

Title (en)
DRILLING/ROLLING METHOD IN MANUFACTURING SEAMLESS TUBE

Title (de)
BOHR-/WALZVERFAHREN BEI DER HERSTELLUNG VON NAHTLOSEN ROHREN

Title (fr)
PROCEDE DE PER AGE/LAMINAGE DESTINE A LA FABRICATION D'UN TUBE SANS SOUDURE

Publication
EP 1649945 A4 20070418 (EN)

Application
EP 04745554 A 20040603

Priority
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Abstract (en)
[origin: EP1649945A1] A piercing method for manufacturing a seamless pipe capable of suppressing the rotary forging effects and suppressing the redundant shear strain without excessive narrowing of the roll diameter is provided. This method is characterized by holding a feed angle ² and a cross angle ³ of main rolls in a range satisfying the following expressions (1) to (3), setting the relationship between outer diameter "do" of the solid billet and the outer diameter "d" and thickness "t" of a hollow piece after piercing so as to satisfy the following expression (4), and further setting the relationship between inlet diameter D 1 and outlet diameter D 2 of the main roll with the above-mentioned "do", "d" and ³ so as to satisfy the following expression (5). $8^\circ \leq \alpha^2 \leq 20^\circ$, $5^\circ \leq \alpha^3 \leq 35^\circ$, $15^\circ \leq \alpha^2 + \alpha^3 \leq 50^\circ$, $1.5 \leq \frac{r}{t} \leq 4.5$, $\frac{d}{d_0} / (0.75 + 0.025 \alpha^3) \leq \frac{D_2}{D_1} \ln$ the expression (4), $r = \ln(2t/d_0)$ and $\alpha = \ln\{2(d/t)/d_0\}$

IPC 8 full level
B21B 19/04 (2006.01)

CPC (source: EP)
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• [A] DE 3844802 C2 19950511 - SUMITOMO METAL IND [JP]
• [A] GB 2202778 A 19881005 - SUMITOMO METAL IND
• [A] JP S6431505 A 19890201 - SUMITOMO METAL IND
• [A] DE 3212742 A1 19821104 - SUMITOMO METAL IND [JP]
• [A] DE 2054541 A1 19710519
• See references of WO 2004108310A1

Cited by
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