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54 **Method of producing corrosion-resistant coatings on ferrous-base articles.**

57 Hot-dip aluminum-zinc coatings having an aluminum content in excess of about 25% aluminum exhibit a tendency for corrosion flaking, that is, selective corrosion along the interface between the aluminum-zinc overlay and the underlying intermetallic layer. The tendency to such corrosion flaking increases with the aluminum content of the coating. Methods for minimizing this tendency by accelerated cooling of the molten coating as it emerges from the coating bath are ineffective for coatings containing greater than 72% aluminum. It has been found that the addition of 0.04 to 0.32% magnesium in hot-dip aluminum-zinc coating baths will substantially enhance the resistance of the coating to corrosion flaking.



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. <sup>3</sup> )
A	US-A-3 480 465 (M. IMABAYASHI) * Page 3, lines 22-31 *	1,4	C 23 C 1/08
A	DE-A-1 771 125 (GESELLSCHAFT FÜR KERNFORSCHUNG) * Claim 3 *	1,4	
A	FR-A-1 393 962 (SOCIETE DES ACIERIES DE POMPEY) * Claim 1c *	1,4	
A	EP-A-0 037 143 (C.R.M.) * Claims 9-14 *	1,3,4	
A	GB-A- 736 224 (REYNOLDS METALS CO.) * Claims 1,2,5,6; page 2, lines 100-121 *	1,4	TECHNICAL FIELDS SEARCHED (Int. Cl. <sup>3</sup> )
A	CHEMICAL ABSTRACTS, vol. 92, 1980, page 280, no. 26628k, Columbus, Ohio, US & IN - A - 146 317 (COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH [INDIA]) 28-04-1979 * Abstract *	1,4	C 23 C B 32 B
A	US-A-3 180 716 (J. DOUGLAS SPROWL) * Claims 1-3 *	1,4	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 29-05-1984	Examiner ELSEN D.B.A.
<b>CATEGORY OF CITED DOCUMENTS</b>			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	



DOCUMENTS CONSIDERED TO BE RELEVANT			Page 2
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 3)
A	US-A-3 055 771 (J.D. SPROWL) * Claims 1-84; page 3, lines 66-75 *	1,4	
A	--- US-A-3 058 206 (E.J. METTS) * Claims 1-10 *	1,4	
A	--- FR-A-1 589 845 (OLIN MATHIESON CHEMICAL CORP.) * Claims 1,3,4,8,D * -----	1,4	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl. 3)
Place of search THE HAGUE		Date of completion of the search 29-05-1984	Examiner ELSEN D.B.A.
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			