

Title (en)

METHOD OF ANNEALING STEEL STRIP IN AN ANNEALING FURNACE WITHOUT THE FORMATION OF SOOT

Title (de)

VERFAHREN ZUM RUSSFREIEN GLÜHEN VON STAHLBAND IN EINEM GLÜHOFEN

Title (fr)

PROCEDE DE RECUIT SANS FORMATION DE SUIE DE FEUILLARDS D'ACIER DANS UN FOUR A RECUIT

Publication

**EP 0673443 B1 19970305 (DE)**

Application

**EP 94901900 A 19931127**

Priority

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- EP 9303334 W 19931127

Abstract (en)

[origin: WO9413843A1] When annealing steel strip in annealing furnaces, contamination often occurs in the form of carbon deposits on the surface of the steel. The use of hydrogen in the protective-gas atmosphere allows such deposits to be converted to methane. If, however, a thermodynamically determined methane-concentration limit is exceeded, soot deposits are formed. In order to avoid this, methane formed as a reaction product is removed at intervals from the dome of the furnace in a protective-gas purge cycle. The invention calls for the purge cycle to depend on the amount of CH<sub>4</sub> formed and to be controlled by a system which measures the fixed thermodynamic values of the H<sub>2</sub>/CH<sub>4</sub> system and compares them with permitted limits. If the measured values are above or below the respective limits, an additional purge is carried out during the hold time for a period of approximately 1 hour. This ensures optimum purging and improved product quality at reduced annealing cost.

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