

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 B1 20110126 (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). $8^{\circ} \leq \alpha^2 \leq 20^{\circ}$, $5^{\circ} \leq \alpha^3 \leq 35^{\circ}$, $15^{\circ} \leq \alpha^2 + \alpha^3 \leq 50^{\circ}$, $1.5 \leq \frac{r}{t} \leq 4.5$, $\frac{d}{do} \leq \frac{1}{(0.75 + 0.025 \alpha^3)}$, $\frac{D2}{D1} \leq \ln \frac{2t}{d}$ in the expression (4), $r = \ln \left(\frac{2t}{d} \right)$ and $\alpha = \ln \left\{ \frac{2(d-t)}{do} \right\}$

IPC 8 full level
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EP 1649945 A1 20060426; EP 1649945 A4 20070418; EP 1649945 B1 20110126; CN 100509192 C 20090708; CN 1795060 A 20060628; DE 602004031232 D1 20110310; JP 4196991 B2 20081217; JP WO2004108310 A1 20060720; RU 2005141132 A 20060627; RU 2309810 C2 20071110; WO 2004108310 A1 20041216

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