

Title (en)

Method for removing coatings and deposits

Title (de)

Verfahren zur Entfernung von Belägen und Ablagerungen

Title (fr)

Procédé destiné l'enlèvement de couches et de dépôts

Publication

EP 2090676 A1 20090819 (DE)

Application

EP 08150974 A 20080201

Priority

EP 08150974 A 20080201

Abstract (en)

Use of an aqueous cleaning solution containing a reducing agent and at least one complexing agent to remove rouging on the medium contacted surface of rustless steel, preferably chromium/nickel or chromium/nickel/molybdenum steel in neutral pH range, is claimed. Independent claims are included for: (1) the aqueous cleaning solution containing a reducing agent and at least one, preferably two complexing agents; and (2) a process for the complete removal of rouging resting on the surface of rustless metal material, which is medium contacted surface of rustless steel, preferably chromium/nickel or chromium/nickel/molybdenum steel in neutral pH range, and subsequently repassivating the surface comprising treating the surface with the cleaning solution and completely removing the sediments and subsequently spraying with an aqueous solution containing oxidizing agent and/or with oxygen containing pure water, so that a rustless steel protective passive layer is formed.

Abstract (de)

Die Erfindung betrifft Verfahren zur Entfernung von Belägen und Ablagerungen auf rostfreien Oberflächen, insbesondere auf rostfreien metallischen Oberflächen, wie sie in Prozess- und Produktionsanlagen in der pharmazeutischen, Lebensmittel- und biotechnologischen Industrie Verwendung finden, sowie wässrige Reinigungslösungen enthaltend ein Reduktionsmittel und einen Komplexbildner zur Anwendung in diesen Verfahren.

IPC 8 full level

C23F 14/02 (2006.01); **C23G 1/08** (2006.01); **C23G 1/26** (2006.01)

CPC (source: EP)

C11D 3/0042 (2013.01); **C11D 7/36** (2013.01); **C23F 14/02** (2013.01); **C23G 1/26** (2013.01); **C11D 2111/16** (2024.01)

Citation (search report)

- [X] EP 1300368 A2 20030409 - SPAENE KG R [DE]
- [X] EP 1621521 A1 20060201 - SPAENE KG R [DE]
- [X] US 5587142 A 19961224 - HORWITZ EARL P [US], et al
- [X] US 6310024 B1 20011030 - GILL JASBIR S [US], et al
- [XY] US 3077487 A 19630212 - RAMSEY WILLIAM M, et al
- [X] US 4789406 A 19881206 - HOLDER E PAUL [US], et al
- [X] US 5037483 A 19910806 - DUBIN LEONARD [US]
- [X] US 2488832 A 19491122 - CARLO ROSSI
- [X] WO 0142148 A1 20010614 - SPAENE KG R [DE], et al
- [X] US 4082683 A 19780404 - GALESLOOT WILHELMUS GERARDUS
- [X] EP 0313335 A1 19890426 - DEARBORN CHEMICALS CO [CA]
- [X] WO 0046423 A1 20000810 - BETZDEARBORN INC [US]
- [X] US 3297580 A 19670110 - PITZER EDGAR C
- [Y] US 6887597 B1 20050503 - YANG BO [US], et al
- [Y] WO 2004011587 A1 20040205 - ECOLAB INC [US]

Cited by

CN110144594A; CN110408757A; DE102012201787A1; CN103911625A; DE102012201787B4; WO2021249878A1; WO2021249880A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

EP 2090676 A1 20090819; AT E521732 T1 20110915; CH 699016 B1 20101029; DK 2122011 T3 20111121; EP 2122011 A1 20091125; EP 2122011 B1 20110824; WO 2009095475 A1 20090806

DOCDB simple family (application)

EP 08150974 A 20080201; AT 09705741 T 20090130; CH 14312009 A 20090130; DK 09705741 T 20090130; EP 09705741 A 20090130; EP 2009051074 W 20090130