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Influence of the concentration of tin in the plating tank. Defects and behavior towards the corrosion of tin

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Abstract : The main objective of the present work is to study the influence of the concentration of tin in the plating tank, the electrochemical behavior of tin in contact with aggressive media if fabric surface defects generated during the manufacturing process. Surface defects of tinned steel are causing the degradation of the coating whose role is essential with respect to corrosion resistance. Aggressive media most commonly in contact in tin boxes are chlorides that promote corrosion by pitting, sulfates where the acidity of the medium acting on the pores that exist inevitably is the starting point for corrosion and nitrates that disrupt the cell formed by the combination of iron and tin.
We try to determine the causes of appearance of these defects to reduce the risk of developing in the final product.
Keywords: tin, defect, corrosion, environment, electrochemical test, salt spray, micrograph.

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