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(54) **REFRIGERANT COMPRESSOR**

(57) The invention relates to an encapsulated refrigerant compressor (1) having
- a compressor shell (100);
- a pump unit (10) located within the compressor shell (100), said pump unit (10) comprising:
-- a cranktrain (200) with a crankshaft (210), a counterweight (225), a crankpin (220), a connecting rod (230) and a piston (240;
-- a crankcase (300) with a cylinder housing (310), wherein a cylinder (320) for reciprocating movement of the piston (240) is located, and wherein the crankshaft (210) is rotatably mounted inside a main bearing section (302),
-- an electric drive unit (400) with a stator (420) and a rotor (410), the rotor (410) being fixed to the crankshaft (210) ;
-- wherein the crankshaft (210) is axially supported by a ball bearing (201) on the crankcase (300).

The crankshaft (210) comprises an upper bearing section (215) and a lower bearing section (217) to form an upper sliding bearing (215b) and a lower sliding bearing (217b), wherein an upper bearing seat (305) as the part of the main bearing section (302) forming the upper sliding bearing (215b) is arranged at an upper end section of the main bearing section (302) of the crankcase (300), and wherein said upper bearing seat (305) is configured to be flexibly bendable in a radial direction (212) of the crankshaft (210).

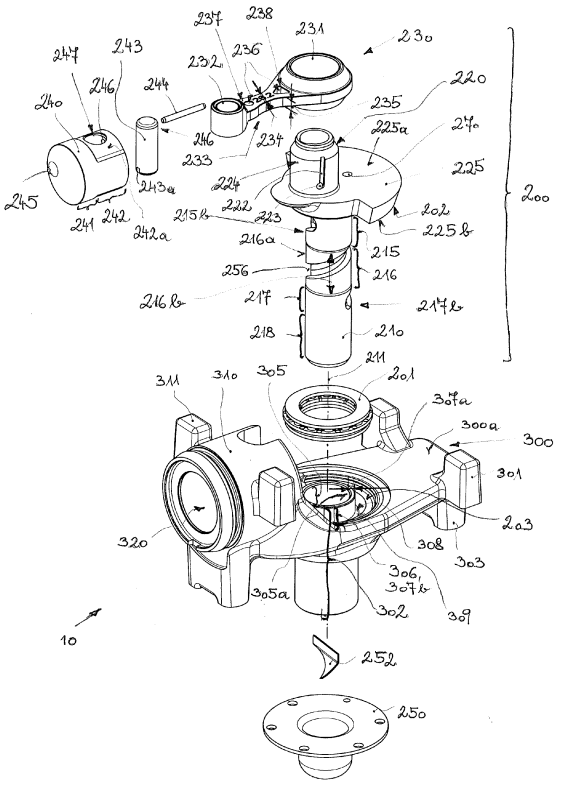

Fig. 5

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EUROPEAN SEARCH REPORT

Application Number
EP 22 20 3373

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~~The present search report has been drawn up for all claims~~

Place of search	Date of completion of the search	Examiner
Munich	31 March 2023	Ricci, Saverio

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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Application Number
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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

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1-14

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

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LACK OF UNITY OF INVENTION
SHEET B

Application Number
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-7

An encapsulated refrigerant compressor comprising a bearing arrangement supporting the crankshaft.

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2. claims: 8-12

An encapsulated refrigerant compressor comprising a coupling arrangement connecting the crankshaft with the piston.

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3. claims: 13, 14

An encapsulated refrigerant compressor comprising a lubricant conveying system.

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4. claim: 15

An encapsulated refrigerant compressor comprising a cylinder head assembly.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 22 20 3373

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