

IMPHY UNGINE PRECISION

PROCESS FOR MANUFACTURING A STRIP MADE OF AN FE-NI ALLOY

Abstract

Process for manufacturing a strip made of an Fe-Ni alloy of the "γ' and/or γ" structural hardening" type, the thermal expansion coefficient between 20°C and 150°C of which is less than $7 \times 10^{-6}/K$, in which a hot strip is manufactured either by hot rolling a semi-finished product or by direct casting of a thin strip which is optionally lightly hot-rolled, and the hot strip is subjected to a softening annealing operation consisting of a soak between 950°C and 1200°C followed by rapid cooling and optionally a pickling operation, in order to obtain a softened strip ; a cold-worked strip is manufactured by cold rolling the said softened strip, with a reduction ratio of greater than 5% ; and the cold-worked strip is subjected to a recrystallization annealing operation in an inert or reducing atmosphere, carried out either on the run with a residence time between 900°C and 1200°C of between 30 s and 5 min, or statically with a soak at a temperature of between 900°C and 1050°C for a time of between 15 min to 5 h, followed by cooling down to a temperature below 500°C at a cooling rate sufficient to prevent the formation of hardening precipitates. Strip made of an Fe-Ni alloy.

Figure for the abstract: none