

Title (en)

Fire heat exchanger for liquid heaters

Title (de)

Feuerhitze austauscher für Flüssigkeitserhitzer

Title (fr)

Échangeur à feu nu pour chauffages de liquides

Publication

EP 2133634 B1 20150401 (EN)

Application

EP 08010795 A 20080611

Priority

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Abstract (en)

[origin: EP2133634A1] The fired heat exchanger's design is characterised by the fact that it contains a spiral tubular heat exchanger (1) with a heated liquid medium where each coil of the tube in the cross-section has a point contact with adjacent tube coils creating, after their inseparable thermal linear integration, a uniform surface of the combustion chamber (2) together with the heat medium flow chamber (3) in the further part of the unit. There is also a tubular multi-chamber core (4) inside the spiral tubular heat exchanger (1) whose internal surface features radially distributed plate lamella elements (5) inseparably fitted on the external surface of the core, thanks to which a maze-like heating medium stream flow system is achieved. The internal shape of the tubular multi-chamber core (4) directs the air stream to flow around all its internal surfaces, which prevents the tubular multi-chamber core walls (4) from overheating. At the same time, the air used in later thermal processes of liquid heating is heated as well.

IPC 8 full level

F24H 1/43 (2006.01); **F24H 9/00** (2006.01)

CPC (source: EP)

F24H 1/43 (2013.01); **F24H 9/0026** (2013.01)

Cited by

US8813688B2; US8720387B2; WO2020133959A1; WO2020133958A1

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