

Title (en)
RECIRCULATION STAGE

Title (de)
RÜCKFÜHRSTUFE

Title (fr)
ÉTAGE DE RETOUR

Publication
EP 3551890 A1 20191016 (DE)

Application
EP 18704418 A 20180122

Priority
• EP 17157126 A 20170221
• EP 2018051389 W 20180122

Abstract (en)
[origin: WO2018153583A1] A recirculation stage (RCH) of a radial turbomachine (RTM) having at least one stator vane stage (VST), wherein the recirculation stage (RCH) extends in annular fashion around an axis (X), wherein the recirculation stage (RCH) is defined radially inwardly by an inner delimiting contour (IDC) and radially outwardly by an outer delimiting contour (ODC), wherein the stator vane stage (VST) comprises stator vanes (VNS) whose surfaces in fluid contact (SFC) extend from an upstream leading edge (LDE), as a pressure side (PRS) and as a suction side (PCS) along a camber line (SCL) spaced apart from one another by profile cross sections (PRC), to a trailing edge (TLE), wherein a tangent at the camber line (SCL) of each profile cross section (PRC) to a radial-axial reference plane (PRF) encloses a vane construction angle (VCA) for each point on the camber line (SCL), wherein a difference between a vane construction angle (VCA) at the leading edge (LDE) and a vane construction angle (VCA) at a downstream position defines a redirection angle (RDA) for each point on the camber line (SCL) of a respective profile cross section (PRC), wherein the stator vanes (VNS) extend at least along part of the third section (SG3), wherein the trailing edges (TLE) are arranged in the third section (SG3), characterized in that at the trailing edges (TLE) in the center of the span width (SPW) the redirection angle (RDA) is in each case greater than the average overall redirection angle (RAM), wherein at both ends of the span width (SPW) at in each case at least 10% of the span width in each case the redirection angle (RDA) is smaller than the average overall redirection angle (RAM).

IPC 8 full level
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CPC (source: EP US)
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Citation (search report)
See references of WO 2018153583A1

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