World Academy of Science, Engineering and Technology International Journal of Mechanical and Industrial Engineering Vol:8, No:06, 2014

Compare Hot Forming and Cold Forming in Rolling Process

Authors: Ali Moarrefzadeh

Abstract : In metalworking, rolling is a metal forming process in which metal stock is passed through a pair of rolls. Rolling is classified according to the temperature of the metal rolled. If the temperature of the metal is above its recrystallization temperature, then the process is termed as hot rolling. If the temperature of the metal is below its recrystallization temperature, the process is termed as cold rolling. In terms of usage, hot rolling processes more tonnage than any other manufacturing process, and cold rolling processes the most tonnage out of all cold working processes. This article describes the use of advanced tubing inspection NDT methods for boiler and heat exchanger equipment in the petrochemical industry to supplement major turnaround inspections. The methods presented include remote field eddy current, magnetic flux leakage, internal rotary inspection system and eddy current.

Keywords: hot forming, cold forming, metal, rolling, simulation

Conference Title: ICMIME 2014: International Conference on Mechanical, Industrial, and Manufacturing Engineering

Conference Location : Istanbul, Türkiye **Conference Dates :** June 19-20, 2014