

Title (en)  
METHOD FOR PRODUCING STAINLESS STEELS, IN PARTICULAR HIGH-GRADE STEELS CONTAINING CHROMIUM AND CHROMIUM-NICKEL

Title (de)  
VERFAHREN ZUR ERZEUGUNG NICHTTROTENDER STÄHLE, INSBESONDERE CHROM- UND CHROMNICKELHALTIGER EDELSTÄHLE

Title (fr)  
PROCEDE POUR PRODUIRE DES ACIERS INOXYDABLES, NOTAMMENT DES ACIERS SPECIAUX AU CHROME ET AU CHROME-NICKEL

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Abstract (en)  
[origin: WO0233130A1] The invention relates to a method for producing stainless steels, in particular steels containing chromium and chromium-nickel. The method is carried out in a melting device containing a metallurgical vessel, or in a melting device (1) containing at least two vessels (2, 3) for supplying a steel-casting installation, an electric arc furnace process (1) and an air-refining process taking place alternately in the two vessels (2, 3). To improve the efficiency of a method of this type, the aim of the invention is to carry out a reversible treatment of unreduced converter slag in the electric arc furnace mode. To achieve this, in the first treatment stage, the slag (19) with a high chromium content is melted together with the added charge, the slag is then reduced during the melting process with the silicon and carbon under favourable thermodynamic conditions of the arc, once the slag has reached a minimum temperature of 1,490 DEG C and the slag is subsequently removed. The air-refining process is then carried out, during which the carbon content is reduced to a value of less than 0.9 %. The metal slag (18) is tapped at a tapping temperature of between 1,620 and 1,720 DEG C, the unreduced slag (19) with a high chromium content from the air-refining process remaining in the treatment vessel.

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