Title (en)

Process for pickling a steel workpiece, in particular stainless steel sheet strip

Title (de)

Verfahren zum Beizen von Stahlwerkstücken, insbesondere Blechband aus rostfreiem Stahl

Title (fr)

Procédé de décapage d'une pièce en acier et notamment d'une bande de tÔle en acier inoxydable

Publication

EP 0792949 A1 19970903 (FR)

Application

EP 97400433 A 19970226

Priority

FR 9602405 A 19960227

Abstract (en)

In a steel pickling process, especially for stainless steel strip, employing an aqueous hydrochloric acid pickling solution, the Fe(III) ion concentration is maintained at 1-300 g/l, for constant pickling capacity of the solution of pH less than 1, by oxygenation (preferably aeration) to effect re-oxidation of the Fe(II) ions generated during pickling, the redox potential being maintained at a value of 0-800 (preferably 400-600) mV as measured between a Pt electrode and an Ag/AgCl reference electrode in the solution. Also claimed is a continuous rolled steel (especially stainless steel) strip production line employing the above process, in which the strip is subjected to mechanical treatment (e.g. stretch-levelling and/or peening), primary pickling, working (e.g. rolling), annealing, final pickling and finishing (e.g. skin pass rolling), at least one of the pickling operations being carried out by the above process.

Abstract (fr)

Procédé de décapage d'une pièce en acier et notamment d'une bande de tôle en acier inoxydable, consistant à appliquer une solution aqueuse de décapage constituée d'acide chlorhydrique et d'ions ferriques et ferreux de décapage en solution, et en vue de conserver un pouvoir décapant constant dans la solution aqueuse d'acide chlorhydrique ayant un pH inférieur à 1, à maintenir la concentration en ions Fe<3+>, à une valeur comprise entre 1 g/litre et 300 g/litre, par réoxydation au moyen d'une oxygénation des ions Fe<2+> générés lors du décapage, le potentiel REDOX étant maintenu à une valeur comprise entre 0 et 800 mV potentiel mesuré entre une électrode de platine et une électrode de référence Ag/AgCl placées dans la solution.

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C23G 1/08

IPC 8 full level

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