

Title (en)
PUMP AND METHOD FOR FORMING SEAL

Title (de)
PUMPE UND VERFAHREN ZUR HERSTELLUNG EINER VERSIEGELUNG

Title (fr)
POMPE ET PROCÉDÉ DE FABRICATION D'UN JOINT

Publication
EP 4390130 A1 20240626 (DE)

Application
EP 22215608 A 20221221

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Abstract (en)
[origin: US2024209857A1] The present invention relates to a pump, in particular a vacuum pump, comprising a pump-active component having a coating, wherein the coating comprises an oxide layer, which is in particular formed by anodic oxidation in an acidic electrolyte and which has pores, and a fluorine-free polymer-based and/or sol-gel-based sealing, and wherein the pores of the oxide layer are at least partly covered by the sealing and/or impregnated with the sealing and/or filled with the sealing. The present invention further relates to a method of sealing a porous oxide layer.

Abstract (de)
Die vorliegende Erfindung betrifft eine Pumpe, insbesondere Vakuumpumpe, umfassend eine pumpaktive Komponente mit einer Beschichtung, wobei die Beschichtung eine, insbesondere durch anodische Oxidation in einem säurehaltigen Elektrolyten gebildete, Poren aufweisende Oxidschicht sowie eine fluorfreie Polymer-basierte und/oder Sol-Gel-basierte Versiegelung umfasst, und wobei die Poren der Oxidschicht zumindest teilweise von der Versiegelung bedeckt und/oder mit der Versiegelung imprägniert und/oder mit der Versiegelung gefüllt sind. Ferner betrifft die vorliegende Erfindung ein Verfahren zum Versiegeln einer porösen Oxidschicht.

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Citation (applicant)
• EP 3153706 A1 20170412 - PFEIFFER VACUUM GMBH [DE]
• EP 3940234 A2 20220119 - PFEIFFER VACUUM TECH AG [DE]

Citation (search report)
• [XDYL] EP 3940234 A2 20220119 - PFEIFFER VACUUM TECH AG [DE]
• [Y] GB 433367 A 19350813 - PEINTAL S A
• [A] EP 0280264 A2 19880831 - COMMW SCIENT IND RES ORG [AU]
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• [T] M. TAKAYA ET AL: "Novel tribological properties of anodic oxide coating of aluminum impregnated with iodine compound", SURFACE AND COATINGS TECHNOLOGY, vol. 169-170, no. 170, 1 June 2003 (2003-06-01), NL, pages 160 - 162, XP055637529, ISSN: 0257-8972, DOI: 10.1016/S0257-8972(03)00218-4

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