(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织
国 际 局

(43) 国际公布日
2026 年 5 月 28 日 (28.05.2026)

WIPO | PCT

(10) 国际公布号
WO 2026/108423 A1

(51) 国际专利分类号:
F04D 29/66 (2006.01) *F04D 13/08* (2006.01)
F04D 29/60 (2006.01) *F04D 7/00* (2006.01)

(21) 国际申请号: PCT/CN2025/126551

(22) 国际申请日: 2025 年 10 月 9 日 (09.10.2025)

(25) 申请语言: 中文

(26) 公布语言: 中文

(30) 优先权:
202411651052.5 2024年11月19日 (19.11.2024) CN

(71) 申请人:上海阿波罗机械股份有限公司**(SHANGHAI APOLLO MACHINERY CO., LTD.)** [CN/CN]; 中国上海市奉贤区八字桥路1818号 201400 (CN)。

(72) 发明人:陆金琪 **(LU, Jinqi)**; 中国上海市奉贤区八字桥路1818号 201400 (CN)。

(74) 代理人:北京超凡宏宇知识产权代理有限公司**(CHOFN INTELLECTUAL PROPERTY)**; 中国北京市海淀区北四环西路68号左岸工社1215-1218室 100080 (CN)。

(81) 指定国(除另有指明，要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UY, UZ, VC, VN, WS, ZA, ZM, ZW。

(54) **Title:** MARINE CRYOGENIC LIQUID CARGO PUMP

(54) 发明名称: 一种船用低温液货泵

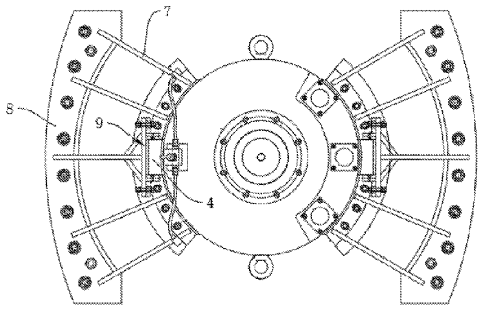


图 3

(57) **Abstract:** A marine cryogenic liquid cargo pump, comprising an intermediate section (1), a cylinder (2), a suction section (3), a motor housing (5) and a motor cover (6) which are connected to each other and form a housing of the cryogenic liquid cargo pump, wherein side wings (7) are fixedly provided around the lower end of the motor cover (6), a fixing arc seat (8) is fixedly arranged at the lower end of each side wing (7), the fixing arc seat (8) is fixed on a cargo tank bottom sump (11) by means of a pump frame (10), a gap for liquid to flow in is reserved between the lower end of the suction section (3) and the interior of the cargo tank bottom sump (11), and corresponding stop blocks (4) are provided at two ends of the intermediate section (1); and a clamping assembly (9) which comprises main steel plates (901) fixedly arranged on two sides of the upper end of the fixing arc seat (8), L-shaped plates (903) being provided on two sides of the two main steel plates (901), and cushion plates (905) configured to clamp and fix the stop blocks (4) being fixedly provided on opposite sides to the L-shaped plates (903). The technical solution has the ability to achieve automatic locking during the clamping and fixing process of the stop blocks (4) on two sides of the cryogenic liquid cargo pump, thereby improving the fixing and buffering effects of the stop blocks (4), and enabling the stop blocks (4) to be finally in contact with the cushion plates (905).

WO 2026/108423 A1

[见续页]

(84) 指定国(除另有指明，要求每一种可提供的地区保护): ARIPO (BW, CV, GH, GM, KE, LR, LS, MU, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG)。

本国际公布:
— 包括国际检索报告(条约第21条(3))。

(57) 摘要: 一种船用低温液货泵，包括彼此连接的中间段（1）、筒体（2）、吸入段（3）、电机壳（5）以及电机盖（6）构成低温液货泵的外壳；电机盖（6）下端环绕固设有侧翼（7），每个侧翼（7）下端均固设有固定弧座（8），固定弧座（8）通过泵架（10）固定在船舱底部基坑（11）上，吸入段(3)下端与船舱底部基坑（11）内部之间预留有供液体流动的间隙；中间段(1)的两端均固设有相对应的止动块（4）；夹持组件（9），包括固设在固定弧座（8）上端两侧的主钢板（901），两个主钢板（901）两侧设置有L形板（903），L形板（903）相对一侧均固设有配置成对止动块（4）进行夹持固定的垫板（905）。该技术方案具有对低温液货泵两侧的止动块（4）夹持固定过程中实现自动锁紧的能力，进而提高对止动块（4）的固定以及缓冲效果，使止动块始（4）终与垫板（905）接触。