

Abstract**S355G10+N HEAVY STEEL PLATE FOR OFFSHORE STRUCTURES AND
MANUFACTURING METHOD THEREOF**

5

The present disclosure discloses an S355G10+N heavy steel plate for offshore structures, which relates to the technical field of steel smelting. A thickness of the S355G10+N heavy steel plate is 150 mm, and the S355G10+N heavy steel plate is composed of the following chemical composition in mass percentage: C: 0.08%-0.14%,
10 Mn: 1.30%-1.65%, Si: 0.10%-0.50%, $P \leq 0.015\%$, $S \leq 0.005\%$, Nb: 0.015%-0.030%,
 $V \leq 0.03\%$, Ti: 0.10%-0.020%, Al: 0.020%-0.055%, Ni: 0.10%-0.50%, $CEV \leq 0.43\%$,
 $P_{cm} \leq 0.21\%$, and a balance of Fe and inevitable impurities. The S355G10+N heavy
steel plate with the thickness of 150 mm has excellent low-temperature toughness and
good welding performance. The impact toughness at -40 °C of the S355G10+N heavy
15 steel plate at the 1/2 thickness is greater than 100 J, which better meets the use and
service requirements of offshore structures.

(Fig. 1)