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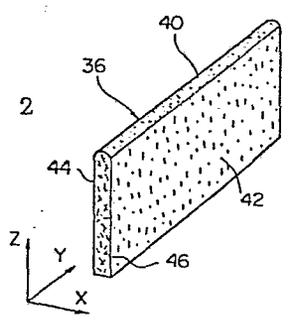
(54) Fiber reinforced metal vanes for rotary compressor.

(57) A vane type compressor includes a hollow cylindrical housing member and a rotor rotatably mounted about a longitudinal axis within it. The rotor is formed with a generally radially extending slot for slidably receiving a vane (36). This vane is formed generally in a rectangular parallelopipedal slab shape, and has two opposite substantially mutually parallel side surfaces (42, 44) which, when the vane is thus fitted to the rotor, extend in planes substantially radial and substantially longitudinal to the rotor and slide against the surfaces of its slot. The vane also has a side edge portion, substantially perpendicular to its side surfaces and joining them, which, when the vane is thus fitted to the rotor, extends in a plane substantially circumferential and substantially longitudinal of the rotor and slides against the inner surface of the hollow cylindrical compressor housing member. The vane is manufactured from a matrix of metal reinforced with short fiber material (46), with the orientation of the fibers (46) of the reinforcing short fiber material being generally two dimensionally random and isotropic in planes perpendicular both to its opposite side surfaces and to its edge portion and substantially perpendicular to the longitudinal direction of the compressor rotor. Thereby both the bending strength and also the anti wear characteristic of the vane are markedly improved, and the anti scuffing and anti seizure characteristics thereof are also enhanced.

FIG. 2



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EUROPEAN SEARCH REPORT

Application Number

EP 87 30 2754

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
Y	GB-A-1 324 248 (BRITISH OXYGEN CO.) * Page 2, lines 42-54; figure 1 *	1,2	F 04 C 18/344
A		4	
Y	GB-A-1 324 443 (BRITISH OXYGEN CO.) * Page 2, lines 23-54; figure 1 *	1,2	
A	US-A-2 905 376 (DAVEY) * Column 4, lines 60-75; figure 3 *	3,4	
D,A	US-A-4 500 360 (WAKAYAMA) * Column 2, lines 5-10; figures 2,3 *	1,2,4,9	
D,A	PATENT ABSTRACTS OF JAPAN, vol. 8, no. 136 (M-304)[1573], 23rd June 1984; & JP-A-59 34 496 (NIPPON DENSO K.K.) 24-02-1984	1,2,4,9	
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A	FR-A-2 250 904 (A. PFEIFFER WAKUUMTECHNIK) * Page 1, line 26 - page 2, line 18 *	1	F 01 C 21/00

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	23-03-1988	KAPOULAS T.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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