

Title (en)
HOT STAMPED MOLDING

Title (de)
HEISSPRÄGEFORMEN

Title (fr)
PIÈCE MOULÉE ESTAMPÉE À CHAUD

Publication
EP 3604602 A1 20200205 (EN)

Application
EP 17903939 A 20170331

Priority
JP 2017013760 W 20170331

Abstract (en)
Provided is a hot stamped body which includes a base metal 10, and a plated layer 20 formed on a surface of the base metal 10, wherein the plated layer 20 includes an interface layer 21, an intermediate layer 22, and an oxide layer 23 in order from a base metal 10 side, the interface layer 21 contains an Fe-Al alloy having a microstructure which contains one or more kinds selected from α Fe, $\text{Fe}_{<\text{sub}>3</sub>\text{Al}$ and FeAl, a total area fraction of the Fe-Al alloy being 99% or more, the intermediate layer 22 contains an Fe-Al-Zn phase which contains one or more kinds selected from $\text{Fe}(\text{Al}, \text{Zn})_{<\text{sub}>2</sub>}$, $\text{Fe}_{<\text{sub}>2</sub>(\text{Al}, \text{Zn})_{<\text{sub}>5</sub>}$ and $\text{Fe}(\text{Al}, \text{Zn})_{<\text{sub}>3</sub>}$, a total area fraction of the Fe-Al-Zn phase being 50% or more, an average composition of the intermediate layer contains, in mass%, Al: 30 to 50% and Zn: 15 to 30%, and an average film thickness of the oxide layer 23 is 3.0 μm or less, and Mg content in the oxide layer 23 is 0.05 to 0.50 g/m².

IPC 8 full level
C23C 2/12 (2006.01); **C21D 1/18** (2006.01); **C21D 9/00** (2006.01); **C22C 18/04** (2006.01); **C22C 21/10** (2006.01); **C22C 38/00** (2006.01); **C22C 38/06** (2006.01); **C22C 38/58** (2006.01); **C23C 2/28** (2006.01); **C23C 2/40** (2006.01)

CPC (source: EP KR US)
C21D 1/18 (2013.01 - EP KR US); **C21D 9/00** (2013.01 - EP KR); **C22C 18/04** (2013.01 - EP KR US); **C22C 21/10** (2013.01 - EP KR US); **C22C 38/00** (2013.01 - EP); **C22C 38/02** (2013.01 - KR); **C22C 38/06** (2013.01 - EP KR US); **C22C 38/58** (2013.01 - EP KR US); **C23C 2/02** (2013.01 - EP US); **C23C 2/024** (2022.08 - EP KR US); **C23C 2/06** (2013.01 - EP KR); **C23C 2/12** (2013.01 - EP KR US); **C23C 2/26** (2013.01 - EP US); **C23C 2/28** (2013.01 - EP US); **C23C 2/29** (2022.08 - EP KR US); **C23C 2/40** (2013.01 - EP KR US); **C23C 28/322** (2013.01 - EP); **C23C 28/3225** (2013.01 - EP KR); **C23C 28/345** (2013.01 - EP KR)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

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