

## Publications in Refereed Journals

1. Al-Mouhamed M. A., Nazeeruddin, M. and **Merah N.** “*Design and Analysis of Force Feedback in Telerobotics*” IEEE Trans. on Instrumentation and Measurements (accepted, Nov. 2007).
2. **Merah, N.**, Al-Aboodi A., Shuaib A. N., and Al-Nassar, "3-D FEA of the Effects of Large Overtolerances on Rolled Tube-Tubesheet Joint Strength", Journal of Materials Processing Technology, (accepted, Oct. 2007).
3. Al-Aboodi A., **Merah N.**, Shuaib A. N. and Al-Nassar Y. "FEA of Groove Geometry Effect on Roller and Hydraulically Expanded Tube to Tubesheet Joint Strength", International Journal of Materials and Product Technology, Inderscience UK (accepted, May 2007).
4. Khan Z., Habib F., and **Merah N.**, “*Effect of Thermal Aging on the Microstructure and Fatigue Strength of Alloy 800 HT*”, International Journal of Microstructure and Materials Properties, (2008), Vol. 3/4.
5. **Merah, N.**, Farrukh Saghir, Z. Khan and A.Bazoune, "Temperature and Loading Frequency Effects On Fatigue Crack Growth In HDPE Pipe Material", Arabian Journal for Science and Engineering, Vol. 31/2C, (2006), pp. 19-30.
6. **Merah, N.**, Badr, H., Khan, Z., Gasem, Z., Boukhili, R., Shirokoff, J., Su, S.W., "Theme issue on fatigue and fracture of materials", Arabian Journal for Science and Engineering 31/2 C, pp. iii-iv.
7. **Merah N.**, "Natural Weathering Effects on Some Properties of CPVC Pipe Material", Elsevier's Journal of Materials Processing Technology, Vol. 191/1-3, (2007), pp.198-201.
8. Khan Z. and **Merah N.**, "Temperature and Frequency Effects on the Fatigue Crack Growth Process in CPVC Pipe Fittings", e-Polymers Journal, (5 June 2007), Article number 060.
9. Al-Aboodi A., **Merah, N.**, A. R. Shuaib, Y. Al-Nassar and S. S. Al-Anizi, "Modeling The Effects Of Initial Tube-Tubesheet Clearance, Wall Reduction And Material Strain Hardening On Rolled Joint Strength" ASME Jl. of Pressure Vessel Technology, to appear in Nov. 2008.
10. Shuaib, A. N., **Merah, N.**, Ahmed, M., Al-Nassar, Y. and Al-Anizi, S., "Integrity of Roller Expanded Tube-to-Tubesheet Joints with Over-Enlarged Tubesheet Holes", ASME Jl of Pressure Vessel Technology (2008), Vol. 130, pp. 1-6.
11. **Merah N.**, F. Saghir, Z. Khan and A. Bazoune, “*Variation of Mechanical Properties of HDPE Pipe Material with Temperature*” Journal of Plastics, Rubber and Composites: Macromolecular Engineering, Vol. 35/5, (2006), pp. 226-230.
12. \* **Merah N.**, F. Saghir, Z. Khan, and A. Bazoune “*A Study of Frequency and Temperature Effects on Fatigue Crack Growth Resistance of CPVC*”, Journal of Engineering Fracture Mechanics, Vol. 72/11 (2005) pp. 1691-1701.
13. **Merah, N.**, Farrukh Saghir, Z. Khan and A.Bazoune, “*Modeling the Combined Effects of Temperature and Frequency on Fatigue Crack Growth of CPVC*”, Elsevier's Journal of Materials Processing Technology, (2005) Vol. 164-165C pp. 1550-1553 .
14. **Merah N.**, M. Irfan-ul-Haq, and Z., Khan, “*Effects of Injection Molding Weld on Fatigue Crack Resistance of CPVC at Different Temperatures,*” Elsevier's Journal of Materials Processing Technology, 155-156C (2004), pp. 1261-1265.
15. **Merah, N.**, Al-Zayer, A., Shuaib, A. and Arif, A., “*Finite Element Evaluation Of Clearance Effect On Tube-To-Tubesheet Joint Strength*”, International Journal of Pressure Vessels and Piping, Vol. 80/12, (2003), pp. 879-885.
16. **Merah, N.**, Irfan-ul-Haq, M. and Z. Khan, “*Temperature and Weld Effects on Mechanical Properties of CPVC*”, Elsevier's Journal of Materials Processing Technology, Vol. 142/1 (2003), pp 247-255.
17. **Merah, N.**, “*Detecting and Measuring Flaws Using Electrical Potential Techniques*”, Journal of Quality in Maintenance Engineering, Vol. 9 No. 2 (2003).

18. Irfan-ul-Haq, M. and **Merah, N.**, "Effect of Temperature on Fatigue Crack Growth in CPVC," ASME Journal of Pressure Vessel Technology, Vol. 125/1 (2003), pp. 71-77.
19. Shuaib, A. N., **Merah, N.**, Khraisheh, M., I. Allam, and Al-Anizi, S., "Experimental Investigation of Heat Exchanger Tube Sheet Hole Enlargement," ASME Journal of Pressure Vessel Technology, Vol. 125/1 (2003), pp. 19-25.
20. Khan, Z., Rehan I. K, Al-Sulaiman, F., and **Merah, N.**, "Fatigue Damage in Woven Carbon Fabric/Epoxy Composites at Non-Ambient Temperatures", Journal of Composite Materials, Vol. 36, No. 22, (2002), pp. 2517-2535.
21. **Merah, N.**, Khan, Z., Mezghani K., Budair, M. O., Younas, M. and Olabisi, O., "Fatigue Crack Propagation in Weld Zone of CPVC Pipe Fittings at Different Temperatures," Journal of Polymer Engineering, Vol. 21, No. 6, (2001), pp. 521-542.
22. **Merah, N.**, "DC Potential Drop Calibration in Creep-Fatigue Loading Conditions," ASTM Journal of Testing & Evaluation, Vol. 28/ 4, (2000), pp. 301-306.
23. **Merah, N.**, "Notch Strengthening Phenomenon Under Creep-Fatigue Loading Conditions," ASME Journal of Pressure Vessel Technology, Vol. 122/1, (2000), pp. 15-21.
24. **Merah, N.**, Bui-Quoc T. and Bernard, M., "Creep-Fatigue Crack Growth in Notched SS-304 Plates at 60 °C," JI. Engineering Fracture Mechanics, Vol. 63, (1999), pp. 39-55.
25. **Merah, N.**, Bui-Quoc,T. and Bernard, M., "Notch and Temperature Effects on Crack Propagation in SS 304 Under LCF Conditions," ASME Journal of Pressure Vessel Technology, Vol. 121/1 (1999), pp. 42-48.
26. **Merah, N.**, Bui-Quoc,T. and Bernard, M., "Calibration of DC Potential Technique Using an Optical Image Processing System in LCF Testing," ASTM Journal of Testing & Evaluation, Vol. 23/3, (1995), pp. 160-167.
27. **Merah, N.**, Bui-Quoc, T. and Bernard, M., "A  $K_I$ -Based Method for Calculating LCF Life of Notched Specimens," ASME Journal of Pressure Vessel Technology, Vol. 116/4, (1994), pp. 403-408.
28. Ranganathan, N., Jendoubi, K. and **Merah, N.**, "Experimental Characterization of the Elastic-Plastic Strain Fields at the Crack Tip Due to Cyclic Loading," ASME Journal of Engineering Materials and Technology, Vol. 116, (1994), pp. 187-192.
29. Jendoubi, K., Ranganathan N., and **Merah, N.**, "Effect of Thickness on Elasto-Plastic Deformation and Hysteretic Energy Dissipated at Crack Tip," ASTM Journal of Testing and Evaluation, Vol. 19/3, (1991), pp. 201-209.
30. Shadley, J. R., **Merah, N.** and Reybicky, E. F., "The Effect of Induction Heating Stress Remedies on Existing Flaws in Pipes," ASME Journal of Pressure Vessel, Vol. 104, (1982), pp. 193-197.

\* #17 of Top 25 articles of the Engineering Fracture Mechanics Journal, Hottest Articles on Science Direct (2005 most downloaded articles).

## Journal Papers submitted or under preparation papers

1. **Merah N.**, Al-Aboodi A., Shuaib A. N., and Al-Nassar "Combined Effects of Projection and Initial Clearance on Rolled Tube-Tubesheet Strength" submitted to International Journal of Pressure Vessel and Piping.
2. **Merah N.** and Al-Bin Mousa J., "Experimental and Numerical Determination of Mixed Mode Crack Initiation Angle" submitted to ASTM JI of Testing and Evaluation (JTE101654-08).
3. Khan Z., Al-Sulaiman F., **Merah N.** and Naik, M. K., "Hydro-Burst Testing Of Filament-Wound Glass Fiber Reinforced Thermoset Pipes", Submitted March 2007 to Polymer Composites JI, PC-07-0143.
4. Khan Z., Naik, M. K., Al-Sulaiman F., and **Merah N.**, "Velocity Impact Response of Filament-Wound Glass-Fiber Reinforced Thermoset Composite Pipes". Submitted (April 2007) to Polymer Composites JI, PC-07-0170.
5. **Merah N.** and Al-Qahtani T., "Effects of Strain Rate and Temperature on Tensile Properties of CPVC Pipe Material" Submitted to JI of Plastics, Rubber and Composites: Macromolecular Engineering, (PRCME2541).
6. Al-Nassar Y., Al-Aboodi A., **Merah N.**, Shuaib A. N., and Al-Anizi S., "A Comparative Study of Roller and Hydraulic Expansion of tube-to-tubesheet joint using a 2D FE Simulation", to be submitted to JMPT.