

Title (en)  
PUMP FOR CRYOGENIC FLUIDS

Publication  
**EP 0174269 A3 19870325 (DE)**

Application  
**EP 85810315 A 19850708**

Priority  
CH 353584 A 19840720

Abstract (en)  
[origin: US4639197A] The cryogenic pump operates in two stages, utilizing a supercharging part and a high pressure part. These two parts are comprised of a high pressure piston pump (3, 4, 34, 35) and a supercharger (5, 6, 61, 62) disposed in a tandem relationship and sharing a common piston rod (8). The supercharger is enclosed in a heat insulated intermediate container (7) and delivers the liquid cryogenic fluid to the high pressure cylinder. The pump operates to convey a liquid cryogenic fluid such as liquid nitrogen, for example, at a high pressure through evaporating means into pressure resistant commercial steel cylinders where the gaseous nitrogen is kept at a pressure of 200 bar and ambient temperature.

IPC 1-7  
**F04B 15/08**; **F17C 5/02**

IPC 8 full level  
**F04B 3/00** (2006.01); **F04B 15/08** (2006.01); **F17C 5/02** (2006.01)

CPC (source: EP US)  
**F04B 3/00** (2013.01 - EP US); **F04B 15/08** (2013.01 - EP US); **F17C 5/02** (2013.01 - EP US); **F17C 2221/014** (2013.01 - EP US); **F17C 2223/0161** (2013.01 - EP US); **F17C 2223/033** (2013.01 - EP US); **F17C 2225/0123** (2013.01 - EP US); **F17C 2225/036** (2013.01 - EP US); **F17C 2227/0135** (2013.01 - EP US); **Y10S 417/901** (2013.01 - EP US)

Citation (search report)  
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• [Y] US 2931313 A 19600405 - HUGHES ROBERT W  
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• [A] US 4396354 A 19830802 - THOMPSON DAVID R, et al  
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Designated contracting state (EPC)  
AT BE DE FR GB IT LU NL SE

DOCDB simple family (publication)  
**EP 0174269 A2 19860312**; **EP 0174269 A3 19870325**; **EP 0174269 B1 19900117**; AT E49629 T1 19900215; CA 1250219 A 19890221; CH 663065 A5 19871113; DE 3575454 D1 19900222; US 4639197 A 19870127

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