameters", International Journal of Materials Research, Vol. 102, 2011, pp. 1295-1302.
- 11- "Investigation into wall wrinkling in the deep drawing process of conical cups", Journal of Materials Processing Technology, Vol. 211, 2011, pp. 1783-1795.
- 12- "Application of GTN model to predict forming limit diagram of IF-steel", Journal of Mechanical Science and Technology, Vol. 26, 2012, pp. 345-352.
- 13- "Application of response surface methodology to drive GTN model parameters and determine the FLD of tailor welded blank", Computational Materials Science, Vol. 53, 2012, 368-376.
- 14- "Investigation into the effects of weld zone and geometric discontinuity on the formability reduction of tailor welded blanks", Computational Materials Science, Vol. 59, 2012, pp. 158-164.
- 15- "The effect of strain rate and deformation temperature on the characteristics of isothermally hot compressed boron-alloyed steel", Materials Science and Engineering A, Vol. 538, 2012, pp. 356-363.
- 16- "Failure analysis of DP600 steel during the cross-die test", Computational Materials Science, Vol. 64, 2012, pp. 101-105.

- 17- "New attempt to wrinkling behavior analysis of tailor welded blanks during the deep drawing process", *Materials & Design*, Vol. 40, 2012, pp. 407-414.
- 18- "Application of the GTN model to predict the forming limit diagram of IF-steel", *Journal of Mechanical Science and Technology*, Vol. 26, 2012, pp. 345-352.
- 19- "Investigation into tearing of tailor welded blanks", *Steel research International, Special Edition: 14th International Conference*, 583-586, 2012.
- 20- "Isothermal versus non-isothermal hot compression process: a comparative study on phase transformations and structure-property relationships", *Materials & Design*, Vol. 45, 2013, pp. 1-5.
- 21- "Enhanced mechanical properties of a hot-stamped advanced high-strength steel via tempering treatment", *Metallurgical and Materials Transactions A*, Vol. 44, 2013, pp. 1852-1861.
- 22- "Numerical investigation into the effects of pin angle and preheating on temperature distribution during friction stir welding operation", *Transactions of Nonferrous Metals Society of China*, Vol. 23, 2013, pp. 2708-2713.
- 23- "The Effect of SiC/Al₂O₃ Particles Used during FSP on Mechanical Properties of AZ91 Magnesium Alloy", *International Journal of Materials Research*, Vol. 105, 2014, pp. 369-374.
- 24- "Effect of cooling rate on mechanical properties of 7075 aluminum rods extruded in semi-solid state", *Journal of Engineering Materials and Technology*, Vol. 136, 2014, pp. 1115-1123.
- 25- "Analytical method for prediction of weld line movement during stretch forming of tailor welded blanks", *International Journal of Advanced Manufacturing Technology*, Vol. 72, 2014, pp. 170-184.
- 26- "Thixo-joining of D2 and M2 tool steels: analysis of microstructure and mechanical properties", *International Journal of Materials Research*, Vol. 4, 2014, pp. 1-6.
- 27- "Thermal analysis of friction stir welding process and investigation into affective parameters using simulation", *Journal of Mechanical Science and Technology*, Vol. 29, 2015, pp- 861-866.
- 28- "The effect of FSP on mechanical, tribological and corrosion behavior of magnesium AZ91 alloy", *International Journal of Advanced Manufacturing Technology*, Vol. 77, 2015, pp. 2051-2058.
- 29- "Characterization of microstructure and mechanical properties of resistance spot welded DP600 steel", *Metals*, Vol. 5, 2015, pp. 1704-1716.
- 30- "The effect of SiC particle addition during FSW on microstructure and mechanical properties of AZ31 magnesium alloy", *Journal of Materials Engineering and Performance*, Vol. 24, 2015, pp. 5037-5045.
- 31- "The effect of martensite banding on the mechanical properties and formability of TRIP steels", *Materials Science and Engineering A*, Vol. 651, 2016, pp. 160-164.

- 32- "Incorporation of SiC particles in FS welded zone of AZ31 Mg alloy to improve the mechanical properties and corrosion resistance", *International Journal of Materials Research*, 2016, Vol. 107, pp. 566-572.
- 33- "Development and application of a microstructure-based approach to characterize and model failure initiation in DP steels using XFEM", *Materials Science and Engineering A*, 2016, Vol. 660, pp. 181-194.
- 34- "Microstructures and mechanical properties of friction stir welded dissimilar steel-copper joints", *Journal of Mechanical Science and Technology*, 2017, Vol. 31, pp. 1135-1142
- 35- "The effect of bake-hardening parameters on the mechanical properties of dual-phase steels", *Steel Research International*, 2016, Vol. 87, pp. 1-7.
- 36- "Friction stir welding vibration welding process: modified version of friction stir welding process", *The International Journal of Advanced Manufacturing Technology*, 2017, Vol. 90, pp. 141-151.
- 37- "The effect of aging on microstructure, formability and springback of Ti-6Al4V titanium alloy", *Journal of Materials Engineering and Performance*, 2017, Vol. 26, pp. 374-382.
- 38- "The effect of friction stir vibration welding process on characteristics of SiO₂ incorporated joint", *Journal of Materials Processing Technology*, 2017, Vol. 243, pp. 23-30.
- 39- "Structural evaluation and mechanical properties of AZ31/SiC nano-composite produced by friction stir welding process at various welding speeds", *Part L: Journal of Materials: Design and Applications*, 2017, DOI: 10.1177/1464420717708485.
- 40- "New method to improve the microstructure and mechanical properties of joint obtained using FSW", *The International Journal of Advanced Manufacturing Technology*, DOI: 10.1007/s00170-017-0810-3.