

Title (en)

Radiator, in particular for heating systems, with a high resistance to internal pressure

Title (de)

Heizkörper, insbesondere für Heizungsanlage, mit hoher Innendruckfestigkeit

Title (fr)

Radiateur, en particulier pour système de chauffage, à résistance élevée à la pression interne

Publication

**EP 0932008 B1 20030806 (EN)**

Application

**EP 99100364 A 19990115**

Priority

IT TO980038 A 19980116

Abstract (en)

[origin: EP0932008A2] A radiator (1) having at least one module (2) including: a tubular portion (3) with a flat cross section (4); opposite top and bottom ends (7,8) having respective lateral hydraulic fittings (10) substantially aligned along a minor axis of the cross section; and a finned portion (5) formed integrally in one piece with a lateral wall (13) of the tubular portion (3); the finned portion including first fins (11) originating directly from the tubular portion, and second fins (12) originating transversely from respective front ribs (13) in turn originating from the tubular portion (3) and perpendicular to the first fins (11); the ribs being substantially aligned with a major axis of the cross section; the cross section (4) having a dimension (D), measured along the major axis, smaller than or equal to 45% of the depth (P) of the module (2), also measured along the major axis, and a wall thickness (S) ranging between 2.4 and 4.5mm; and a root portion (20) of each rib (13) having no fins, and having a number of respective ridges (22) connecting the root portion (20) to the lateral wall (6) of the tubular portion (3) and to a second fin immediately adjacent to the tubular portion. <IMAGE>

IPC 1-7

**F28D 1/053**; **F28F 1/16**

IPC 8 full level

**F28D 1/02** (2006.01); **F28D 1/053** (2006.01); **F28F 1/16** (2006.01)

CPC (source: EP)

**F28D 1/0233** (2013.01); **F28D 1/05358** (2013.01); **F28F 1/16** (2013.01)

Cited by

EP1471309A3; ITUA20164170A1; EA037896B1; WO2017212415A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IT LI MC NL PT SE

DOCDB simple family (publication)

**EP 0932008 A2 19990728**; **EP 0932008 A3 20000510**; **EP 0932008 B1 20030806**; AT E246793 T1 20030815; CZ 13299 A3 19990915; CZ 299359 B6 20080702; DE 69910089 D1 20030911; EA 001710 B1 20010625; EA 199900037 A2 19990826; EA 199900037 A3 19991229; IT TO980038 A1 19990716; PL 193192 B1 20070131; PL 330858 A1 19990719; SI 0932008 T1 20031231; SK 285469 B6 20070201; SK 6199 A3 20000214; UA 59364 C2 20030915

DOCDB simple family (application)

**EP 99100364 A 19990115**; AT 99100364 T 19990115; CZ 13299 A 19990115; DE 69910089 T 19990115; EA 199900037 A 19990115; IT TO980038 A 19980116; PL 33085899 A 19990115; SI 9930402 T 19990115; SK 6199 A 19990115; UA 99010220 A 19990114