

Title (en)

Thermally operated safety device for boilers in closed-circuit heating plants.

Title (de)

Thermisch gesteuerte Sicherheitseinrichtung für Kessel in geschlossenen Heizungsanlagen.

Title (fr)

Dispositif de sécurité commandé thermiquement pour chaudière de chauffage dans des installations de chauffage à circuit hydraulique fermé.

Publication

EP 0041163 A2 19811209 (DE)

Application

EP 81103711 A 19810514

Priority

DE 3020797 A 19800531

Abstract (en)

1. Thermically controlled safety device for boilers (10) heated with solid fuels in closed heating installations, with which, in case of an over temperature in the heating installation, cold fresh water from the delivery conduit is taken into the system of the heating installation and hot heating water is let off into a drain (44), comprising a fresh water supply conduit (20) conducted to the system of the heating installation and connected to the delivery conduit, in which supply conduit a pressure reducer (22), a temperature controlled valve (34) and a tube separator (24) are arranged in series, and a drain conduit (42) connected to the system of the heating installation, in which a thermic drain safety device (38) is provided, the thermic drain safety device (38) being controlled by the same temperature sensor (36) as the temperature controlled valve (34), which temperature sensor (36) is exposed to the heating water temperature, and opening at a slightly higher temperature than this valve, characterized in that (a) the tube separator (24) has a passage port (30) of large diameter and a control port (32) of small diameter (b) the passage port (30) is connected directly to the outlet (66) of the pressure reducer (22), and (c) the control port (32) likewise connected to the outlet (66) of the pressure reducer is governed by the temperature controlled valve (34) formed as disc valve, which is controlled by a valve stem (46) longitudinally movable by the actuating member (40) of the temperature sensor (36) and also controlling the valve disc (104) of the thermic drain safety device (38).

Abstract (de)

Bei einem mit festen Brennstoffen beheizten Kessel 10 in geschlossenen Heizungsanlagen wird bei Übertemperatur kaltes Frischwasser aus der Versorgungsleitung 20 in das System der Heizungsanlage eingelassen und heißes Heizungswasser in einen Ablauf 44 abgelassen. In die Frischwasserzuleitung 20 ist ein Rohrtrenner 24 mit einem Durchflußanschluß 30 von großem Querschnitt und einem Steueranschluß 32 von kleinem Querschnitt angeordnet. Der Durchflußanschluß 30 ist unmittelbar mit dem Auslaß eines Druckminderers verbunden. Der Steueranschluß 32 wird von einem Tellerventil 34 beherrscht, das durch das Stellglied 40 des auf die Kesseltemperatur ansprechenden Temperaturfühler 30 gesteuert ist. Dieses Stellglied 40 steuert gleichzeitig die thermische Ablaufsicherung 38.

IPC 1-7

F24H 9/20; **F24D 19/10**

IPC 8 full level

F24D 19/10 (2006.01); **F24H 9/20** (2006.01)

CPC (source: EP US)

F24D 19/1009 (2013.01 - US); **F24H 9/2057** (2013.01 - EP)

Cited by

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AT CH DE FR SE

DOCDB simple family (publication)

EP 0041163 A2 19811209; **EP 0041163 A3 19820120**; **EP 0041163 B1 19840801**; AT E8814 T1 19840815; DE 3020797 A1 19811217; DE 3165205 D1 19840906; DK 228881 A 19811201; NO 151384 B 19841217; NO 151384 C 19850327; NO 811815 L 19811201

DOCDB simple family (application)

EP 81103711 A 19810514; AT 81103711 T 19810514; DE 3020797 A 19800531; DE 3165205 T 19810514; DK 228881 A 19810526; NO 811815 A 19810529