

Title (en)
Security heat-exchanger

Title (de)
Sicherheitswärmeaustauscher

Title (fr)
Echangeur de chaleur de sécurité

Publication
EP 0508315 B1 19960117 (DE)

Application
EP 92105738 A 19920403

Priority
DE 9104177 U 19910406

Abstract (en)
[origin: EP0508315A1] A safety heat exchanger has a tube bundle which is surrounded by a casing and whose tubes consist in each case of two tubes pushed into one another, of which the inner tubes and the outer tubes are arranged sealed in tube plates. The inner tubes and the casing space surrounding the outer tubes are flowed through by a first and a second heat exchange medium. The annular spaces between the inner tubes and the outer tubes are filled with a third heat exchange medium whose medium pressure is monitored by a pressure sensor. In order to be able reliably to detect perforations in the inner and/or outer tubes when the heat exchange media are not under pressure or are under partial pressure, the annular spaces (22) are part of a safety circuit in which the third medium is under a pressure that is higher than the pressures of the heat exchange media, and the pressure sensor (34) generates a warning signal and/or a shutdown signal in the event of a pressure drop in the pressure medium in the safety circuit. The pressure is exerted via a device (32) which is formed by a vessel (36), which is partially filled with the third heat-transferring medium and has above the medium level (37) an adequately dimensioned space (38) filled with a gas at a specific pressure. <IMAGE>

IPC 1-7
F28F 1/00

IPC 8 full level
F28D 7/10 (2006.01); **F28F 1/00** (2006.01)

CPC (source: EP)
F28D 7/106 (2013.01)

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