

Title (en)

Process for the reduction of the friction coefficient of coated metal strips and apparatus for applying a metallic coating to a steel strip.

Title (de)

Verfahren zur erniedrigung des Reibwerts der Oberfläche von mit einer Beschichtung überzogenen Metallbändern und Vorrichtung für das Aufbringen einer metallischen Beschichtung auf ein Stahlband

Title (fr)

Procédé pour la réduction du coefficient de frottement de bandes métalliques pourvues d'un revêtement et dispositif pour l'application d'un revêtement métallique sur une bande d'acier.

Publication

**EP 1767673 A2 20070328 (DE)**

Application

**EP 06013429 A 20060629**

Priority

DE 102005045033 A 20050921

Abstract (en)

Method for reducing the coefficient of friction of tin- or chromium plated steel strip comprises spraying the coated strip with surfactant solution while it is moving at the same speed as that used during electroplating. An independent claim is included for apparatus for applying metal coatings to steel strip (S), especially tin- or chromium-plating, comprises an electroplating bath, a passivating unit (2), a washing bath (3) and two spray pipes (11) arranged on either side of the strip which spray it with surfactant solution.

IPC 8 full level

**C25D 5/48** (2006.01); **C10M 173/02** (2006.01); **C23C 22/83** (2006.01)

CPC (source: EP KR US)

**C10M 173/02** (2013.01 - EP US); **C23C 2/40** (2013.01 - EP US); **C23C 22/83** (2013.01 - EP US); **C25D 5/48** (2013.01 - EP KR US); **C25D 7/0628** (2013.01 - EP US); **C25D 17/00** (2013.01 - EP US); **C10M 2207/046** (2013.01 - EP US); **C10M 2207/283** (2013.01 - EP US); **C10M 2209/104** (2013.01 - EP US); **C10M 2219/044** (2013.01 - EP US)

C-Set (source: EP US)

1. **C10M 2209/104** + **C10M 2209/109**
2. **C10M 2209/104** + **C10M 2209/108**

Citation (applicant)

- US 2579778 A 19511225 - ALLEN WILLIAM S
- US 3826675 A 19740730 - SMITH J, et al
- EP 0723824 A1 19960731 - INLAND STEEL CO [US]
- US 3519542 A 19700707 - KITAMURA YOICHI, et al

Designated contracting state (EPC)

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Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

**US 2007062617 A1 20070322**; AT E478981 T1 20100915; AU 2006203319 A1 20070405; BR PI0603946 A 20070814; CA 2558572 A1 20070321; CA 2558572 C 20131112; CN 1935391 A 20070328; CN 1935391 B 20120328; DE 102005045033 B3 20070118; DE 502006007718 D1 20101007; EP 1767673 A2 20070328; EP 1767673 A3 20070530; EP 1767673 B1 20100825; ES 2348802 T3 20101214; JP 2007113113 A 20070510; JP 4921903 B2 20120425; KR 101260735 B1 20130506; KR 20070033282 A 20070326

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**US 53214906 A 20060915**; AT 06013429 T 20060629; AU 2006203319 A 20060803; BR PI0603946 A 20060921; CA 2558572 A 20060901; CN 200610139273 A 20060921; DE 102005045033 A 20050921; DE 502006007718 T 20060629; EP 06013429 A 20060629; ES 06013429 T 20060629; JP 2006254499 A 20060920; KR 20060091590 A 20060921