# Investigation into the corrosion activity of zinc-magnesium-aluminium (ZMA) alloys

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Three differing ZMA alloy coated steels were studied using the scanning vibrating electrode technique (SVET). A collaboration of work in the form of *in situ* time-lapse optical microscopy whilst immersed in a 1% NaCl electrolyte was also conducted, facilitating investigation of each microstructure. The collation of data from the three alloy compositions demonstrated preferential corrosive attack of the eutectic phases, specifically the MgZn2 lamellae, succeeded by corrosion of Zn-rich dendrites. The use of SVET enabled an estimation of mass loss from each alloy, revealing a reduction in magnitude of corrosion with increasing content of Mg and Al alloy additions.