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(54) **Pot roll for continuous hot-dip galvanizing**

(57) A Pot roll for continuous hot-dip galvanizing used in a galvanizing bath, characterized by comprising a Pot roll surface having three spray coating layers composed of a alloy of high Co ratio or cermet of high ratio of said alloy as the first layer, a cermet containing a oxide, carbide or boride as the second layer and a ceramic of oxide group as the third layer.

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Application Number
EP 95 11 6671

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)
Y	PATENT ABSTRACTS OF JAPAN vol. 7 no. 19 (C-147) [1164] ,25 January 1983 & JP-A-57 174440 (NITSUSHIN SEIKO) 27 October 1982, * abstract *	1,2	C23C2/00
Y	EP-A-0 245 862 (UNION CARBIDE CORPORATION) * claims 1,4,5,8 *	1,2	
A	CHEMICAL ABSTRACTS, vol. 100, no. 26, 25 June 1984 Columbus, Ohio, US; abstract no. 213954j, NIPPON STEEL 'mechanical parts for hot-dip galvanizing bath' page 243; * abstract * & JP-A-05 925 966 (NIPPON STEEL)	1	
A	DATABASE WPI Derwent Publications Ltd., London, GB; AN 93-297954 c38 & JP-A-05 209 259 (NIPPON STEEL CORP) , 20 August 1993 * abstract *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.6) C23C
A	US-A-5 070 587 (AKIRA NAKAHIRA) * claims 1-5 *	1	
A	PATENT ABSTRACTS OF JAPAN vol. 4 no. 98 (C-018) ,15 July 1980 & JP-A-55 058360 (SATOSEN) 1 May 1980, * abstract *	1	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 1 April 1996	Examiner Elsen, D
CATEGORY OF CITED DOCUMENTS 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			

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Application Number
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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)
A	PATENT ABSTRACTS OF JAPAN vol. 18 no. 448 (C-1240) ,22 August 1994 & JP-A-06 136505 (SUMITOMO METAL IND) 17 May 1994, * abstract *	1	
A	--- PATENT ABSTRACTS OF JAPAN vol. 17 no. 200 (C-1050) ,20 April 1993 & JP-A-04 346693 (NITSUTETSU HAADO) 2 December 1992, * abstract *	1	
A	--- DE-A-28 20 699 (KAWASAKI STEEL CORP) * claim 1 *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
The present search report has been drawn up for all claims			
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