

Title (en)
INTERSTAGE CAPACITY CONTROL VALVE WITH SIDE STREAM FLOW DISTRIBUTION AND FLOW REGULATION FOR MULTI-STAGE CENTRIFUGAL COMPRESSORS

Title (de)
ZWISCHENSTUFEN-KAPAZITÄTSREGELVENTIL MIT SEITENSTROMVERTEILUNG UND DURCHFLUSSREGELUNG FÜR MEHRSTUFIGE ZENTRIFUGALVERDICHTER

Title (fr)
SOUPAPE DE RÉGULATION DE CAPACITÉ INTER-ÉTAGE AVEC DISTRIBUTION DE FLUX LATÉRAL ET RÉGULATION DE FLUX POUR COMPRESSEURS CENTRIFUGES À PLUSIEURS ÉTAGES

Publication
EP 4177476 A1 20230510 (EN)

Application
EP 22204569 A 20221028

Priority
US 202117453456 A 20211103

Abstract (en)
Centrifugal compressors can incorporate a side stream flow of intermediate pressure vapor between stages of that compressor. The side stream flow can be controlled by a side stream injection port controlled by a throttle ring disposed between stages of the compressor. The throttle ring can allow or obstruct flow through the side stream injection port. The throttle ring can extend and retract in a direction substantially perpendicular to the direction of flow from the first stage impeller to the second stage impeller. A method of operating a centrifugal compressor can include actuating a throttle ring by rotating a drive ring to adjust a flow of interstage fluid into the second stage impeller.

IPC 8 full level
F04D 29/46 (2006.01); **F04D 17/12** (2006.01)

CPC (source: CN EP)
F04D 17/12 (2013.01 - CN); **F04D 17/122** (2013.01 - EP); **F04D 27/005** (2013.01 - CN); **F04D 29/444** (2013.01 - EP); **F04D 29/464** (2013.01 - EP); **F04D 27/0238** (2013.01 - EP); **F04D 27/0253** (2013.01 - EP); **F04D 29/4213** (2013.01 - EP)

Citation (search report)

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- [YA] US 2004109757 A1 20040610 - NENSTIEL KURT [US]
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- [YA] US 3362625 A 19680109 - ENDRESS JAMES W
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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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA

Designated validation state (EPC)
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DOCDB simple family (application)
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