

Title (en)  
CENTRIFUGAL PUMP FOR CRYOGENIC FEED MEDIA

Title (de)  
ZENTRIFUGALPUMPE FÜR KRYOGENE FÖRDERMEDIEN

Title (fr)  
POMPE CENTRIFUGE POUR MILIEUX DE TRANSPORT CRYOGÉNIQUES

Publication  
**EP 3460246 B1 20200527 (DE)**

Application  
**EP 18192242 A 20180903**

Priority  
CH 11522017 A 20170919

Abstract (en)  
[origin: US2019085858A1] In a rotary direct-drive single-stage or multi-stage centrifugal pump (1) for cryogenic liquids, having a pump housing (2) for the pump (1) and an electric drive motor unit (12) in a motor housing (10) serving as a pump drive, wherein a shaft (11) of the drive motor unit (12) is mounted on two roller bearings (20; 21), and wherein at least one roller bearing (20; 21) is an unlubricated roller bearing, the structural design of the centrifugal pump (1) should be kept as simple as possible. This is achieved in that at least a first communicating connection, in particular a direct connecting channel (16), is configured between the pressure side (D) in the pump housing (2) and the roller bearing (21) on the pump housing side for a diverted part (FA1) of the main conveying flow (FH) of the cryogenic pumped medium to the roller bearing (21), and that a second communicating connection is configured between the roller bearing (21) on the pump housing side and the suction side (S) for the diverted part (FA2) of the cryogenic pumped medium back to the suction side (S) in the main conveying flow (FH) of the cryogenic pumped medium, so that a circulation of the diverted part (FA1, FA2) of the cryogenic pumped medium is ensured between the pressure side (D) in the pump housing (2) and only the roller bearing (21) on the pump housing side.

IPC 8 full level  
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