

Title (en)
APPARATUS FOR MANUFACTURING A STEEL STRIP HAVING A THICKNESS BETWEEN 2 AND 25 MM

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Application
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Abstract (en)
[origin: EP0286862A1] The invention relates to a process and an installation for manufacturing a steel strip with a thickness of 2 to 25 mm. A steel strand (10) with a thickness of 40 to 50 mm is cast in an oscillating open die (2) at a rate of 5 to 20 m/min. The steel strand emerging from the open die, which is not yet completely solidified, is compressed to such an extent that the inner walls of the already solidified strand shell weld together. After the cooling of the steel strand, the thickness of which has been reduced in this way, to 1000 to 1200 DEG C, the strip is rolled out in at least one pass with a degree of deformation of 5 to 85%. <IMAGE>

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Citation (search report)
• [X] GB 1199805 A 19700722 - BRITISH IRON STEEL RESEARCH [GB]
• [Y] DE 3306537 A1 19830908 - SUMITOMO HEAVY INDUSTRIES [JP]
• [Y] FR 1470209 A 19670217 - MANNESMANN AG
• [Y] FR 1519135 A 19680329 - BOEHLER & CO AG GEB
• [AD] PATENT ABSTRACTS OF JAPAN, Band 8, Nr. 210 (M-328)[1647], 26. September 1984; & JP-A-59 097 747 (SHIN NIPPON SEITETSU K.K.) 05-06-1984

Cited by
US6044895A; EP0707908A4; US5901777A; EP0745444A1; DE4338805A1; EP0662357A1; US5511606A; US7137437B2; WO2004065030A1; WO9515233A1

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