

Title (en)

APPARATUS FOR PARTIALLY AUTOMATED CLEANING OF TUBE BUNDLE HEAT EXCHANGERS, TUBE BUNDLE HEAT EXCHANGER CLEANING ASSEMBLY, AND BLASTING METHOD FOR CLEANING AN INNER TUBE SURFACE OF A TUBE OF A TUBE BUNDLE HEAT EXCHANGER

Title (de)

VORRICHTUNG ZUR TEILAUTOMATISIERTEN REINIGUNG VON ROHRBÜNDELWÄRMETAUSCHERN, ROHRBÜNDELWÄRMETAUSCHERREINIGUNGSANORDNUNG UND STRAHLVERFAHREN ZUM REINIGEN EINER INNENROHRFLÄCHE EINES ROHRS EINES ROHRBÜNDELWÄRMETAUSCHERS

Title (fr)

APPAREIL POUR LE NETTOYAGE PARTIELLEMENT AUTOMATISÉ D'ÉCHANGEURS DE CHALEUR À FAISCEAU DE TUBES, ENSEMBLE DE NETTOYAGE D'ÉCHANGEUR DE CHALEUR À FAISCEAU DE TUBES, ET PROCÉDÉ DE SABLAGE DESTINÉ À NETTOYER UNE SURFACE DE TUBE INTERNE D'UN TUBE D'UN ÉCHANGEUR DE CHALEUR À FAISCEAU DE TUBES

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Abstract (en)

[origin: WO2021175350A1] The invention relates to an apparatus (5) for partially automated cleaning of tube bundle heat exchangers (1) that have a plurality of tubes (2, 2.1, 2.2), comprising a guide rail (6) extending longitudinally in a transverse direction (7), comprising a slide (8) that is movable along the guide rail (6) in the transverse direction (7), comprising a blasting device that has a connection for a gaseous and/or liquid blasting medium and a blasting means, having a blasting adapter (11) designed to be placed on an end face of a tube (2.1) of the tube bundle heat exchanger (1) to be cleaned, having a controllable pressure module which is assigned to the blasting adapter (11) such that the blasting adapter (11) can be pressed by the pressure module towards the tube to be cleaned (2.1), having a deflection body (14) for the blasting means and/or the blasting medium, which can be inserted into the tube (2.1) to be cleaned and has a durable retaining cable (15), which cable holds the deflection body (14) and is also suitable for the use of abrasive blasting means, and having a supply module for the retaining cable (15), wherein at least the blasting adapter (11) and/or the deflection body (14) of the blasting device can be moved together with the carriage (8) in the transverse direction (7), and comprising a fastening device for fixing the guide rail (6) to the tube bundle heat exchanger (1). The invention further relates to a tube bundle heat exchanger cleaning assembly having an apparatus (5) according to the invention for cleaning tubes (2, 2.1, 2.2) and having a tube bundle heat exchanger (1) that comprises a plurality of tubes (2, 2.1, 2.2), and to a blasting method for cleaning an inner tube surface (4) of a tube (2.1) of the tube bundle heat exchanger (1).

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