Title (en)

Method of aluminizing steel for obtaining a thin interfacial layer

Title (de)

Verfahren zur Aluminisierung von Stahl zum Erzeugen einer dünnen Grenzflächenschicht

Title (fr)

Procédé d'aluminiage d'acier permettant d'obtenir une couche d'alliage interfaciale de faible epaisseur

Publication

EP 1029940 B1 20041027 (FR)

Application

EP 00400358 A 20000209

Priority

FR 9902050 A 19990218

Abstract (en)

[origin: EP1029940A1] Hot dip aluminizing of steel includes using bath temperature and composition and workpiece temperature control, to achieve local equilibrium with the theta solid phase. Hot dip aluminizing of steel workpieces comprises adapting the average bath temperature and composition and the workpiece temperature to obtain, in the workpiece immersion zone, a local bath temperature and composition permitting equilibrium with the θ solid phase of composition approximately corresponding to FeAl3. An Independent claim is also included for an aluminized steel sheet in which the coating consists of an aluminum-based outer layer and an Al-Fe-Si alloy layer comprising a θ phase sub-layer in contact with the steel.

IPC 1-7

C23C 2/12

IPC 8 full level

C23C 2/12 (2006.01)

CPC (source: EP US)

C23C 2/12 (2013.01 - EP US); Y10S 428/926 (2013.01 - EP US); Y10S 428/933 (2013.01 - EP US); Y10S 428/939 (2013.01 - EP US); Y10T 428/12757 (2015.01 - EP US)

Cited by

EP3561141A4; US11090907B2; WO2011104443A1

DOCDB simple family (publication)

EP 1029940 A1 20000823; **EP 1029940 B1 20041027**; AT E280846 T1 20041115; BR 0000843 A 20000926; BR 0000843 B1 20100406; CA 2298312 A1 20000818; CA 2298312 C 20090203; DE 60015202 D1 20041202; DE 60015202 T2 20051110; ES 2231130 T3 20050516; FR 2790010 A1 20000825; FR 2790010 B1 20010406; JP 2000239819 A 20000905; JP 4629180 B2 20110209; US 6309761 B1 20011030

DOCDB simple family (application)

EP 00400358 A 20000209; AT 00400358 T 20000209; BR 0000843 A 20000218; CA 2298312 A 20000210; DE 60015202 T 20000209; ES 00400358 T 20000209; FR 9902050 A 19990218; JP 2000041707 A 20000218; US 50658600 A 20000218