

Title (en)

DUCTILE MAGNETIC ALLOYS, METHOD OF MAKING SAME AND MAGNETIC BODY

Publication

EP 0018942 B1 19840704 (EN)

Application

EP 80810124 A 19800411

Priority

US 2947779 A 19790412

Abstract (en)

[origin: EP0018942A1] Magnetic alloys of a ternary composition as defined within the region A, B, C, D of the ternary diagram of fig. 5, wherein X is one or more metals selected from the group which consists of iron, nickel, aluminum, chromium, copper, molybdenum and manganese and preferably includes 0.1 to 10% atomic iron and/or chromium (most advantageously 1 to 5% atomic chromium of the entire alloy), are cast and rendered ductile by the formation within the material during solidification of at least two phases. One of the phases is preferably ductile and formed essentially of fibers or dendrites of Co and the other phase or phases are from those normally found in rare-earth/cobalt magnets. The alloy is magnetically hardened by precipitation hardening. The chromium appears predominantly in the fiber or dendrite phase and promotes the formation of the latter.

IPC 1-7

C22C 19/07; **H01F 1/04**

IPC 8 full level

C22F 1/10 (2006.01); **C22C 1/02** (2006.01); **C22C 19/07** (2006.01); **H01F 1/053** (2006.01); **H01F 1/055** (2006.01)

CPC (source: EP)

C22C 19/07 (2013.01); **H01F 1/055** (2013.01)

Cited by

CN102472162A; US4824735A; WO2013072899A1; WO2011011197A3; US9366181B2

Designated contracting state (EPC)

CH DE FR GB LI NL

DOCDB simple family (publication)

EP 0018942 A1 19801112; **EP 0018942 B1 19840704**; DE 3068420 D1 19840809; JP S5613454 A 19810209

DOCDB simple family (application)

EP 80810124 A 19800411; DE 3068420 T 19800411; JP 4695680 A 19800411