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Effect of water temperature on the mechanical properties of water quenched medium carbon steels

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Abstract

The authors worked on study the effect of water temperature on the mechanical properties of water quenched medium carbon steel. The mechanical properties considered by the authors were hardness and impact strength. Two carbon steels namely 0.33C and 0.42C were considered by the authors. They were heated to a temperature of 900⁰c and quenched in water at temperatures ranging from 35 to 95⁰c. They observed that the hardness was reduced by 18% and impact strength was increased by 50%.