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(54) Title: METHOD AND APPARATUS FOR THE DIRECT PRODUCTION OF SCALE-FREE THIN METAL STRIP

(57) Abstract: A method and apparatus for the direct production, from molten metal, of scale-free thin metal strip. Hot thin metal strip exiting a continuous caster system is directed to a reducing chamber wherein a reducing gas reduces strip surface oxides while the cast metal strip is at an elevated temperature from retained heat from the molten metal. A cooling unit following the reducing chamber is used to cool the strip to a temperature below about 150 °C prior to exposing the strip to an oxidizing atmosphere. In various embodiments of the invention, strip thickness is reduced with use of hot and cold rolling mills and the scale-free surface of the strip is coated with protective coatings.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C21D8/02 B22D11/124

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C21D B22D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 97 01401 A (PRONK CORNELIS ;HOOGOVS STAAL BV (NL)) 16 January 1997 (1997-01-16) the whole document ---	1-54
Y	WO 00 12233 A (DANIELI CORP) 9 March 2000 (2000-03-09) cited in the application the whole document ---	1-54
A	WO 90 00100 A (SUNDWIGER EISEN MASCHINEN) 11 January 1990 (1990-01-11) ---	
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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