

Patent

Method of hot forming hybrid parts



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Mašek et al.

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(54) **METHOD OF HOT FORMING HYBRID PARTS**

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C22C 38/58 (2006.01)

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CPC: **C21D 8/005** (2013.01); **B22B 15/012** (2013.01); **B22B 15/013** (2013.01); **C21D 1/013** (2013.01); **C21D 6/004** (2013.01); **C21D 6/008** (2013.01); **C21D 6/009** (2013.01); **C21D 7/13** (2013.01); **C21D 9/00** (2013.01); **C22C 21/00** (2013.01); **C22C 21/10** (2013.01); **C22C 28/02** (2013.01); **C22C 38/002** (2013.01); **C22C 38/02** (2013.01); **C22C 38/04** (2013.01); **C22C 38/06** (2013.01); **C22C 38/44** (2013.01); **C22C 38/48** (2013.01); **C22C 38/58** (2013.01); **C22F 1/002** (2013.01); **C22F 1/04** (2013.01); **C22F 1/053** (2013.01)

(58) **Field of Classification Search**
CPC: **C21D 1/18**; **C21D 8/005**
See application file for complete search history.

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(57) **ABSTRACT**
A method of hot forming hybrid parts wherein side-by-side with a thin-walled piece of steel stock, which has been heated to austenite temperature, another piece of stock of another formable metal is placed. The processing temperature of this formable metal corresponds to the temperature at which quenching of the steel stock is interrupted within an interval between the M_s and M_f temperatures. The steel stock and formable metal are then formed together, while the temperature decreases to a temperature which is close to the forming tool temperature. Next, the resulting semi-finished product is cooled to the ambient temperature.

12 Claims, No Drawings

- V souladu s platnou metodikou United States Patent and Trademark Office je uplatňován patent „Method of hot forming hybrid parts“.

- Patent vznikl v přímé souvislosti s řešením projektu č:

CZ.01.1.02/0.0/0.0/15_019/0004620

- A method of hot forming hybrid parts wherein side-by-side with a thin-walled piece of steel stock, which has been heated to austenite temperature, another piece of stock of another formable metal is placed, The processing temperature of this formable metal corresponds to the temperature at which quenching of the steel stock is interrupted within an interval between the $M_{s,sub}$ and $M_{f,sub}$ temperatures. The steel stock and formable metal are then formed together, while the temperature decreases to a temperature which is close to the forming tool temperature. Next, the resulting semi-finished product is cooled to the ambient temperature.

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EVROPSKÁ UNIE
Evropský fond pro regionální rozvoj
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