

Title (en)

METHOD FOR MANUFACTURING METALLIC PIPE, AND METHOD FOR WASHING METALLIC PIPE

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES METALLROHRES UND VERFAHREN ZUM WASCHEN EINES METALLROHRES

Title (fr)

PROCÉDÉ DESTINÉ À FABRIQUER UN TUYAU MÉTALLIQUE, ET PROCÉDÉ DESTINÉ À LAVER LE TUYAU MÉTALLIQUE

Publication

EP 3862466 A4 20220727 (EN)

Application

EP 19868663 A 20190926

Priority

- JP 2018189325 A 20181004
- JP 2019037792 W 20190926

Abstract (en)

[origin: EP3862466A1] An object of the present disclosure is to achieve both energy conservation (low cost) and good cleaning performance in cleaning a metal tube with a chemical conversion coating film and a lubricating film on its surface. A manufacturing method of a metal tube (P) includes a preparing step (S1) of preparing a metallic material tube; a lubricating step (S2) of forming a chemical conversion coating film on a surface of the material tube and forming a lubricating film on the chemical conversion coating film; a cold drawing step (S3) of applying cold drawing to the material tube with the chemical conversion coating film and the lubricating film thereon to form the material tube into a metal tube (P) with specified dimensions; and a cleaning step (S4) of cleaning the metal tube (P) to remove the chemical conversion coating film and the lubricating film. The cleaning step (S4) includes: a step (S41) of soaking the metal tube (P) in a non-highly-heated alkaline degreasing fluid in an alkaline cleaning tank (11); and a step (S42) of soaking the metal tube (P) after soaked in the alkaline degreasing fluid in a washing liquid in an ultrasonic washing tank (21) while radiating ultrasonic waves into the washing liquid and generating fine bubbles in the washing liquid.

IPC 8 full level

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CPC (source: EP KR)

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Citation (search report)

- [Y] WO 2018169050 A1 20180920 - NIPPON STEEL & SUMITOMO METAL CORP [JP] & EP 3597318 A1 20200122 - NIPPON STEEL CORP [JP]
- [Y] EP 3290544 A1 20180307 - NIHON PARKERIZING [JP]
- [A] JP 2004212738 A 20040729 - TOHOKU RIKO KK
- See references of WO 2020071224A1

Designated contracting state (EPC)

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