An Interdependence Relation to Support Case-based Reasoning Solution for an Industrial Application

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Abstract

One of the major issues required to be dealt with the case-based reasoning (CBR) is the challenge to meet to maintain and control the correctness and accuracy of the results expected to be produced against the proposed algorithm and methodology for the candidate CBR system. This paper introduces a computational model with the assistance of the concept of Regression fitting within the mathematical and simulated model proposed through the Case Based Reasoning for predicting the case hardening process parameters of steel to be maintained within the furnace of steel hardening unit. The paper is mainly focused towards the derivation of the interrelationship between the alloying percentage of the elements within a steel of any kind and the hardness contribution corresponding to each element. Few of the Plasma Nitriding Engineering considerations are also briefed within the paper.

References

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Index Terms

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Keywords

Case Based Reasoning  Plasma Ion Nitriding (PIN)  Soft PIN System (SPIN)  Case Hardening