

Title (en)

Installation (plant) for thermo-cracking a hydrocarbon starting material to alkene, shell and tube heat exchanger for use in such an installation and process for manufacturing shell and tube heat exchanger.

Title (de)

Anlage zum thermischen Cracken von Kohlenwasserstoffen zu Alkenen, Mantel- und Rohrwärmetauscher für den Gebrauch in einer solchen Anlage und Verfahren zur Herstellung des Mantel- und Rohrwärmetauschers.

Title (fr)

Unité d'installation pour le craquage thermique d'une matière hydrocarbonée pour obtenir des alcènes, échangeur de chaleur à tubes et manteau à utiliser dans une telle unité d'installation et méthode pour fabriquer un tel échangeur de chaleur à tubes et manteau.

Publication

EP 0110486 A1 19840613 (EN)

Application

EP 83201725 A 19831206

Priority

NL 8204731 A 19821207

Abstract (en)

The invention relates to an installation (plant) for thermocracking a hydrocarbon starting material to alkenes, comprising a cracking furnace with externally heated reactor tubes (coils) and a shell and tube heat exchanger (<<quench>>, cooler, <<transfer line>> heat exchanger, TLX) to be used for quenching the reactor effluent and connected to the cracking furnace, wherein on the shell side steam is generated, wherein the internal surface of the tubes of the heat exchanger is coated with an inert layer impermeable to the materials in the reactor effluent which are responsible for the fouling, said layer masking the alloy of which the heating exchanger tubes consist. Said layer has a thickness of preferably 0.5 - 20 μ m and is a layer based on an inert metal, in particular aluminum, metal oxide, aluminate, silicate or graphite or is an inert polymeric layer, in particular a layer formed by thermosetting alkylene quench oil with a peroxide, like benzoyl peroxide. The invention also relates to the heat exchange's.

IPC 1-7

C10G 9/00; F28F 19/02

IPC 8 full level

F28F 13/18 (2006.01); **C10G 9/00** (2006.01); **F28F 19/01** (2006.01); **F28F 19/02** (2006.01); **F28F 19/04** (2006.01); **F28F 19/06** (2006.01)

CPC (source: EP)

C10G 9/002 (2013.01); **F28F 19/02** (2013.01)

Citation (search report)

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Designated contracting state (EPC)

BE DE FR GB IT NL SE

DOCDB simple family (publication)

EP 0110486 A1 19840613; EP 0110486 B1 19861210; CA 1210282 A 19860826; DE 3368282 D1 19870122; JP H0519080 B2 19930315; JP S59157494 A 19840906; NL 8204731 A 19840702

DOCDB simple family (application)

EP 83201725 A 19831206; CA 442653 A 19831206; DE 3368282 T 19831206; JP 23121983 A 19831207; NL 8204731 A 19821207