

Title (en)  
PROCESS FOR PRODUCING STEEL PIPE FOR AIR BAG

Title (de)  
VERFAHREN ZUR HERSTELLUNG EINES STAHLROHRS FÜR AIRBAGS

Title (fr)  
PROCÉDÉ DE PRODUCTION D'UN TUYAU EN ACIER POUR COUSSIN DE SÉCURITÉ GONFLABLE

Publication  
**EP 2578705 B1 20180808 (EN)**

Application  
**EP 11789849 A 20110601**

Priority  
• JP 2010127713 A 20100603  
• JP 2011062583 W 20110601

Abstract (en)  
[origin: EP2578705A1] In a process for manufacturing a steel tube for air bags having a high strength and high toughness which can simplify cold drawing and reduce the alloy cost, a seamless steel tube is formed from a steel comprising, in mass percent, C: 0.04 - 0.20%, Si: 0.10 - 0.50%, Mn: 0.10 - 1.00%, P: at most 0.025%, S: at most 0.005%, Al: at most 0.10%, Cr: 0.01 - 0.50%, Cu: 0.01 - 0.50%, Ni: 0.01 - 0.50%, and a remainder of Fe and unavoidable impurities, and the seamless steel tube is subjected to cold drawing at least one time with a working ratio such that the reduction in area is greater than 40% to obtain predetermined dimensions, then to quench hardening by heating to a temperature of at least the Ac 3 point at a rate of temperature increase of at least 50° C per second followed by cooling at a cooling rate of at least 50° C per second at least in a temperature range of 850 - 500° C, and to tempering at a temperature of at most the Ac 1 point.

IPC 8 full level  
**C21D 8/10** (2006.01); **B21C 29/00** (2006.01); **C21D 1/25** (2006.01); **C21D 9/08** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/42** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP KR US)  
**B21C 29/003** (2013.01 - KR US); **C21D 1/25** (2013.01 - EP KR US); **C21D 8/10** (2013.01 - EP KR US); **C21D 8/105** (2013.01 - EP KR US); **C21D 9/08** (2013.01 - EP KR US); **C22C 38/002** (2013.01 - EP KR US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP KR US); **C22C 38/42** (2013.01 - EP KR US); **C22C 38/48** (2013.01 - EP KR US); **C22C 38/50** (2013.01 - EP KR US); **C22C 38/54** (2013.01 - EP KR US)

Cited by  
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Designated contracting state (EPC)  
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