

Title (en)

TWIN SPOOL INDUSTRIAL GAS TURBINE ENGINE WITH VARIABLE INLET GUIDE VANES

Title (de)

ZWEIWELLIGEN INDUSTRIELLE GASTURBINE MIT VERSTELLBAREN EINLASSLEITSCHAUFELN

Title (fr)

MOTEUR À TURBINE À GAZ INDUSTRIEL À DEUX BOBINES POURVU D'AUBES DE GUIDAGE D'ENTRÉE VARIABLES

Publication

EP 3449100 A2 20190306 (EN)

Application

EP 17721939 A 20170425

Priority

- US 201615137248 A 20160425
- US 201615174051 A 20160606
- US 2017029401 W 20170425

Abstract (en)

[origin: WO2017189566A2] A large frame heavy duty industrial gas turbine engine that produces twice the power as conventional single spool industrial engines and operates at full power during a hot day. The engine includes a high spool directly driving an electric generator at a synchronous speed of the electric power grid, a low spool with a low pressure turbine (LPT) driving a low pressure compressor (LPC) from the exhaust gas from the high pressure turbine.. The low spool can operate at a higher speed than at the normal temperature conditions to produce high mass flow. A turbine with a variable IGV assembly in which vane airfoils extend between inner and outer buttons, an airfoil center of rotation being located aft of an airfoil aerodynamic center of pressure. The airfoil trailing edge (TE) extends into both buttons to eliminate gap between the airfoil TE and a static part of the turbine.

IPC 8 full level

F01D 15/10 (2006.01); **F01D 17/16** (2006.01); **F02C 3/04** (2006.01); **F02C 6/12** (2006.01); **F02C 9/20** (2006.01); **F02C 9/54** (2006.01); **F04D 27/02** (2006.01)

CPC (source: EP)

F01D 15/10 (2013.01); **F01D 17/16** (2013.01); **F02C 3/04** (2013.01); **F02C 6/12** (2013.01); **F02C 9/20** (2013.01); **F02C 9/54** (2013.01); **F04D 27/0246** (2013.01); **F05D 2220/40** (2013.01); **F05D 2220/76** (2013.01); **F05D 2260/70** (2013.01); **Y02E 20/16** (2013.01)

Citation (search report)

See references of WO 2017189566A2

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)

WO 2017189566 A2 20171102; **WO 2017189566 A3 20171228**; EP 3449100 A2 20190306

DOCDB simple family (application)

US 2017029401 W 20170425; EP 17721939 A 20170425