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Recent progress of Refractories in Highly Efficient Continuous Casting

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:

3

MgO

4

450

Synopsis :

Kawasaki Steel has developed several new refractory technologies to support higher efficiency in continuous casting. To improve the productivity of Chiba Works No.3 Continuous Casting Shop, the life of the submerged nozzle was extended by improving the nozzle material properties in order to raise the continuous-continuous index of the tundish ; a castable lining refractory characterized by little burning with the MgO coating was developed ; and monolithic refractory material was adopted to the tundish lining following an improvement in the refractory supporting structure. On the other hand, Mizushima Works No.4 Continuous Casting Shop has adopted hot recycling of the tundish in order to enhance productivity, save energy, and raise the effective use ratio of refractories. With this technique, the tundish has been reused as many as 450 times, achieving a substantial cost reduction in comparison with conventional continuous casting machines.

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要旨

川崎製鉄では，連鋳の高能率化を支える耐火物技術として以下の開発を行った。千葉製鉄所第3連鋳工場の更なる生産性向上を図る

Table 1 Properties of submerged nozzles

0.2 kg/cm²

A

B