References

Ghosh. & Mallik. (1993). *Manufacturing Science*. New Delhi, India: East West Press Private LTD.

A, Sorsa. (2012 Mar). *Prediction of material properties based on nondestructive Barkhausen noise measurement.* (Ph.D. Ph.D thesis), University of oulu graduate school. (46)

Abbas, N. M., Yusoff, N., & Mahmod, R. (2012). Electrical discharge machining (EDM): practices in Malaysian industries and possible change towards green manufacturing. *Procedia Engineering, 41*, 1684-1688.

Abdulkareem, S., Khan, A. A., & Konneh, M. (2009). Reducing electrode wear ratio using cryogenic cooling during electrical discharge machining. *The International Journal of Advanced Manufacturing Technology, 45*(11), 1146-1151.

Abdullah, A., & Shabgard, M. R. (2008). Effect of ultrasonic vibration of tool on electrical discharge machining of cemented tungsten carbide (WC-Co). *The International Journal of Advanced Manufacturing Technology, 38*(11), 1137-1147.

Abdullah, A., Shabgard, M. R., Ivanov, A., & Shervanyi-Tabar, M. T. (2009). Effect of ultrasonic-assisted EDM on the surface integrity of cemented tungsten carbide (WC-Co). *The International Journal of Advanced Manufacturing Technology, 41*(3), 268-280.

Ahmad, S., & Lajis, M. A. (2013). *Electrical discharge machining (EDM) of Inconel 718 by using copper electrode at higher peak current and pulse duration.* Paper presented at the IOP Conference Series: Materials Science and Engineering.

Anglada-Rivera, J., Padovese, L., & Capo-Sanchez, J. (2001). Magnetic Barkhausen noise and hysteresis loop in commercial carbon steel: influence of applied

tensile stress and grain size. *Journal of Magnetism and Magnetic Materials, 231*(2), 299-306.

Annamalai, N., Sivaramakrishnan, V., Suresh Kumar, B., & Baskar, N. (2014). Investigation and Modeling of Electrical Discharge Machining Process Parameters for AISI 4340 Steel. *International Journal of Engineering and Technology, 5*, 4761-4770.

Assarzadeh, S., & Ghoreishi, M. (2013). Statistical modeling and optimization of process parameters in electro-discharge machining of cobalt-bonded tungsten carbide composite (WC/6% Co). *Procedia Cirp, 6*, 463-468.

Augustyniak, B. (1999). Correlation between acoustic emission and magnetic and mechanical Barkhausen effects. *Journal of Magnetism and Magnetic Materials, 196*, 799-801.

Baizán, J., Navarro-Crespín, A., Casanueva, R., Azcondo, F. J., Brañas, C., & Díaz, F. J. (2014). Converter with four quadrant switches for EDM applications. *IEEE Transactions on Industry Applications, 50*(6), 4356-4362.

Barton, J., & Kusenberger, F. (1974). *Residual stresses in gas turbine engine components from Barkhausen noise analysis.* Paper presented at the American Society of Mechanical Engineers, Gas Turbine Conference and Products Show, Zurich, Switzerland.

BD, C. (1972). *Introduction to magnetic materials*. London: Addison- Wesley.

Bergaley, A., & Sharma, N. (2013). Optimization of Electrical and Non Electrical Factors in EDM for Machining Die Steel Using Copper Electrode by Adopting Taguchi Technique. *International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN*, 2278-3075.

Bhattacharya, A., Batish, A., Singh, G., & Singla, V. (2012). Optimal parameter settings for rough and finish machining of die steels in powder-mixed EDM. *The International Journal of Advanced Manufacturing Technology, 61*(5), 537-548.

Bhattacharya D K, R. S., Babu Rao C,Vadyanathan S, Baldev Raj. (1992c). *Assessment of residual stress and post weld heat treatment in butt weld joints of 2.25Cr-1 Mo steel tubes by X-ray diffraction technique and Barkhausen noise.* Paper presented at the Proceeding of National welding Seminar,, Calcutta.

Bhattacharya, D., & Vaidyanathan, S. (1997). Effect of the demagnetisation factor on the Barkhausen noise signal. *Journal of Magnetism and Magnetic Materials, 166*(1-2), 111-116.

Bhattacharyya, B., Gangopadhyay, S., & Sarkar, B. (2007). Modelling and analysis of EDM ED job surface integrity. *Journal of Materials Processing Technology, 189*(1), 169-177.

Blaow, M., Evans, J., & Shaw, B. (2006). Effect of hardness and composition gradients on Barkhausen emission in case hardened steel. *Journal of Magnetism and Magnetic Materials, 303*(1), 153-159.

Blaow, M., Evans, J. T., & Shaw, B. A. (2007). The effect of microstructure and applied stress on magnetic Barkhausen emission in induction hardened steel. *Journal of materials science, 42*(12), 4364-4371.

Blaow, M. M., & Shaw, B. A. (2014). Magnetic Barkhausen noise profile analysis: effect of excitation field strength and detection coil sensitivity in case carburized steel. *Materials Sciences and Applications, 5*(05), 258.

Brinksmeier, E., Cammett, J., König, W., Leskovar, P., Peters, J., & Tönshoff, H. (1982). Residual stresses—measurement and causes in machining processes. *CIRP Annals-Manufacturing Technology, 31*(2), 491-510.

Brinksmeier, E., & Tönshoff, H. (1985). X-ray stress measurement—a tool for the study and layout of machining processes. *CIRP Annals-Manufacturing Technology, 34*(1), 485-490.

Bundel, B. R. (2015). Experimental Investigation of Electrode Wear in Die-Sinking EDM on Different Pulse-on &off Time (μs) in Cylindrical Copper Electrode. *International Journal of Modern Engineering Research, 5*, 49-54.

Capo-Sanchez, J., Perez-Benitez, J., & Padovese, L. (2007). Analysis of the stress dependent magnetic easy axis in ASTM 36 steel by the magnetic Barkhausen noise. *NDT & E International, 40*(2), 168-172.

Çaydaş, U., & Hascalik, A. (2008). Modeling and analysis of electrode wear and white layer thickness in die-sinking EDM process through response surface methodology. *The International Journal of Advanced Manufacturing Technology, 38*(11-12), 1148-1156.

Chander, K. P., Vashista, M., Sabiruddin, K., Paul, S., & Bandyopadhyay, P. (2009). Effects of grit blasting on surface properties of steel substrates. *Materials & Design, 30*(8), 2895-2902.

Chen, D., Jhang, J., & Guo, M. (2013). Application of Taguchi design method to optimize the electrical discharge machining. *Journal of Achievements in Materials and Manufacturing Engineering, 57*(2), 76-82.

Chen, Y.-F., Chow, H.-M., Lin, Y.-C., & Lin, C.-T. (2008). Surface modification using semi-sintered electrodes on electrical discharge machining. *The International Journal of Advanced Manufacturing Technology, 36*(5), 490-500.

Chen, Y.-F., & Lin, Y.-C. (2009). Surface modifications of Al–Zn–Mg alloy using combined EDM with ultrasonic machining and addition of TiC particles into the dielectric. *Journal of Materials Processing Technology, 209*(9), 4343-4350.

Chiang, K.-T. (2008). Modeling and analysis of the effects of machining parameters on the performance characteristics in the EDM process of Al 2 O 3+ TiC mixed ceramic. *The International Journal of Advanced Manufacturing Technology, 37*(5), 523-533.

Chiang, K.-T., Chang, F.-P., & Tsai, D.-C. (2007). Modeling and analysis of the rapidly resolidified layer of SG cast iron in the EDM process through the response surface methodology. *Journal of Materials Processing Technology, 182*(1), 525-533.

Choudhary, S. K., & Jadoun, R. (2014). Current advanced research development of electric discharge machining (EDM): a review. *International Journal of Research in Advent Technology, 2*(3), 273-297.

Jameson, E. (2001). Electrical Discharge Machining.

Clapham, L., Jagadish, C., & Atherton, D. (1991). The influence of pearlite on Barkhausen noise generation in plain carbon steels. *Acta metallurgica et materialia, 39*(7), 1555-1562.

Cogun, C., & Akaslan, S. (2002). The effect of machining parameters on tool electrode edge wear and machining performance in electric discharge machining (EDM). *Journal of mechanical science and technology, 16*(1), 46-59.

Daneshmand, S., Kahrizi, E. F., Abedi, E., & Abdolhosseini, M. M. (2013). Influence of machining parameters on electro discharge machining of NiTi shape memory alloys. *Int. J. Electrochem. Sci, 8*(3), 3095-3104.

Daneshmand, S., Kahrizi, E. F., Neyestanak, A. A. L., & Ghahi, M. M. (2013). Experimental Investigations into Electro Discharge Machining of NiTi Shape Memory Alloys using Rotational Tool. *Int. J. Electrochem. Sci, 8*, 7484-7497.

Das, M. K., Kumar, K., Barman, T. K., & Sahoo, P. (2014). Application of artificial bee colony algorithm for optimization of MRR and surface roughness in EDM of EN31 tool steel. *Procedia Materials Science, 6*, 741-751.

Daryl, D.D., Philip, T.E., & Maria, A.B., (1989). Theoretical models of the electrical discharge machining process. I. A simple cathode erosion model. *Journal of Applied Physics*. *66* (9), 4095–4103.

Degmova, J., Abreu, A., Heftrich, T., Chantraine, H., & Debarberis, L. (2007). Mechanical and magnetic testing of realistic welds with parametric variation of Ni, Si, Cr and Mn content. *JRC Technical and Scientific Report–EUR, 22866*, 1-30.

Desvaux, S., Duquennoy, M., Gualandri, J., & Ourak, M. (2004). The evaluation of surface residual stress in aeronautic bearings using the Barkhausen noise effect. *NDT & E International, 37*(1), 9-17.

Dhar, A., Clapham, L., & Atherton, D. (2001). Influence of uniaxial plastic deformation on magnetic Barkhausen noise in steel. *NDT & E International, 34*(8), 507-514.

Donzella, G., & Granzotto, S. (1994). Some experimental results about the correlation between Barkhausen noise and the fatigue life of steel specimens. *Journal of Magnetism and Magnetic Materials, 133*(1-3), 613-616.

Doverbo, M. (2012). Correlation between material properties, grinding effects and Barkhausen noise measurements for two crankshaft steels.

Ekmekci, B. (2007). Residual stresses and white layer in electric discharge machining (EDM). *Applied Surface Science, 253*(23), 9234-9240.

Ekmekci, B., Tekkaya, A. E., & Erden, A. (2006). A semi-empirical approach for residual stresses in electric discharge machining (EDM). *International Journal of Machine Tools and Manufacture, 46*(7), 858-868.

El-Taweel, T. (2009). Multi-response optimization of EDM with Al–Cu–Si–TiC P/M composite electrode. *The International Journal of Advanced Manufacturing Technology, 44*(1-2), 100-113.

Enokizono, M., Nishimizu, A., & Oka, M. (1996). Estimation of fatigue level by rotational Barkhausen noise. *Journal of Magnetism and Magnetic Materials, 160*, 43-44.

Gadalla, A., & Bozkurt, B. (1992). Expanding heat source model for thermal spalling of TiB 2 in electrical discharge machining. *Journal of materials research, 7*(10), 2853-2858.

Gatelier-Rothea, C., Chicois, J., Fougeres, R., & Fleischmann, P. (1998). Characterization of pure iron and (130p. pm) carbon–iron binary alloy by Barkhausen noise measurements: study of the influence of stress and microstructure. *Acta materialia, 46*(14), 4873-4882.

Gauthier, J., Krause, T., & Atherton, D. (1998). Measurement of residual stress in steel using the magnetic Barkhausen noise technique. *NDT & E International, 31*(1), 23-31.

George, P., Raghunath, B., Manocha, L., & Warrier, A. M. (2004). EDM machining of carbon–carbon composite—a Taguchi approach. *Journal of Materials Processing Technology, 145*(1), 66-71.

Ghanei, S., Kashefi, M., & Mazinani, M. (2014). Comparative study of eddy current and Barkhausen noise nondestructive testing methods in microstructural examination of ferrite–martensite dual-phase steel. *Journal of Magnetism and Magnetic Materials, 356*, 103-110.

Ghanem, F., Fredj, N. B., Sidhom, H., & Braham, C. (2011). Effects of finishing processes on the fatigue life improvements of electro-machined surfaces of tool steel. *The International Journal of Advanced Manufacturing Technology, 52*(5), 583-595.

Giandomenico, N., Gorgerat, F.-H., & Lavazais, B. (2016). Development of a New Generator for Die Sinking Electrical Discharge Machining. *Procedia Cirp, 42*, 721-726.

Goodenough, J. B. (1954). A theory of domain creation and coercive force in polycrystalline ferromagnetics. *Physical Review, 95*(4), 917.

Gopalakannan, S., & Senthilvelan, T. (2012). Effect of electrode materials on electric discharge machining of 316 L and 17-4 PH stainless steels. *Journal of Minerals and Materials Characterization and Engineering, 11*(07), 685.

Gostimirovic, M., Kovac, P., Sekulic, M., & Skoric, B. (2012). Influence of discharge energy on machining characteristics in EDM. *Journal of mechanical science and technology, 26*(1), 173-179.

Grum, J., Zerovnik, P., & Fefer, D. (2000). *Use of Barkhausen effect in measurement of residual stresses in steel after Heat treatment and grinding.* Paper presented at the Proceedings of 15th WCNDT Conference.

Gupta, H., Zhang, M., & Parakka, A. (1997). Barkhausen effect in ground steels. *Acta materialia, 45*(5), 1917-1921.

Guu, Y., & Hou, M. T.-K. (2007). Effect of machining parameters on surface textures in EDM of Fe-Mn-Al alloy. *Materials Science and Engineering: A, 466*(1), 61-67.

Haron, C. C., Deros, B. M., Ginting, A., & Fauziah, M. (2001). Investigation on the influence of machining parameters when machining tool steel using EDM. *Journal of Materials Processing Technology, 116*(1), 84-87.

Ho, K., & Newman, S. (2003). State of the art electrical discharge machining (EDM). *International Journal of Machine Tools and Manufacture, 43*(13), 1287-1300.

Hu, C., Zhou, Y., & Bao, Y. (2008). Material removal and surface damage in EDM of Ti 3 SiC 2 ceramic. *Ceramics International, 34*(3), 537-541.

Izquierdo, B., Sanchez, J., Plaza, S., Pombo, I., & Ortega, N. (2009). A numerical model of the EDM process considering the effect of multiple discharges. *International Journal of Machine Tools and Manufacture, 49*(3), 220-229.

Jain, V. K. (2009). *Advanced machining processes*: Allied publishers.

Ji, R., Liu, Y., Zhang, Y., Cai, B., Ma, J., & Li, X. (2012). Influence of dielectric and machining parameters on the process performance for electric discharge

milling of SiC ceramic. *The International Journal of Advanced Manufacturing Technology, 59*(1-4), 127-136.

Jiang, Y., Zhao, W., & Xi, X. (2012). A study on pulse control for small-hole electrical discharge machining. *Journal of Materials Processing Technology, 212*(7), 1463-1471.

Joshi, S., & Pande, S. (2010). Thermo-physical modeling of die-sinking EDM process. *Journal of manufacturing processes, 12*(1), 45-56.

K.Mandal , M. E. L., A.Corey, D.L Atherton (1997). Magnetic Barkhausen noise indications of stress concentrations near pit of various depth. *Journal of Magnetism &Magnetic Material, 175*, 255-255

Kanagarajan, D., Palanikumar, K., & Karthikeyan, R. (2012). Effect of Electrical Discharge Machining on strength and reliability of WC–30% Co composite. *Materials & Design, 39*, 469-474.

Karpuschewski, B., Bleicher, O., & Beutner, M. (2011). Surface integrity inspection on gears using Barkhausen noise analysis. *Procedia Engineering, 19*, 162-171.

Keskin, Y., Halkacı, H. S., & Kizil, M. (2006). An experimental study for determination of the effects of machining parameters on surface roughness in electrical discharge machining (EDM). *The International Journal of Advanced Manufacturing Technology, 28*(11), 1118-1121.

Khan, A. A. (2008). Electrode wear and material removal rate during EDM of aluminum and mild steel using copper and brass electrodes. *The International Journal of Advanced Manufacturing Technology, 39*(5), 482-487.

Khan, A. R., Ahmad, M. A., Munir, N., & Butt, Z. R. (2015). INFLUENCE OF ELECTRODE MATERIAL ON QUALITY OF BLIND HOLES MACHINED VIA ELECTRIC DISCHARGE MACHINE (DIE SINKER).

Khanra, A., Sarkar, B., Bhattacharya, B., Pathak, L., & Godkhindi, M. (2007). Performance of ZrB 2–Cu composite as an EDM electrode. *Journal of Materials Processing Technology, 183*(1), 122-126.

Kiyak, M., & Cakır, O. (2007). Examination of machining parameters on surface roughness in EDM of tool steel. *Journal of Materials Processing Technology, 191*(1), 141-144.

Kleber, X., & Vincent, A. (2004). On the role of residual internal stresses and dislocations on Barkhausen noise in plastically deformed steel. *NDT & E International, 37*(6), 439-445.

Klocke, F., Holsten, M., Hensgen, L., & Klink, A. (2014). Experimental investigations on sinking-EDM of seal slots in gamma-TiAl. *Procedia Cirp, 24*, 92-96.

Klocke, F., Holsten, M., Welling, D., Klink, A., & Perez, R. (2015). Influence of Threshold Based Process Control on Sinking EDM of a High Aspect Ratio Geometry in a Gamma Titanium Aluminide. *Procedia Cirp, 35*, 73-78.

Klocke, F., Schwade, M., Klink, A., & Veselovac, D. (2013). Analysis of material removal rate and electrode wear in sinking EDM roughing strategies using different graphite grades. *Procedia Cirp, 6*, 163-167.

Krause, T. W., Makar, J., & Atherton, D. (1994). Investigation of the magnetic field and stress dependence of 180 domain wall motion in pipeline steel using magnetic Barkhausen noise. *Journal of Magnetism and Magnetic Materials, 137*(1-2), 25-34.

Kruth, J.-P., Stevens, L., Froyen, L., & Lauwers, B. (1995). Study of the white layer of a surface machined by die-sinking electro-discharge machining. *CIRP Annals-Manufacturing Technology, 44*(1), 169-172.

Ktena, A., Hristoforou, E., Gerhardt, G. J., Missell, F. P., Landgraf, F. J., Rodrigues, D. L., & Alberteris-Campos, M. (2014). Barkhausen noise as a microstructure characterization tool. *Physica B: Condensed Matter, 435*, 109-112.

Kung, K.-Y., Horng, J.-T., & Chiang, K.-T. (2009). Material removal rate and electrode wear ratio study on the powder mixed electrical discharge machining

of cobalt-bonded tungsten carbide. *The International Journal of Advanced Manufacturing Technology, 40*(1-2), 95-104.

Kunieda, M., & Kobayashi, T. (2004). Clarifying mechanism of determining tool electrode wear ratio in EDM using spectroscopic measurement of vapor density. *Journal of Materials Processing Technology, 149*(1), 284-288.

Kunieda, M., Kowaguchi, W., & Takita, T. (1999). Reverse simulation of die-sinking EDM. *CIRP Annals-Manufacturing Technology, 48*(1), 115-118.

Kunieda, M., & Muto, H. (2000). Development of multi-spark EDM. *CIRP Annals-Manufacturing Technology, 49*(1), 119-122.

Kunieda, M., & Ojima, S. (2000). Improvement of EDM efficiency of silicon single crystal through ohmic contact. *Precision engineering, 24*(3), 185-190.

Kunieda, M., Yoshida, M., & Taniguchi, N. (1997). Electrical discharge machining in gas. *CIRP Annals-Manufacturing Technology, 46*(1), 143-146.

Kurita, M. (1987). A new X-ray method for measuring residual stress and diffraction line broadness and its automation. *NDT international, 20*(5), 277-284.

Lakshmanan, S., Kumar, M., & Namballa, M. (2013). Optimization of EDM parameters using response surface methodology for EN31 tool steel machining. *International Journal of Engineering Science and Innovative Technology, 2*(5), 64-71.

Langman, R. (1987). Some comparisons between the measurement of stress in mild steel by means of Barkhausen noise and rotation of magnetization. *NDT international, 20*(2), 93-99.

Lauwers, B., Kruth, J.-P., Liu, W., Eeraerts, W., Schacht, B., & Bleys, P. (2004). Investigation of material removal mechanisms in EDM of composite ceramic materials. *Journal of Materials Processing Technology, 149*(1), 347-352.

Lauwers, B., Oosterling, H., & Vanderauwera, W. (2010). Development of an operations evaluation system for sinking EDM. *CIRP Annals-Manufacturing Technology, 59*(1), 223-226.

Le Manh, T., Caleyo, F., Hallen, J., Benítez, J. P., & Hernández, J. E. (2017). Novel method for the accurate determination of magnetocrystalline energy from Barkhausen noise in ferromagnetic materials. *Materials Science and Engineering: B, 225*, 98-107.

Lee, H.-T., & Liu, C. (2009). Optimizing the EDM hole-drilling strain gage method for the measurement of residual stress. *Journal of Materials Processing Technology, 209*(15), 5626-5635.

Lee, H.-T., Rehbach, W. P., Hsu, F.-C., Tai, T.-Y., & Hsu, E. (2004). The study of DM hole-drilling method for measuring residual stress in SKD11 tool steel. *Journal of Materials Processing Technology, 149*(1), 88-93.

Lee, H.-T., & Tai, T. Y. (2003). Relationship between EDM parameters and surface crack formation. *Journal of Materials Processing Technology, 142*(3), 676-683.

Lee H.T., Hsu. C.F.& Tai T.Y.,(2004). Study of surface integrity using the small area EDM process with a copper–tungsten electrode. *Materials Science and Engineering* A364, 346–356.

Lin, Y.-C., Chow, H.-M., Yan, B.-H., & Tzeng, H.-J. (2007). Effects of finishing in abrasive fluid machining on microholes fabricated by EDM. *The International Journal of Advanced Manufacturing Technology, 33*(5), 489-497.

Lin, Y.-C., Yan, B.H., & Chang Y.S., (2000). Machining characteristics of titanium alloy (Ti-6Al-4V) using a combination process of EDM with USM. *Journal of Materials Processing Technology* 104, 171-177.

Lindgren, M., & Lepistö, T. (2001). Effect of prestraining on Barkhausen noise vs. stress relation. *NDT & E International, 34*(5), 337-344.

Lindgren, M., & Lepistö, T. (2003a). Effect of cyclic deformation on Barkhausen noise in a mild steel. *NDT & E International, 36*(6), 401-409.

Lindgren, M., & Lepistö, T. (2003b). Relation between residual stress and Barkhausen noise in a duplex steel. *NDT & E International, 36*(5), 279-288.

Lindgren, M., & Lepistö, T. (2004). On the stress vs. Barkhausen noise relation in a duplex stainless steel. *NDT & E International, 37*(5), 403-410.

Liu, J., & Guo, Y. (2016). Residual stress modeling in electric discharge machining (EDM) by incorporating massive random discharges. *Procedia Cirp, 45*, 299-302.

Liu, K., Reynaerts, D., & Lauwers, B. (2009). Influence of the pulse shape on the EDM performance of Si 3 N 4–TiN ceramic composite. *CIRP Annals-Manufacturing Technology, 58*(1), 217-220.

Luo, Y. (1998). An investigation into the actual EDM off-time in SEA machining. *Journal of Materials Processing Technology, 74*(1), 61-68.

Mai, J., Peng, L., Lai, X., & Lin, Z. (2013). Electrical-assisted embossing process for fabrication of micro-channels on 316L stainless steel plate. *Journal of Materials Processing Technology, 213*(2), 314-321.

Makar, J., & Tanner, B. (2000). The effect of plastic deformation and residual stress on the permeability and magnetostriction of steels. *Journal of Magnetism and Magnetic Materials, 222*(3), 291-304.

Mandal, K., Corey, A., Loukas, M., Weyman, P., Eichenberger, J., & Atherton, D. (1997). The effects of defect depth and bending stress on magnetic Barkhausen noise and flux-leakage signals. *Journal of Physics D: Applied Physics, 30*(14), 1976.

Maradia, U., Knaak, R., Boos, J., Boccadoro, M., Stirnimann, J., & Wegener, K. (2013). EDM process analysis using high-speed imaging.

Marafona, J. (2007). Black layer characterisation and electrode wear ratio in electrical discharge machining (EDM). *Journal of Materials Processing Technology, 184*(1), 27-31.

Marafona, J. D. (2009). Black layer affects the thermal conductivity of the surface of copper–tungsten electrode. *The International Journal of Advanced Manufacturing Technology, 42*(5-6), 482.

Marafona, J. D., & Araujo, A. (2009). Influence of workpiece hardness on EDM performance. *International Journal of Machine Tools and Manufacture, 49*(9), 744-748.

Mamalis, A.G., Voaniakos, G.C., Vaxevanidis, N.M., (1987). Macroscopic and microscopic phenomena of electro-discharge machined steel surfaces: an experimental investigation, *Journal of Mechanical Working Technology*. 15, 335–356 .

Merdan, M.-R., & Arnell, R. (1989). Surface Integrity of a Die Steel after Electrodischarge Machining: 1Structure, Composition, and Hardness. *Surface engineering, 5*(2), 158-164.

Merdan, M.-R., & Arnell, R. (1991). The surface integrity of a die steel after electrodischarge machining: 2 residual stress distribution. *Surface engineering, 7*(2), 154-158.

Moorthy, V., Shaw, B., & Day, S. (2004). Evaluation of applied and residual stresses in case-carburised En36 steel subjected to bending using the magnetic Barkhausen emission technique. *Acta materialia, 52*(7), 1927-1936.

Moorthy, V., Shaw, B., & Evans, J. (2003). Evaluation of tempering induced changes in the hardness profile of case-carburised EN36 steel using magnetic Barkhausen noise analysis. *NDT & E International, 36*(1), 43-49.

Moorthy, V., Shaw, B., & Hopkins, P. (2006). Surface and subsurface stress evaluation in case-carburised steel using high and low frequency magnetic

Barkhausen emission measurements. *Journal of Magnetism and Magnetic Materials, 299*(2), 362-375.

Moorthy, V., Shaw, B., Mountford, P., & Hopkins, P. (2005). Magnetic Barkhausen emission technique for evaluation of residual stress alteration by grinding in case-carburised En36 steel. *Acta materialia, 53*(19), 4997-5006.

Moorthy, V., Vaidyanathan, S., Jayakumar, T., & Raj, B. (1997). Microstructural characterization of quenched and tempered 0.2% carbon steel using magnetic Barkhausen noise analysis. *Journal of Magnetism and Magnetic Materials, 171*(1-2), 179-189.

Moorthy, V., Vaidyanathan, S., Jayakumar, T., & Raj, B. (1998). On the influence of tempered microstructures on magnetic Barkhausen emission in ferritic steels. *Philosophical magazine A, 77*(6), 1499-1514.

Moorthy, V., Vaidyanathan, S., Jayakumar, T., Raj, B., & Kashyap, B. (1999). Effect of tensile deformation on micromagnetic parameters in 0.2% carbon steel and 2.25 Cr–1Mo steel. *Acta materialia, 47*(6), 1869-1878.

Naidu SV, K. D. V., Manu R, Mathew J. (2014). *Experimental Study on Varying Electromagnetic Field Assisted Die Sinking EDM*. Paper presented at the 5th International & 26th All India Manufacturing Technology, Design and Research Conference, Assam,India.

Neslušan, M., Čížek, J., Kolařík, K., Minárik, P., Čilliková, M., & Melikhova, O. (2017). Monitoring of grinding burn via Barkhausen noise emission in case-hardened steel in large-bearing production. *Journal of Materials Processing Technology, 240*, 104-117.

Neslušan, M., Hrabovský, T., Čilliková, M., & Mičietová, A. (2015). Monitoring of Hard Milled Surfaces via Barkhausen Noise Technique. *Procedia Engineering, 132*, 472-479.

Ng, D., Cho, K., Wong, M., Chan, S., Ma, X.-Y., & Lo, C. (2003). Study of microstructure, mechanical properties, and magnetization process in low

carbon steel bars by Barkhausen emission. *Materials Science and Engineering: A, 358*(1), 186-198.

Nikalje, A., Kumar, A., & Srinadh, K. S. (2013). Influence of parameters and optimization of EDM performance measures on MDN 300 steel using Taguchi method. *The International Journal of Advanced Manufacturing Technology, 69*(1-4), 41-49.

O'Sullivan, D., Cotterell, M., Tanner, D., & Mészáros, I. (2004). Characterisation of ferritic stainless steel by Barkhausen techniques. *NDT & E International, 37*(6), 489-496.

Patel, M.K., Maria, A.B., Philip, T.E. & Daryl, D.D., (1989). Theoretical models of the electrical discharge machining process. II. The anode erosion model. *Journal of Applied Physics.* 66 (9) 4101–4111.

Patowari, P. K., Saha, P., & Mishra, P. (2010). Artificial neural network model in surface modification by EDM using tungsten–copper powder metallurgy sintered electrodes. *The International Journal of Advanced Manufacturing Technology, 51*(5), 627-638.

Patowari, P. K., Saha, P., & Mishra, P. K. (2011). Taguchi analysis of surface modification technique using W-Cu powder metallurgy sintered tools in EDM and characterization of the deposited layer. *The International Journal of Advanced Manufacturing Technology, 54*(5), 593-604.

Peças, P., & Henriques, E. (2008). Effect of the powder concentration and dielectric flow in the surface morphology in electrical discharge machining with powder-mixed dielectric (PMD-EDM). *The International Journal of Advanced Manufacturing Technology, 37*(11), 1120-1132.

Pradhan, M. K., & Biswas, C. K. (2010). Neuro-fuzzy and neural network-based prediction of various responses in electrical discharge machining of AISI D2 steel. *The International Journal of Advanced Manufacturing Technology, 50*(5), 591-610.

Prihandana, G. S., Mahardika, M., Hamdi, M., & Mitsui, K. (2011). Effect of low-frequency vibration on workpiece in EDM processes. *Journal of mechanical science and technology, 25*(5), 1231-1234.

Puertas, I., Luis, C., & Alvarez, L. (2004). Analysis of the influence of EDM parameters on surface quality, MRR and EW of WC–Co. *Journal of Materials Processing Technology, 153*, 1026-1032.

Puertas, I., & Luis, C. J. (2012). Optimization of EDM conditions in the manufacturing process of B4C and WC-Co conductive ceramics. *The International Journal of Advanced Manufacturing Technology, 59*(5-8), 575-582.

Puri, A., & Bhattacharyya, B. (2005). Modeling and analysis of white layer depth in a wire-cut EDM process through response surface methodology. *The International Journal of Advanced Manufacturing Technology, 25*(3), 301-307.

R. Bormann, (1991). Getting those better EDM'd surfaces. *Modern Machine Shop*, 63 (9), 56–66.

Rai S, B. R. C., Bhattacharya D K, Baldev Raj (1993). *Residual stress measurement of explosively welded Al-SS plates using X-ray diffraction technique.* Paper presented at the Proceeding of National welding Seminar. NDE -93, Madras.

Rai S, B. R. C., Bhattacharya D K, Baldev Raj (1994). Evaluation of residual stress of AlSI-304L stainless steel dished ends. *J.Non-Destr.Eval*.

Raj, B., Jayakumar, T., & Rao, B. (1995). Non-destructive testing and evaluation for structural integrity. *Sadhana, 20*(1), 5-38.

Raj, B., Mudali, U. K., Jayakumar, T., Kasiviswanathan, K., & Natarajan, R. (2000). Meeting the challenges related to material issues in chemical industries. *Sadhana, 25*(6), 519-559.

Ramasawmy, H., & Blunt, L. (2004). Effect of EDM process parameters on 3D surface topography. *Journal of Materials Processing Technology, 148*(2), 155-164.

Rangajanardhaa, G., & Rao, S. (2009). Development of hybrid model and optimization of surface roughness in electric discharge machining using artificial neural networks and genetic algorithm. *Journal of Materials Processing Technology, 209*(3), 1512-1520.

Rao, P. S., Ramji, K., & Satyanarayana, B. (2016). Effect of wire EDM conditions on generation of residual stresses in machining of aluminum 2014 T6 alloy. *Alexandria Engineering Journal, 55*(2), 1077-1084.

Rebelo, J., Dias, A. M., Kremer, D., & Lebrun, J. (1998). Influence of EDM pulse energy on the surface integrity of martensitic steels. *Journal of Materials Processing Technology, 84*(1), 90-96.

Reddy VV, K. P., Kumar BS,Shashidhar M. (2016). Optimization of Process Parameters during EDM of Stainless Steel 304 using Taguchi Method. . *International Journal of Engineering Trends and Technology, 31*(2).

Roy, A. K., & Kumar, K. (2014). Effect and Optimization of various Machine Process Parameters on the surface roughness in EDM for an EN41 Material using Grey-Taguchi. *Procedia Materials Science, 6*, 383-390.

Salman, Ö., & Kayacan, M. C. (2008). Evolutionary programming method for modeling the EDM parameters for roughness. *Journal of Materials Processing Technology, 200*(1), 347-355.

Salonitis, K., Stournaras, A., Stavropoulos, P., & Chryssolouris, G. (2009). Thermal modeling of the material removal rate and surface roughness for die-sinking EDM. *The International Journal of Advanced Manufacturing Technology, 40*(3), 316-323.

Sánchez, H. T., Estrems, M., & Faura, F. (2011). Development of an inversion model for establishing EDM input parameters to satisfy material removal rate,

electrode wear ratio and surface roughness. *The International Journal of Advanced Manufacturing Technology, 57*(1-4), 189-201.

Sanchez, J., de Lacalle, L. L., Lamikiz, A., & Bravo, U. (2002). Dimensional accuracy optimisation of multi-stage planetary EDM. *International Journal of Machine Tools and Manufacture, 42*(15), 1643-1648.

Santa-aho, S., Vippola, M., Sorsa, A., Leiviskä, K., Lindgren, M., & Lepistö, T. (2012). Utilization of Barkhausen noise magnetizing sweeps for case-depth detection from hardened steel. *NDT & E International, 52*, 95-102.

Santa-aho, S., Vippola, M., Sorsa, A., Lindgren, M., Latokartano, J., Leiviskä, K., & Lepistö, T. (2012). Optimized laser processing of calibration blocks for grinding burn detection with Barkhausen noise. *Journal of Materials Processing Technology, 212*(11), 2282-2293.

Santos, R. F., Silva, E. R., Sales, W. F., & Raslan, A. A. (2016). Analysis of the surface integrity when nitriding AISI 4140 steel by the sink electrical discharge machining (EDM) process. *Procedia Cirp, 45*, 303-306.

Saquet, O., Chicois, J., & Vincent, A. (1999). Barkhausen noise from plain carbon steels: analysis of the influence of microstructure. *Materials Science and Engineering: A, 269*(1), 73-82.

Schumacher, B. M. (2004). After 60 years of EDM the discharge process remains still disputed. *Journal of Materials Processing Technology, 149*(1), 376-381.

Senthilkumar, V., & Omprakash, B. U. (2011). Effect of Titanium Carbide particle addition in the aluminium composite on EDM process parameters. *Journal of manufacturing processes, 13*(1), 60-66.

Sharif, S., Safiei, W., Mansor, A., Isa, M., & Saad, R. (2015). Experimental Study of Electrical Discharge Machine (die sinking) on Stainless Steel 316L Using Design of Experiment. *Procedia Manufacturing, 2*, 147-152.

Shu, K. M., Shih, H. R., & Tu, G. (2006). Electrical discharge abrasive drilling of hard materials using a metal matrix composite electrode. *The International Journal of Advanced Manufacturing Technology, 29*(7), 678-687.

Shunmugam, M., Philip, P., & Gangadhar, A. (1994). Improvement of wear resistance by EDM with tungsten carbide P/M electrode. *Wear, 171*(1-2), 1-5.

Sidhom, H., Ghanem, F., Amadou, T., Gonzalez, G., & Braham, C. (2013). Effect of electro discharge machining (EDM) on the AISI316L SS white layer microstructure and corrosion resistance. *The International Journal of Advanced Manufacturing Technology*, 1-13.

Sidhu, S. S., Batish, A., & Kumar, S. (2013). EDM of metal matrix composite for parameter design using lexicographic goal programming. *Materials and Manufacturing Processes, 28*(4), 495-500.

Singh, H. (2012). *Investigating the Effect of Copper Chromium and Aluminum Electrodes on EN-31 Die Steel on Electric Discharge Machine Using Positive Polarity.* Paper presented at the Proceedings of the World Congress on Engineering.

Singh, P., Beri, N., & Kumar, A. (2012). Determination of best parameter setting for overcut during electrical discharge machining of H13 tool steel using Taguchi method. *Int. J. of Adv. Engg. Tech, 3*(4), 101-103.

Sohani, M., Gaitonde, V., Siddeswarappa, B., & Deshpande, A. (2009). Investigations into the effect of tool shapes with size factor consideration in sink electrical discharge machining (EDM) process. *The International Journal of Advanced Manufacturing Technology, 45*(11), 1131-1145.

Sorsa, A., Leiviskä, K., Santa-aho, S., & Lepistö, T. (2012). Quantitative prediction of residual stress and hardness in case-hardened steel based on the Barkhausen noise measurement. *NDT & E International, 46*, 100-106.

Srivastava, V., & Pandey, P. M. (2012). Effect of process parameters on the performance of EDM process with ultrasonic assisted cryogenically cooled electrode. *Journal of manufacturing processes, 14*(3), 393-402.

SS., H. (2014). Parameter Optimization of electrical discharge machining using Taguchi approach. *Journal of engineering and Tecchnology Research, 6*(3), 27-42.

Stambekova, K., Lin, H.-M., & Uan, J.-Y. (2012). Microstructural and Corrosion Characteristics of Alloying Modified Layer on 5083 Al Alloy by Electrical Discharge Alloying Process with Pure Silicon Electrode. *Materials Transactions, 53*(8), 1436-1442.

Stefanita, C.-G., Atherton, D., & Clapham, L. (2000). Plastic versus elastic deformation effects on magnetic Barkhausen noise in steel. *Acta materialia, 48*(13), 3545-3551.

Stefanita, C., Clapham, L., & Atherton, D. (2000). Subtle changes in magnetic Barkhausen noise before the macroscopic elastic limit. *Journal of materials science, 35*(11), 2675-2681.

Stewart, D., Stevens, K., & Kaiser, A. (2004). Magnetic Barkhausen noise analysis of stress in steel. *Current Applied Physics, 4*(2), 308-311.

Stráský, J., Janeček, M., Harcuba, P., Bukovina, M., & Wagner, L. (2011). The effect of microstructure on fatigue performance of Ti–6Al–4V alloy after EDM surface treatment for application in orthopaedics. *Journal of the mechanical behavior of biomedical materials, 4*(8), 1955-1962.

Stupakov, A., Neslušan, M., & Perevertov, O. (2016). Detection of a milling-induced surface damage by the magnetic Barkhausen noise. *Journal of Magnetism and Magnetic Materials, 410*, 198-209.

Syed, K. H., & Palaniyandi, K. (2012). Performance of electrical discharge machining using aluminium powder suspended distilled water. *Turkish Journal of Engineering and Environmental Sciences, 36*(3), 195-207.

Tang, L., & Guo, Y. (2014). Electrical discharge precision machining parameters optimization investigation on S-03 special stainless steel. *The International Journal of Advanced Manufacturing Technology, 70*(5-8), 1369-1376.

Thiyagarajan, S., Sivapirakasam, S., Mathew, J., Surianarayanan, M., & Sundareswaran, K. (2014). Influence of workpiece materials on aerosol emission from die sinking electrical discharge machining process. *Process Safety and Environmental Protection, 92*(6), 739-749.

Tiitto, S. (1977). On the influence of microstructure on magnetization transitions in steel. *Acta Polytech. Scand.\ Appl. Phys.\, 80*(119).

Tomita, Y., Hashimoto, K., & Osawa, N. (1996). Nondestructive estimation of fatigue damage for steel by Barkhausen noise analysis. *NDT & E International, 29*(5), 275-280.

Trillon, A., Deneuville, F., Petit, S., & Bisiaux, B. (2012). *Magnetic Barkhausen noise for hardness checking on steel.* Paper presented at the 18th World Conference on Nondestructive Testing.

Tsai, Y., & Lu, C. (2007). Influence of current impulse on machining characteristics in EDM. *Journal of mechanical science and technology, 21*(10), 1617-1621.

Tsai, Y., Tseng, C., & Chang, C. (2008). Development of a combined machining method using electrorheological fluids for EDM. *Journal of Materials Processing Technology, 201*(1), 565-569.

Tzeng, Y.-f. (2008). Development of a flexible high-speed EDM technology with geometrical transform optimization. *Journal of Materials Processing Technology, 203*(1), 355-364.

Tzeng, Y.-F., & Lee, C.-Y. (2001). Effects of powder characteristics on electrodischarge machining efficiency. *The International Journal of Advanced Manufacturing Technology, 17*(8), 586-592.

Uhlmann, E., & Domingos, D. (2013a). Development and optimization of the die-sinking EDM-technology for machining the nickel-based alloy MAR-M247 for turbine components. *Procedia Cirp, 6*, 180-185.

Uhlmann, E., & Domingos, D. (2013b). Investigations on vibration-assisted EDM-machining of seal slots in high-temperature resistant materials for turbine components. *Procedia Cirp, 6*, 71-76.

Varavallo, R., de Melo Moreira, V., Paes, V., Brito, P., Olivas, J., & Pinto, H. C. (2014). *Welding Induced Residual Stresses in Explosion Cladded AL-6XN Superaustenitic Stainless Steel and ASME SA516-70 Steel Composite Plates.* Paper presented at the Advanced Materials Research.

Vashista, M., & Moorthy, V. (2015). On the shape of the magnetic Barkhausen noise profile for better revelation of the effect of microstructures on the magnetisation process in ferritic steels. *Journal of Magnetism and Magnetic Materials, 393*, 584-592.

Vashista, M., & Paul, S. (2009). Correlation between surface integrity of ground medium carbon steel with Barkhausen Noise parameters and magnetic hysteresis loop characteristics. *Materials & Design, 30*(5), 1595-1603.

Vashista, M., & Paul, S. (2011). Novel processing of Barkhausen noise signal for assessment of residual stress in surface ground components exhibiting poor magnetic response. *Journal of Magnetism and Magnetic Materials, 323*(21), 2579-2584.

Vourna, P., Ktena, A., Tsakiridis, P., & Hristoforou, E. (2015). An accurate evaluation of the residual stress of welded electrical steels with magnetic Barkhausen noise. *Measurement, 71*, 31-45.

Wang, C. C., Yan, B. H., Chow, H. M., & Suzuki, Y. (1999). Cutting austempered ductile iron using an EDM sinker. *Journal of Materials Processing Technology, 88*(1), 83-89.

Wang, P., Zhu, S., Tian, G. Y., Wang, H., Wilson, J., & Wang, X. (2010). Stress measurement using magnetic Barkhausen noise and metal magnetic memory testing. *Measurement Science and Technology, 21*(5), 055703.

Wang, Z., Gu, Y., & Wang, Y. (2012). A review of three magnetic NDT technologies. *Journal of Magnetism and Magnetic Materials, 324*(4), 382-388.

Yamaura, S., Furuya, Y., & Watanabe, T. (2001). The effect of grain boundary microstructure on Barkhausen noise in ferromagnetic materials. *Acta materialia, 49*(15), 3019-3027.

Yan, B. H., Tsai, H. C., & Huang, F. Y. (2005). The effect in EDM of a dielectric of a urea solution in water on modifying the surface of titanium. *International Journal of Machine Tools and Manufacture, 45*(2), 194-200.

Yelbay, H. I., Cam, I., & Gür, C. H. (2010). Non-destructive determination of residual stress state in steel weldments by Magnetic Barkhausen Noise technique. *NDT & E International, 43*(1), 29-33.

Yeo, S., Kurnia, W., & Tan, P. (2008). Critical assessment and numerical comparison of electro-thermal models in EDM. *Journal of Materials Processing Technology, 203*(1), 241-251.

Younis, M. A., Abbas, M. S., Gouda, M. A., Mahmoud, F. H., & Allah, S. A. A. (2015). Effect of electrode material on electrical discharge machining of tool steel surface. *Ain Shams Engineering Journal, 6*(3), 977-986.

Zergoug, M., Oussaid, G., Makhlouf, S., & Oubouchou, H. (2007). *Residual Stress Analysis in the Stainless Steel by Micro Magnetic Methods.* Paper presented at the Proceedings of 4th Middle East NDT Conference and Exhibition, Kingdom of Bahrain.

Žerovnik, P., & Grum, J. (2009). *Determination of residual stresses from the Barkhausen noise voltage signal.* Paper presented at the International Conference of the Slovenian Society for Non-Destructive Testing Application of Contemporary Non-Destructive Testing in Engineering.

Zhao, Y., Zhang, X., Liu, X., & Yamazaki, K. (2004). Geometric modeling of the linear motor driven electrical discharge machining (EDM) die-sinking process. *International Journal of Machine Tools and Manufacture, 44*(1), 1-9.