

Title (en)

A method for manufacturing austempered spheroidal graphite iron.

Title (de)

Verfahren zur Herstellung von einem zwischenstufengehärteten Kugelgraphit-Gusseisen.

Title (fr)

Procédé de fabrication d'une fonte à graphite spréroïdal, trempée et bainitique.

Publication

EP 0203050 A1 19861126 (EN)

Application

EP 86850178 A 19860520

Priority

SE 8502514 A 19850522

Abstract (en)

A method for producing austempered spheroidal graphite iron having a microstructure comprising bainite, ferrite and austenite. A nodular-iron casting containing 2-3.5% Si, 0-2% Mn, 0-5% Ni 0-0.3% Sn, 0-0.3% Cr, 0-3% Mo, 0-1.5% Cu, and 3.3-3.8% C and at most 0.08% P and 0-0.15% S is partially austenitized by heat treatment at a temperature beneath the temperature at which austenite and graphite or austenite are in equilibrium, but within the temperature range in which ferrite, austenite and graphite are in equilibrium. The temperature of the casting is then rapidly lowered by at least 100 K min⁻¹, and is held at a constant temperature within a range of 235 and 425 DEG C, wherewith part of the austenite formed is converted to bainite to provide a casting that includes a bainite structure with a residual austenite content of 5-40%, preferably 15-20%, and a ferrite content of 10-15%, preferably 20-40%.

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C21D 5/00

IPC 8 full level

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Citation (search report)

- EP 0018445 A1 19801112 - MUEHLBERGER HORST [DE]
- EP 0144907 A2 19850619 - NISSAN MOTOR [JP]

Cited by

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