

Title (en)

CASTING APPARATUS FOR PRODUCING A TURBINE ROTOR BLADE OF A GAS TURBINE AND TURBINE ROTOR BLADE

Title (de)

GIESSVORRICHTUNG ZUM HERSTELLEN EINER TURBINENLAUFSCHAUFEL EINER GASTURBINE UND TURBINENLAUFSCHAUFEL

Title (fr)

DISPOSITIF DE COULÉE POUR LA PRODUCTION D'UNE AUBE DE TURBINE D'UNE TURBINE À GAZ, ET AUBE DE TURBINE CORRESPONDANTE

Publication

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Application

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Priority

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Abstract (en)

[origin: EP2243574A1] The casting device (10) comprises a hollow mold shell (12), whose hollow cavity (14) is limited by a surface (16) and represents a negative mold of a turbine blade to be produced, casting cores disposed in the hollow cavity, and an inlet channel (20) for a casting material, where the inlet channel has an inlet opening (22) flowing into the surface. The surface is aligned in the mold shell in such a way that a blade root of the turbine blade to be cast is contoured at inlet-side. The inlet channel has a longitudinal extension directly upstream to its inlet opening. The casting device (10) comprises a hollow mold shell (12), whose hollow cavity (14) is limited by a surface (16) and represents a negative mold of a turbine blade to be produced, casting cores disposed in the hollow cavity, and an inlet channel (20) for a casting material, where the inlet channel has an inlet opening (22) flowing into the surface. The surface is aligned in the mold shell in such a way that a blade root of the turbine blade to be cast is contoured at inlet-side. The inlet channel has a longitudinal extension directly upstream to its inlet opening, where a part of the hollow cavity, into which an imaginary extension of the inlet channel projects, is completely free from casting core at the inlet opening side. The inlet channel flows into a part of the surface that forms the negative of a plane front side of the blade root of the turbine blade. The surface has a symmetrical has a symmetrical pine tree-shaped contour or hammer-shaped contour for the blade root of the turbine blade. The inlet channel is arranged concentrically in between and one of the casting cores in the area of the inlet opening in an eccentric manner. The casting cores are arranged on both sides of the center of the symmetry in the area of the inlet opening. An independent claim is included for a turbine blade for a gas turbine.

IPC 8 full level

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