

Title (en)

ANTI-SURGE CONTROL OF A SUBSEA COMPRESSOR

Title (de)

ÜBERSPANNUNGSSCHUTZREGELUNG EINES UNTERWASSERVERDICHTERS

Title (fr)

COMMANDE ANTI-EMBALLEMENT D'UN COMPRESSEUR SOUS-MARIN

Publication

EP 3132142 B1 20211222 (EN)

Application

EP 15716522 A 20150414

Priority

- NO 20140516 A 20140416
- EP 2015058105 W 20150414

Abstract (en)

[origin: WO2015158734A1] A subsea compression system and method is disclosed, the compression system arranged to be switched from normal operation into an anti-surge operational mode. The compression system comprises a compressor rotor (3) supported for contact-free rotation by active magnetic bearings (20, 21, 22), an active magnetic bearing (AMB) controller (24) to maintain the position of the compressor rotor (3) relative to non-rotating parts of the compressor, an anti-surge valve (25) normally closed in a recycle line (26) setting a compressor outlet (10) in flow connection with a compressor inlet (9) in an open state of the anti-surge valve, wherein the active magnetic bearing controller (24) is operatively connected to the anti-surge valve (25). The method comprises determining, using AMB control data, a value representing a force acting on the compressor rotor from the process load, comparing the force representing value to a threshold value indicative of a surge condition, and in response to the force representing value exceeding the threshold value switching the anti-surge valve into the open state.

IPC 8 full level

F04D 25/06 (2006.01); **F04D 27/02** (2006.01); **F04D 29/058** (2006.01)

CPC (source: EP)

F04D 25/0686 (2013.01); **F04D 27/001** (2013.01); **F04D 27/0223** (2013.01); **F04D 29/058** (2013.01)

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

DOCDB simple family (publication)

WO 2015158734 A1 20151022; AU 2015248926 A1 20161020; AU 2015248926 B2 20180712; BR 112016022609 A2 20170815; BR 112016022609 B1 20220816; EP 3132142 A1 20170222; EP 3132142 B1 20211222; NO 20140516 A1 20151019; NO 337902 B1 20160704; PL 3132142 T3 20220207

DOCDB simple family (application)

EP 2015058105 W 20150414; AU 2015248926 A 20150414; BR 112016022609 A 20150414; EP 15716522 A 20150414; NO 20140516 A 20140416; PL 15716522 T 20150414