

### **ABSTRACT**

A production method for improving the Z-direction performance of heavy hot-rolled H-section steel, and a heavy hot-rolled H-section steel. The production method comprises the following steps: molten iron pretreatment, converter double-slag smelting, LF furnace refining, VD vacuum degassing, continuous casting, slow cooling, hot rolling, and cooling. In the step of continuous casting, low-superheat, constant-drawing speed casting is used, superheat being 10-35°C, and the continuous casting drawing speed of a profiled billet section being 0.45-0.95 m/min; the secondary cooling water ratio is 0.45-0.77 L/kg, the foot roller area is cooled by water, and the active section, the first section, the second section and the third section are cooled by air-water atomization; the water distribution ratio of the foot roller area, the active section, the first section, the second section and the third section is 25-33%:40-45%:15-20%:7-10%:4.5-6%; the Z-direction performance of the produced heavy hot-rolled H-shaped steel is 35-65%, and the cast billet surface quality is good.