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Kelly

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(54) **METHOD FOR ADDING SOLID ZINC-ALUMINUM TO GALVANIZING BATHS**

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(56) **References Cited**

U.S. PATENT DOCUMENTS

2,595,292	A	*	5/1952	Reece	75/122
3,227,577	A	*	1/1966	Baessler et al.	117/102
3,634,075	A	*	1/1972	Hoff	75/135
3,729,309	A	*	4/1973	Kawawa	420/126
3,738,827	A		6/1973	Pryor et al.	75/76
4,088,475	A		5/1978	Tyler et al.	75/153
4,330,328	A		5/1982	Tyler et al.	75/76
4,481,032	A		11/1984	Kaiser	75/58
4,512,800	A		4/1985	Wirth, Jr.	75/53
4,688,771	A	*	8/1987	Eckert et al.	266/78
5,026,433	A		6/1991	Vierod et al.	148/2
5,076,548	A	*	12/1991	Arndt et al.	266/44
5,321,792	A	*	6/1994	Schonherr et al.	392/388
5,827,576	A		10/1998	Carter et al.	427/436
5,998,545	A		12/1999	King	242/178
6,053,960	A		4/2000	King et al.	75/375
6,280,497	B1		8/2001	King et al.	75/304
6,426,122	B1		7/2002	Ishii et al.	427/433

OTHER PUBLICATIONS

V. Neufeldt, ed., "Webster's New World Dictionary," Webster's New World, New York (1988, no month), p. 553.*

* cited by examiner

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(57) **ABSTRACT**

The process of the present invention is directed to a method for making zinc or zinc-aluminum alloy additions to galvanizing baths. The process involves addition of a wire of zinc or zinc-aluminum alloy introduced directly into a molten galvanizing bath to more rapidly achieve a desired zinc or zinc-aluminum chemistry thereby reducing the time required to make the bath addition.

9 Claims, No Drawings