

Title (en)

PISTON TRAVEL MONITORING IN HYDRAULIC RAM CYLINDERS

Title (de)

KOLBENHUBÜBERWACHUNG IN HYDRAULIKKOLBENZYLINDERN

Title (fr)

SURVEILLANCE DE COURSE DE PISTON DANS DES CYLINDRES DE VÉRIN HYDRAULIQUES

Publication

EP 3926179 A1 20211222 (EN)

Application

EP 21171189 A 20210429

Priority

EP 20180110 A 20200615

Abstract (en)

A high-pressure hydraulic fluid ram (1) has a piston (4) mounted in a cylinder (2), and an electromagnetic wave sensor (10) mounted to detect movement of the piston in its travel within the cylinder. An electromagnetic wave barrier (30) of electrically conductive material is mounted to the piston around its circumference in a groove (33) to prevent passage of electromagnetic waves past the piston. It is alongside a pair of spaced-apart guide rings (20) and a high-pressure resilient seal (21). By blocking passage of electromagnetic waves past the piston accuracy of measurement is considerably improved without affecting normal dynamic interaction of the piston and the cylinder.

IPC 8 full level

F15B 15/28 (2006.01)

CPC (source: EP)

F15B 15/2869 (2013.01); **F15B 15/1452** (2013.01); **F15B 15/1471** (2013.01); **F15B 2215/30** (2013.01)

Citation (applicant)

- US 8362788 B2 20130129 - TRUMMER GUENTHER [DE], et al
- US 10436889 B2 20191008 - GIERE ANDRE [DE], et al

Citation (search report)

- [XII] US 5222429 A 19930629 - GARMAN JAMES A [US], et al
- [XAI] US 5540137 A 19960730 - LARK WAYNE W [US], et al
- [XAI] US 5560278 A 19961001 - LARK WAYNE W [US]
- [A] US 4207800 A 19800617 - HOMUTH KENNETH C [US]
- [A] US 2010011954 A1 20100121 - REININGER THOMAS [DE], et al
- [A] DE 102007020046 A1 20081030 - ASTYX GMBH [DE]

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

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DOCDB simple family (application)

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