

ABSTRACT

H-BEAM HAVING PROTRUSIONS, AND
MANUFACTURING METHOD FOR SAME

Disclosed is an H-beam having protrusions, together with a manufacturing method for the same, which can dramatically improve the manufacturability while securing tensile strength and suppressing surface cracking during continuous casting. An H-beam having protrusions, includes: a steel composition containing C: 0.05 mass% to 0.20 mass%, Si: 0.05 mass% to 0.60 mass%, Mn: 1.20 mass% to 1.70 mass%, P: 0.035 mass% or less, S: 0.035 mass% or less, Nb: 0.005 mass% to 0.050 mass%, V: 0.005 mass% to 0.050 mass%, Ti: 0.005 mass% to 0.030 mass%, and N: 0.0020 mass% to 0.0100 mass%, within a range satisfying the following expression with the balance being Fe and inevitable impurities:
$$([\%S]/32)/([\%Ti]/48)+4\times([\%N]/14)/([\%Ti]/48) \leq 15.0;$$
 a tensile strength of 490 MPa or more; a yield strength of 355 MPa or more; and an impact absorbed energy at 0 °C, vE_0 , of 27 J or more.

No suitable figure