

Title (en)

Method and apparatus for removing sludge from the tube sheets of steam generators.

Title (de)

Verfahren und Einrichtung zum Entfernen von Schlamm an der Rohrplatte von Dampferzeugern.

Title (fr)

Procédé et dispositif d'élimination des boues sur la plaque tubulaire des générateurs de vapeur.

Publication

EP 0077255 A1 19830420 (FR)

Application

EP 82401808 A 19821004

Priority

FR 8118760 A 19811006

Abstract (en)

[origin: ES8306244A1] For removal of the sludge deposits on the tube sheet of a steam generator which comprises, in a vertical cylindrical enclosure closed by said sheet, a bundle of parallel heat exchange U-shaped tubes sealingly connected to said sheet at both ends and distributed to form parallel sheets of tubes, a lance is radially moved from the center of the tubular plate between two parallel sheets of tubes rather than in the tube lane. Movement occurs in a direction parallel to the tube sheet and in close proximity to the latter. Two streams at least of cleaning fluid under a high pressure are directed toward the plate from the end portion of the lance and in directions which are fixed and symmetrical with respect to the direction of the two sheets of tubes. The streams are cut off as they confront the tubes during radial movement of the lance. And the cleaning fluid is flown out of the enclosure of the steam generator from the periphery of the bundle of tubes.

Abstract (fr)

Pour éliminer les boues sur la plaque tubulaire (2) d'un générateur de vapeur, on déplace radialement au moins une lance (19) à partir du centre de la plaque tubulaire entre deux nappes de tubes, parallèlement à la plaque tubulaire (2) et à proximité de celle-ci; on dirige vers la plaque, à partir de la partie terminale de la lance et dans des directions fixes et symétriques par rapport à la direction des nappes, deux jets de liquide de nettoyage sous haute pression que l'on interrompt au passage devant les tubes d'échange thermique (7) du générateur; et on évacue simultanément le liquide de nettoyage depuis la périphérie du faisceau de tubes.

IPC 1-7

F22B 37/54

IPC 8 full level

F22B 1/16 (2006.01); **F22B 37/48** (2006.01); **F22B 37/54** (2006.01); **F28G 1/16** (2006.01); **F28G 15/04** (2006.01)

CPC (source: EP KR US)

F22B 37/483 (2013.01 - EP US); **F22B 37/54** (2013.01 - KR); **F28G 15/04** (2013.01 - EP US)

Citation (search report)

- [A] FR 2445487 A1 19800725 - WESTINGHOUSE ELECTRIC CORP [US]
- [AD] FR 2352269 A1 19771216 - WESTINGHOUSE ELECTRIC CORP [US]

Cited by

FR2584317A1; FR2577035A1; EP0459597A1; EP0151404A3; FR2660479A1; FR2692712A1; FR2550967A1; EP0432889A3; US4844021A; EP0255503A3; US4887555A; EP0125186A1; FR2545582A1; EP0647815A1; FR2711009A1; US5529020A; EP0780627A1; FR2742858A1; US5782255A; EP0168728A1; US6192904B1; US7050543B2; WO9007679A1; WO9628690A1; WO8807156A3

Designated contracting state (EPC)

BE CH DE FR GB IT LI SE

DOCDB simple family (publication)

EP 0077255 A1 19830420; **EP 0077255 B1 19860102**; CA 1190104 A 19850709; DE 3268322 D1 19860213; ES 516093 A0 19830601; ES 8306244 A1 19830601; FR 2514108 A1 19830408; FR 2514108 B1 19860613; JP S58127003 A 19830728; JP S615043 B2 19860215; KR 840002088 A 19840611; KR 880001503 B1 19880816; US 4424769 A 19840110; ZA 826909 B 19830727

DOCDB simple family (application)

EP 82401808 A 19821004; CA 412873 A 19821005; DE 3268322 T 19821004; ES 516093 A 19820930; FR 8118760 A 19811006; JP 17523782 A 19821005; KR 820004478 A 19821005; US 43318482 A 19821006; ZA 826909 A 19820921