

Title (en)
Flux compositions for steel galvanization

Title (de)
Flussmittelzusammensetzungen zur Stahlverzinkung

Title (fr)
Compositions de flux pour galvanisation d'acier

Publication
EP 2725115 A1 20140430 (EN)

Application
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Abstract (en)
This invention relates to a flux composition for treating a metal surface, comprising (a) more than 40 and less than 70 wt.% zinc chloride, (b) 10 to 30 wt.% ammonium chloride, (c) more than 6 and less than 30 wt.% of a set of at least two alkali metal chlorides including sodium chloride and potassium chloride, (d) from 0 to 2 wt.% lead chloride, and (e) from 0 to 15 wt.% tin chloride, provided that the KCl/NaCl weight ratio of said set of at least two alkali metal chlorides ranges from 2.0 to 8.0. This invention also relates to a fluxing bath comprising this flux composition dissolved in water for use in galvanizing processes, by batch or continuously, of metal articles such as iron or steel long products and flat products including wires, plates, coils, rods, reinforcing bars, tubes, strips and sheets.

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Citation (applicant)
• WO 0242512 A1 20020530 - GALVA POWER GROUP N V [BE], et al
• WO 2007146161 A1 20071221 - UNIV CINCINNATI [US], et al
• JP 2001049414 A 20010220 - NIPPON STEEL CORP
• CN 101948990 A 20110119 - UNIV NORTHEASTERN
• EP 0488423 A1 19920603 - TANAKA GALVANIZING CO LTD [JP], et al
• US 7560494 B2 20090714 - STEINBRENNER ULRICH [DE], et al

Citation (search report)
• [YA] GB 1040958 A 19660901 - WILLIAM BLYTHE AND COMPANY LTD
• [YDA] CN 101948990 B 20120111 - UNIV NORTHEASTERN
• [YA] EP 1209245 A1 20020529 - GALVAPOWER GROUP N V [BE]
• [Y] EP 0905270 A2 19990331 - NISSHIN STEEL CO LTD [JP]
• [AD] JP 2001049414 A 20010220 - NIPPON STEEL CORP
• [Y] "Next Level HDG technologies", 25 July 2012 (2012-07-25), XP002719188, Retrieved from the Internet <URL:http://fontaine-technologie.net/index.php/next-level-hdg-technologies> [retrieved on 20140122]

Cited by
EP4328345A1; CN108060382A; EP3663429A1; US11499216B2; BE1030796B1; WO2017215796A1; EP2725116B1

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GB 201219211 D0 20121212; GB 2507310 A 20140430; GB 2507310 B 20180829; HU E032167 T2 20170928; JP 2014088615 A 20140515;
JP 6133752 B2 20170524; KR 102014157 B1 20190826; KR 20150035343 A 20150406; PL 2725115 T3 20170630; PT 2725115 T 20170329;
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