



Machining Performance of the MSS using Baln/Sic Coated Tool

N. Senthilvelan^{1*}, P. Marimuthu², K.Chandrasekaran³

¹Department of Mechanical Engineering, PRIST University, Thanjavur, Tamilnadu, India.

²Department of Mechanical Engineering, Syed Ammal Engineering College, Ramanathapuram, Tamilnadu, India.

³Department of Mechanical Engineering, Nadar Saraswathi College of Engineering and Technology, Theni, India.

Abstract: Martensitic Stainless Steels (MSS) are similar to iron-carbon alloys. They are austenitized, hardened by quenching, and then tempered for increased ductility and toughness. They are magnetic, and their heat-treated structure is body centered tetragonal. MSSs are used in cutlery, valves, gears, shafts, rollers, cams, ball bearings, scissors, springs, blades and similar components used in food processing, fasteners, shafts, valves and tools. In general, stainless steels are considered more difficult to machine than other metals such as aluminum and low-carbon steels. Stainless steels have been characterized as gummy during cutting, showing a tendency to produce long, stringy chips that seize or form a BUE on the tool. This may result in reduced tool life and degraded surface finish. The modern industries are expecting the better condition for making the quality product. So in order to get the quality product by machining, it is necessary to work with better optimum machining parameter condition by optimization methodology. Hence, in this paper, Taguchi method is used for identifying best machining parameter for turning MSS under dry condition. More Significant parameters are also identified from the analysis of variance.

Keyword : *CNC Turning; AISI410; Taguchi Methodology; ANOVA.*

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