Title (en)

IMPROVEMENTS IN OR RELATING TO FLUID HANDLING APPARATUS

Publication

**EP 0124584 B1 19880427 (EN)**

Application

**EP 83903701 A 19831018**

Priority

US 43830082 A 19821101

Abstract (en)

[origin: WO8401818A1] Fluid handling apparatus which may be heat exchange apparatus or fluid reaction apparatus. The apparatus is provided with an interrupter structure (44) for disrupting the fluid boundary layers at the walls (20) of the apparatus and promoting mixing of the separated boundary layers with the adjacent core layers (52). One interrupter structure comprises a plurality of longitudinally-spaced interrupter elements (46) mounted on a core rod (48), each element comprising a plurality of blade-like members (50) each of at least approximately spherical segment profile in side elevation, the members extending mutually radially outward relative to one another to touch or nearly touch the surface or surfaces adjacent the elements. Alternatively each element comprises a respective sphere (56). The elements are spaced longitudinally from one another the distance required to provide wake interference flow of the fluid, wherein the vortex (54) upstream of one element cooperates with the vortex downstream of the next element in the fluid path. In a shell and tube type exchanger the bladed type of structure may be provided in the tubes interiors, while the spherical type of structure is provided in the shell contacting the tube exteriors.

IPC 1-7

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IPC 8 full level

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**WO 8401818 A1 19840510**; AU 2200883 A 19840522; AU 574339 B2 19880707; CA 1217763 A 19870210; DE 3376449 D1 19880601; DK 318684 A 19840628; DK 318684 D0 19840628; EP 0124584 A1 19841114; EP 0124584 A4 19850425; EP 0124584 B1 19880427; IN 160888 B 19870815; IT 1203715 B 19890223; IT 8323565 A0 19831102; JP S59501991 A 19841129; MX 159117 A 19890421; NO 842342 L 19840612; ZA 838057 B 19840627

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