

Title (en)

STEEL FOR ALLOY STRUCTURE AND MANUFACTURING METHOD THEREFOR

Title (de)

STAHL FÜR LEGIERUNGSSTRUKTUR UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

ACIER POUR STRUCTURES D'ALLIAGE ET PROCÉDÉ DE FABRICATION ASSOCIÉ

Publication

**EP 4036266 A1 20220803 (EN)**

Application

**EP 20869967 A 20200927**

Priority

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Abstract (en)

Disclosed is a steel for an alloy structure, the chemical elements of the steel being, in percentage by mass: 0.35-0.45% of C, 0.27-0.35% of Si, 0.6-0.8% of Mn, 0.015-0.05% of Al, 0.06-0.1% of V, 0.2-1.0% of Zr, 0.001-0.005% of Mg, 0.025% or less of P, 0.015% or less of S, 0.005% or less of N, 0.001% or less of O, the balance being Fe and other inevitable impurities. In addition, also disclosed is a manufacturing method for the steel for an alloy structure, the method comprising steps of: (1) smelting, refining, and casting; (2) blooming and cogging; (3) secondary hot rolling to form a product; and (4) heat treatment including quenching and tempering. The steel for an alloy structure is designed by adding trace alloy elements, the steel for an alloy structure is further strengthened and toughened, and the manufacturing cost is low.

IPC 8 full level

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