

A Metallography Study of Secondary A226 Aluminium Alloy Used in Automotive Industries

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Abstract : The secondary alloy A226 is used for many automotive casting produced by mould casting and high pressure die-casting. This alloy has excellent castability, good mechanical properties and cost-effectiveness. Production of primary aluminium alloys belong to heavy source fouling of life environs. The European Union calls for the emission reduction and reduction in energy consumption, therefore, increase production of recycled (secondary) aluminium cast alloys. The contribution is deal with influence of recycling on the quality of the casting made from A226 in automotive industry. The properties of the casting made from secondary aluminium alloys were compared with the required properties of primary aluminium alloys. The effect of recycling on microstructure was observed using combination different analytical techniques (light microscopy upon black-white etching, scanning electron microscopy-SEM upon deep etching and energy dispersive X-ray analysis-EDX). These techniques were used for the identification of the various structure parameters, which was used to compare secondary alloy microstructure with primary alloy microstructure.

Keywords : A226 secondary aluminium alloy, deep etching, mechanical properties, recycling foundry aluminium alloy

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