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(54) High current density zinc organosulfonate electrogalvanizing process and composition

(57) The inventors disclose a process for reducing high current density edge buildup dendrite formation, edge burn, controlling high current density roughness, grain size, and orientation of a zinc coating obtained from an aqueous zinc acidic electrogalvanic coating bath comprising passing a high density current from a zinc anode in the bath to a metal cathode in the bath for a period of time sufficient to deposit a zinc coating on the cathode. The bath contains greater than about 5g/l of a water soluble zinc organosulfonate. A random or block polyoxyalkylene glycol homopolymer or copolymer based on 2 to about 4 carbon atom alkylene oxides. The inventors employ current densities from about 250 to about 4,000 ASF, and optionally, a sulfonated condensation product of naphthalene and formaldehyde, a boron oxide compound, and a lignin compound. The invention also comprises bath compositions.

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EUROPEAN SEARCH REPORT

Application Number
EP 97 10 0964

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X,D	US 4 207 150 A (CREUTZ) 10 June 1980 * the whole document * ---	1,13,16, 17,19, 30,33,34	C25D3/22 C25D3/56
X	DATABASE WPI Section Ch, Week 9303 Derwent Publications Ltd., London, GB; Class E12, AN 93-025443 XP002032981 & SU 1 713 987 A (DNEPR CHEM TECHN INST) , 23 February 1992 * abstract * ---	1,19	
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X,P	EP 0 727 512 A (ATOTECH USA) 21 August 1996 * claims 1-16 * ---	2,3,7-9, 15,18, 20, 24-26, 32,34,35	C25D
X,P	EP 0 730 047 A (ATOTECH USA) 4 September 1996 * claims 1-62 * --- -/--	3-15,17, 18, 21-32, 34,35	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	13 June 1997	Van Leeuwen, R

CATEGORY OF CITED DOCUMENTS

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