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Authors:

A. R. Golhar

P. S. Sawadh

N. K. Choudhari

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Abstract

The industries faced problem like failure of structure due to improper Aluminium material used. The possible reason may be the material used is not proper. In that case characterization of Aluminium metals play great importance in industry and in research field. Aluminium metals are classified into different grads or type according to the Aluminium percentage and other elements present in the Aluminium metals. If the Aluminium percentage of the sample is known, then the

type or grade of Aluminium metals may be identify and user in a position to decide its applications. To characterize Aluminium metals, it is necessary that we should know the Aluminium percentage in the Aluminium sample. In this paper an attempt is made to characterize the Aluminium metals by ultrasonic non destructive techniques and signal processing technique. IDASM Neural network is used to develop the relationship between Aluminium percentage and the various observed NDT parameters such as hardness, density, ultrasonic velocity, attenuation, peak amplitude of FFT, Time signal, Power Spectral Density etc. This Neural model calculates the Aluminium percentage present in the Aluminium samples and then we can compare with the Experimental data. The impact of various variables on Aluminium percentage is also discussed in this paper.

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