

Title (en)
EXHAUST DIFFUSER FOR A STEAM TURBINE AND CORRESPONDING STEAM TURBINE

Title (de)
ABGASDIFFUSOR FÜR EINE DAMPFTURBINE UND ZUGEHÖRIGE DAMPFTURBINE

Title (fr)
DIFFUSEUR D'ÉCHAPPEMENT POUR UNE TURBINE À VAPEUR ET TURBINE À VAPEUR ASSOCIÉE

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Application
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Abstract (en)
[origin: EP3653850A1] The present invention relates to an exhaust diffuser for a steam turbine comprising an inlet area (S_{1}) and an outlet area (S_{2}), an inner guide (7) and an outer guide (6) having an endpoint (E), wherein the inner guide (7) comprises an inclined wall (70, 71, 72) with at least two inflection points (A, B, C, D), wherein the inclination of the inclined wall (70, 71, 72) with respect to the longitudinal axis of the steam turbine is given at the inflection points, wherein the inner guide (7) is adapted so that a ratio of the axial length (L_{AL}) of the exhaust diffuser to the distance (L_{1}) between the base (2) of the last stage blades (3) and the stator body above the tip of the last stage blade (3) is between 1,25 and 1,5, and wherein the outer guide (6) is adapted so that the ratio of the outlet area (S_{2}) to the inlet area (S_{1}) is between 1,45 and 1,85. The exhaust diffuser with the geometry as defined above provides for the improvement of efficiency of the exhaust diffuser assembly, while it allows keeping the axial length of the diffuser as short as possible.

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