

Title (en)

Work rolls crossing type mill, rolling system and rolling method.

Title (de)

Walzwerk mit gekreuzten Arbeitswalzen, Walzanlage und Walzverfahren.

Title (fr)

Laminoir à cylindres de travail croisés, système de laminage et procédé de laminage.

Publication

EP 0590682 A1 19940406 (EN)

Application

EP 93115892 A 19931001

Priority

JP 26470692 A 19921002

Abstract (en)

A lubricant is supplied from headers (38) of lubricant supply units (5) onto surfaces of back-up rolls (3) at locations spaced from contact positions between a pair of work rolls (2) and a pair of back-up rolls (3). The headers (38) each include a lubricant spray nozzle (41) for spraying the lubricant under a pressure not lower than 3 kg/cm², a header cover (42) for confining the lubricant sprayed from the lubricant spray nozzle (41), an oil return line (44) for returning the surplus lubricant, and seal members (43) made of flexible material such as rubber. The work rolls (2) are provided with water wiping plates (6), and the back-up rolls (3) are also provided with water wiping plates (7). In a work rolls crossing type mill thus arranged, water films of cooling water deposited on the roll surfaces are removed to prevent the cooling water from mixing into the lubricant. Even if the water films are not totally removed, it is possible to surely plate out the lubricant for reliably lubricating between the work rolls (2) and the back-up rolls (3). Raw lubricant oil of the lubricant meets the following requirements; (a) the coefficient of friction between said work rolls (2) and said back-up rolls (3) is in the range of 0.04 to 0.1, (b) the viscosity is not larger than 80 Cst. at 40 DEG C, (c) mineral oil and synthetic ester not less than 5 % are contained as base oil, (d) a fatty acid in the range of 0.03 to 0.5 % is contained as an oiliness enhancer, (e) an extreme pressure additive not less than 0.1 % is contained, and preferably, (f) a surface active agent not larger than 0.5 % is contained as emulsifier. <IMAGE>

IPC 1-7

B21B 27/10; **B21B 13/02**

IPC 8 full level

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CPC (source: EP KR)

B21B 13/023 (2013.01 - EP); **B21B 13/14** (2013.01 - KR); **B21B 27/10** (2013.01 - EP KR); **B21B 37/007** (2013.01 - EP)

Citation (search report)

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