

Title (en)

Process for the manufacture of castings of nodular castiron.

Title (de)

Verfahren zur Herstellung von Gussstücken aus Gusseisen mit Kugelgraphit.

Title (fr)

Procédé pour la fabrication de pièces coulée en fonte nodulaire.

Publication

EP 0018445 A1 19801112 (DE)

Application

EP 79200725 A 19791205

Priority

DE 2853870 A 19781213

Abstract (en)

1. Method of producing castings from cast iron with spheroidal graphite with a mixed austenitic-bainitic mixed structure from a melt with the usual amounts of silicon, carbon, phosphorus, sulphur and magnesium and also additional amounts of manganese, molybdenum, possibly copper and possibly nickel, in which the casting is heated to austenitisation temperature and is also maintained, until austenitisation, at this temperature and thereafter is cooled to bainitisation temperature of 350 to 400 degrees C and is held at this temperature for a time corresponding to the required bainite fraction, wherein the melt contains less than 0.3% manganese, 0.2 to 0.8% molybdenum, possibly 0.1 to 1.5% copper and possibly up to 3% nickel and wherein the casting is brought to an austenitisation temperature of 800 to 860 degrees C, is maintained for 10 to 60 minutes at this temperature, is thereafter cooled in a time of less than 2 minutes to the bainitisation temperature and is maintained at this temperature for 5 to 60 minutes.

Abstract (de)

Durch entsprechende Wärmebehandlung und Abkühlung hergestellte Gußeisen mit Kugelgraphit mit austenitischbainitischem Mischgefüge weist für eine Anwendung günstige Werkstoffwerte auf. Zur Verringerung des Aufwandes bei der Herstellung ist vorgesehen, dem Gußeisen mit Kugelgraphit neben den üblichen Mengen an Kohlenstoff, Silizium, Phosphor, Schwefel und Magnesium noch > 0 - 0,3 % Mangan zuzusetzen.

IPC 1-7

C22C 37/04; **C21D 5/00**

IPC 8 full level

C21D 5/00 (2006.01); **C22C 37/04** (2006.01)

CPC (source: EP)

C21D 5/00 (2013.01); **C22C 37/04** (2013.01)

Citation (search report)

- FR 1591761 A 19700504
- DE 2334992 A1 19740207 - KYMIN OY KYMMENE AB
- DE 1054102 B 19590402 - TEVES KG ALFRED
- DE 1123353 B 19620208 - TEVES KG ALFRED

Cited by

FR2712606A1; EP0347568A3; CN100398672C; EP0144907A3; ITMI20110141A1; EP1344839A1; EP0639651A1; FR2709133A1; EP1384794A1; EP0203050A1; EP0087634A1; FR2522291A1; GB2117000A; DE102008050152A1; WO2004022792A3; US7070666B2; US7497915B2; WO8301959A1

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DOCDB simple family (application)

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