

# **Corrosion behaviour of Mg-Zn-Y-Mischmetal alloys in phosphate buffer saline solution**

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## **Abstract**

The influence of the processing route and chemical composition in the corrosion behaviour of two Mg-Zn-Y-Mischmetal alloys has been evaluated in phosphate buffer saline solution. The corrosion resistance of the alloy processed by conventional techniques was substantially higher than that found for the same alloy processed from atomised powders. Fine homogeneous distribution of the second-phase particles promoted severe attack due to the enhanced number of galvanic microcells. A higher concentration of zinc and a lower content of rare earth additions improved the corrosion resistance of the alloys due to the lower volume fraction of second-phase particles. © 2012 Elsevier Ltd.