

Evaluation of Mechanical Properties of Aluminum alloy Quenched in Natural Biological Fluid

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Abstract : The atharvaveda says the cow's body represents various devas and other divine beings the Mahabharata, Harivamsapurana, Manusmriti and other literature eulogies the cow. Cow dung is one of the main fuel in rural India and also served as a fertilizer. Cow dung and cow urine are also thought to be an disinfectant among ancient Indians, and used to clean up home. This paper attempts to investigate the influence of biological quenching media on aluminum alloy its properties(Tensile strength, Yield stress, Hardness) and microstructure. The test samples temperature was 450⁰C, 500⁰C, 550⁰C quenched in two different quenching media (water & cow urine). It has been concluded that the cow urine mixed with base quenching media has an overall improvement in the micro structure and mechanical properties of Aluminum alloy material.

Keywords : Aluminum alloy , Hardness, Tensile strength, Yield stress, quenching media.

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