

Title (en)
Method for producing a sheet metal part with a corrosion-resistant coating

Title (de)
Verfahren zum Herstellen eines Blechformteils mit einer Korrosionsschutzbeschichtung

Title (fr)
Procédé destinés à fabriquer une pièce usinée en tôle dotée d'un revêtement de protection contre la corrosion

Publication
EP 2327805 A1 20110601 (DE)

Application
EP 10180536 A 20100928

Priority
DE 102009053368 A 20091114

Abstract (en)
The method for producing a sheet metal part provided with a corrosion resistant coating and formed from a high-strength steel sheet material, comprises forming a provided initial sheet metal material to the sheet metal part, electrolytically coating the sheet metal part for the formation of the corrosion resistant coating, and subsequently heat treating the coated sheet metal part. The initial sheet metal material is a high strength steel sheet material. The electrolytic coating is a zinc-containing corrosion resistant coating applied on the sheet metal part. The method for producing a sheet metal part provided with a corrosion resistant coating and formed from a high-strength steel sheet material, comprises forming a provided initial sheet metal material to the sheet metal part, electrolytically coating the sheet metal part for the formation of the corrosion resistant coating, and subsequently heat treating the coated sheet metal part. The initial sheet metal material is a high strength steel sheet material. The electrolytic coating of a zinc-containing corrosion resistant coating is applied on the sheet metal part. The layer thickness of the electrolytically applied corrosion resistant coating is less than 15 μ m. The temperature of the heat treatment is 180-200[deg] C. The duration of the heat treatment is several hours and is carried out in a protective gas atmosphere. The forming is a hot-forming. After the forming and before electrolytic coating, the hardening of the sheet metal part is carried out. The forming includes a press hardening. Independent claims are included for (1) a production plant for producing a sheet metal part; and (2) a hot-formed part.

Abstract (de)
Die Erfindung betrifft ein Verfahren zum Herstellen eines mit einer Korrosionsschutzbeschichtung (C) versehenen und aus einem höherfesten Stahlblechmaterial gebildeten Blechformteils (P). Dieses Verfahren umfasst die folgenden Schritte: - Umformen eines bereitgestellten Ausgangsblechmaterials zu einem Blechformteil; - elektrolytisches Beschichten des Blechformteils, zur Ausbildung der Korrosionsschutzbeschichtung (C); und - nachfolgendes Wärmebehandeln des beschichteten Blechformteils. Die Erfindung betrifft ferner eine Fertigungsanlage zur Durchführung dieses Verfahrens, sowie ein nach dem erfindungsgemäßen Verfahren und/oder auf der erfindungsgemäßen Fertigungsanlage hergestelltes Blechformteil.

IPC 8 full level
C21D 6/00 (2006.01); **C21D 1/673** (2006.01); **C21D 1/773** (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C25D 5/00** (2006.01); **C25D 5/50** (2006.01); **C25D 7/06** (2006.01)

CPC (source: EP)
C21D 1/673 (2013.01); **C21D 1/773** (2013.01); **C21D 8/0278** (2013.01); **C21D 9/46** (2013.01); **C25D 5/50** (2013.01)

Citation (applicant)
DE 102005055374 A1 20070524 - VICTOCOR TECHNOLOGIES S A [BE]

Citation (search report)
• [X1] EP 0419678 A1 19910403 - NIPPON KOKAN KK [JP], et al
• [X1] US 7514153 B1 20090407 - ARCHER JR HARRY L [US], et al
• [X1] WO 8401461 A1 19840412 - BOEING CO [US]
• [X1] EP 2088223 A1 20090812 - THYSSENKRUPP STEEL AG [DE], et al
• [X1] EP 0360781 A2 19900328 - ANDRITZ AG MASCHF [AT]
• [X1] DE 10021948 A1 20011122 - THYSSENKRUPP STAHL AG [DE]

Cited by
DE102013010024A1; CN105283586A; DE102013010024B4; JP2015224393A; CN105316734A; EP2949787A3; DE102013010025A1; US9938600B2; WO2014202587A1

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