

Title (en)

PROCESS FOR PRODUCTION OF SEAMLESS METAL PIPE BY COLD ROLLING

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES NAHTLOSEN METALLROHRS DURCH KALTWALZEN

Title (fr)

PROCÉDÉ DE PRODUCTION DE TUYAU MÉTALLIQUE SANS SOUDURE PAR LAMINAGE À FROID

Publication

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Application

EP 09834667 A 20091125

Priority

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Abstract (en)

In cold rolling of a seamless metallic tube with a cold pilger mill, when a reduction ratio of an outside diameter becomes excessive in comparison to a reduction ratio of a wall thickness, strain in a circumferential direction on flange regions becomes excessive. As a result, compressive stress in a circumferential direction becomes excessive, so that wrinkle imperfections are generated inside a tube and folded on groove bottom regions to become folded defects. This process is repeated to be developed into inside defects. When a hollow shell is produced by the Mannesmann-mandrel process instead of the extrusion process, inside wrinkle imperfections are generated with a sizing mill (a stretch reducer or a sizer) at a stage of hollow shell. Since the inside wrinkle imperfections further grow in cold rolling, it is necessary to pay attention thereto. In consideration of these, (a reduction ratio of an outside diameter/a reduction ratio of a wall thickness both in a cold pilger mill) is set to not more than 1/2. It is, thereby, possible to obtain a high-quality seamless metallic tube, inside defects thereof being suppressed, produced by cold rolling.

IPC 8 full level

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