Abstract

The invention relates to a pump casing (2) having a double-walled shell (3) which allows the circulation of a first fluid (4) at least partially around a chamber of compression (5) of a second fluid (6), the compression being carried out by means of at least two elongated rotors (7, 8), the double-walled shell (3) having, on the one hand, a first wall (10) which determines the volume of the compression chamber (5) and, on the other hand, a second wall (11) which extends around the first wall (10) with a certain spacing (12) intended for the circulation of the first fluid (4), said pump casing (2) being made up of two subassemblies (13, 14), referred to as first (13) and second (14), which are joined along a joint face (15) substantially orthogonal to the longitudinal axes (70, 80) of the rotors (7, 8),

- each first subassembly (13) and second subassembly (14) being characterized in that it comprises a rigid element (16) which, cast in a first thermally conducting material, has two opposite faces, being a first face (18) and a second face (19), with

- situated beyond the first face (18),

- on the one hand, the first wall (10) which, cast with this rigid element (16), extends substantially orthogonally to said first face (18) and

- on the other hand, the second wall (11) which extends substantially orthogonally to said first face (18) and parallel to the fourth face (21) of the first wall (10), while being without any connection to said fourth face (21),

- situated set back with respect to the first face (18), cutouts (23) which each constitute at least one accommodation for a first element for guiding in rotation (9) of one of the opposite ends (71, 72, 81, 82) of one of the rotors (7, 8).

Figure 1