

Title (en)
LOW CARBON ALLOY STEEL TUBE HAVING ULTRA HIGH STRENGTH AND EXCELLENT TOUGHNESS AT LOW TEMPERATURE AND METHOD OF MANUFACTURING THE SAME

Title (de)
ROHR AUS KOHLENSTOFFARMEM LEGIERUNGSSTAHL MIT ULTRAHOHER FESTIGKEIT UND HERVORRAGENDER ZÄHIGKEIT BEI NIEDRIGER TEMPERATUR UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
TUBE EN ALLIAGE D'ACIER A FAIBLE TENEUR EN CARBONE PRESENTANT UNE RESISTANCE TRES ELEVEE ET UNE TENACITE EXCELLENTE A BASSE TEMPERATURE, ET SON PROCEDE DE FABRICATION

Publication
EP 1678335 B1 20120111 (EN)

Application
EP 04769605 A 20041011

Priority
• IB 2004003311 W 20041011
• US 50980603 P 20031010
• US 95760504 A 20041005

Abstract (en)
[origin: US2005076975A1] A low carbon alloy steel tube and a method of manufacturing the same, in which the steel tube consists essentially of, by weight: about 0.06% to about 0.18% carbon; about 0.5% to about 1.5% manganese; about 0.1% to about 0.5% silicon; up to about 0.015% sulfur; up to about 0.025% phosphorous; up to about 0.50% nickel; about 0.1% to about 1.0% chromium; about 0.1% to about 1.0% molybdenum; about 0.01% to about 0.10% vanadium; about 0.01% to about 0.10% titanium; about 0.05% to about 0.35% copper; about 0.010% to about 0.050% aluminum; up to about 0.05% niobium; up to about 0.15% residual elements; and the balance iron and incidental impurities. The steel has a tensile strength of at least about 145 ksi and exhibits ductile behavior at temperatures as low as -60° C.

IPC 8 full level
C21D 8/10 (2006.01); **C21D 9/08** (2006.01); **C22C 38/00** (2006.01); **C22C 38/20** (2006.01); **C22C 38/22** (2006.01); **C22C 38/24** (2006.01)

CPC (source: EP KR US)
C21D 8/10 (2013.01 - EP KR US); **C22C 38/02** (2013.01 - KR); **C22C 38/04** (2013.01 - KR); **C22C 38/06** (2013.01 - KR); **C22C 38/20** (2013.01 - EP KR US); **C22C 38/42** (2013.01 - KR); **C22C 38/44** (2013.01 - KR); **C22C 38/46** (2013.01 - KR); **C22C 38/50** (2013.01 - KR)

Cited by
DE102018106546A1; EP1637619A4; WO2021126195A1; US11913101B2

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