Title (en)

DEVICE AND METHOD FOR REDUCING SLAG CARRY-OVER WITH A MINIMAL AMOUNT OF STEEL REMAINING IN THE CONVERTER

Publication

**EP 0305319 B1 19930526 (DE)**

Application

**EP 88730182 A 19880812**

Priority

DE 3728051 A 19870820

Abstract (en)

[origin: EP0305319A1] When converters are tapped, steel also runs out with the slag towards the end of the tapping. With a minimal amount of steel remaining in the converter, the proportion of slag also running out must be minimised in order to improve the accuracy of analytical sampling, the degree of purity and the output. The cause of slag also running out is essentially the formation of a vortex and a lowered channel above the tap hole, when the level falls below the critical steel bath level. According to the invention, a depression is therefore created around the tap hole, the depth of the depression being greater than the critical bath height for vortex formation and, to prevent the latter, the depression being provided with weirs, feeds for inert gas and/or coils for generating flows in the steel bath and measuring instruments to detect the slag also running out. The process provides that the depression is uniformly filled until the end of tapping, the stiffness of the slag is increased by means of lime if necessary and/or the melt is perturbed by pulsed introduction of inert gas and/or the vortex flow is perturbed by electromagnetic fields. By means of the novel device and the process, formation of the vortex is very largely prevented and therefore has the advantage of improving the accuracy of analytical sampling, the degree of purity and the output of steel in the tapping of converters. <IMAGE>

IPC 1-7

C21C 5/46

IPC 8 full level

**C21C 5/44** (2006.01); **C21C 5/46** (2006.01)

CPC (source: EP)

**C21C 5/44** (2013.01); **C21C 5/4653** (2013.01)

Citation (examination)

- STAHL UND EISEN, Band 105, Nr. 14/15, 22. Juli 1985, Seiten 765-769; D. SUCKER et al.: "Störmungsuntersuchungen für schmelzmetallurgische Prozesse"
- Ironmaking & Steelmaking 11 (1984), pages 332-339

Cited by

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