7. Towards an optimised process planning of multistage deep drawing: an overview
   A.S. Wifi, T.F. Abdelmaguid (Egypt)

18. Welding stability assessment in the GMAW-S process based on fuzzy logic by acoustic sensing from arc emissions
   E. Huanca Cayo, S.C. Absi Alfaro (Brazil)

26. Strip casting using a single roll caster equipped with a scraper
   T. Haga, K. Akitsu, K. Kamakura, S. Kumai, H. Watari (Japan)

Materials

33. Diamond composite with Ti$_2$SnC and Zr$_2$SnC phases
   L. Jaworska (Poland)

39. The effect of $\alpha$-alumina particles on the properties of EN AC-44200 Al alloy based composite materials
   J.W. Kaczmar, A. Kurzawa (Poland)

Properties

45. Preparation and properties of carbon/carbon and polymer/carbon porous monolithic composites
   M. Krzesińska (Poland)

54. Investigation of the effects of various surface treatments on properties of plastic mold steels X40CrMoV5-1
   C. Meran, E. Sanikaya (Turkey)

59. Influence of select parameters of drawing process on the expansive deposition of inner PE lining in pipelines
   G. Wróbel, M. Rojek, M. Szymiczek (Poland)

Analysis and modelling

66. A study on simulation model and kinematic model of welding robot
   J.W. Jeong, I.S. Kim, R.R. Chand, J.H. Lee (South Korea)
The research paper entitled “Effect of cutting on surface hardness and residual stresses or 12Mn austenitic steel” by M. Cebron, F. Kosel, and J. Kopac on page 80 informs that the austenitic steels are known for their high impact toughness and resistance against abrasive wear, yet their machining is difficult and limits their application. Since surface conditions resulting from production strongly affect the performance of finished products, any information linking the machining process to the mechanical properties of the surface is useful not only in production but also in the design phase of the product. It was confirmed that the analysed material hardens substantially during machining and that the wear of cutting tools can be related both to this phenomenon and to the material structure after heat treatment. Furthermore, it was found out that inadequate machining conditions can lead to tensile stresses that alone can initiate cracks in the surface layer even before the material is additionally loaded. The main reasons why highly hardening materials require an accurate assessment of the cutting conditions are outlined. It is shown that an apt choice of cutting conditions has a favorable influence both on the condition of the surface after cutting and on the tool life. This paper presents an account of some of the difficulties that are associated with machining austenitic and other highly hardening materials. Since the detailed composition of the material and all the important machining parameters are listed, the results presented can also be useful for checking or calibrating numerical models of the cutting process.