

Title (en)
STEEL WIRE FOR COLD FORGING HAVING EXCELLENT LOW TEMPERATURE IMPACT PROPERTIES AND METHOD OF PRODUCING SAME

Title (de)
STAHLDRAHT ZUM KALTSCHMIEDEN MIT HERVORRAGENDEN KÄLTESCHLAGEIGENSCHAFTEN UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
FIL D'ACIER POUR FORGEAGE A FROID PRESENTANT D'EXCELLENTES PROPRIETES D'IMPACT A FAIBLE TEMPERATURE ET PROCEDE DE PRODUCTION ASSOCIE

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Application
EP 04820547 A 20041129

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Abstract (en)
[origin: US2007006947A1] Disclosed is a steel wire for cold forging, which has excellent low temperature impact properties, and a method of producing the same. The steel wire consists of 0.10-0.40 wt % C, 1.0 wt % or less of Si, 0.30-2.0 wt % Mn, 0.03 wt % or less of P, 0.03 wt % or less of S, and the balance of Fe and impurities. The steel wire has an austenite grain size of 5-20 μm , impact absorption energy of 60 J/cm² or more at -40° C., and tensile strength of 70-130 kgf/mm². A steel material for cold forming according to the present invention has impact toughness that is greatly superior to a conventional spheroidized material or non-heat treated steel at a low temperature of -40° C.

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Citation (search report)
• [X] EP 1293578 A2 20030319 - SAMHWA STEEL CO LTD [KR]
• [X] GB 2290800 A 19960110 - NETUREN CO LTD [JP]
• [AP] WO 2004007785 A1 20040122 - SAMHWA STEEL CO LTD [KR], et al
• [A] US 4537644 A 19850827 - TOMINAGA JIRO [JP], et al
• [A] US 3532560 A 19701006 - TOMIOKA MITSUO, et al
• [A] US 4533401 A 19850806 - YUTORI TOSHIO [JP], et al
• See references of WO 2005059192A1

Cited by
WO2008125700A1

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US 2007006947 A1 20070111; CN 1894432 A 20070110; EP 1697552 A1 20060906; EP 1697552 A4 20110112; JP 2007513259 A 20070524; KR 100536660 B1 20051214; KR 20050061805 A 20050623; US 2007256767 A1 20071108; WO 2005059192 A1 20050630

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