

Title (en)
HYBRID TESLA-PELTON WHEEL DISC TURBINE

Title (de)
HYBRID-TESLA-PELTON-RAD-SCHEIBENTURBINE

Title (fr)
TURBINE A DISQUE A ROUE HYBRIDE TESLA-PELTON

Publication
EP 2260178 A4 20130515 (EN)

Application
EP 08714511 A 20080306

Priority
BR 2008000064 W 20080306

Abstract (en)
[origin: WO2009109020A1] Utility Model Patent for a hybrid turbine that consists in a Tesla turbine improved with the replacement partial or total of its smooth discs by innovative discs called 'Pelton type discs (2)'. The parts of the Tesla turbine are: stator, shaft, inlet, exhaust outlet (4) and smooth discs (2). The disc (2) with an innovative format, object of this patent, owns the characteristics of the Pelton Wheel, once it owns cavities (1) that are hit by the working fluid. The 'Pelton type' discs (2) have as purpose to increase the torque provided by the shaft of the turbine and it is an improvement of the Tesla turbine that makes it useful for many applications and improve its efficiency in applications which demands bigger torque that furnished by the original Tesla turbine. The proportion between 'Pelton type' discs (2) and smooth discs, used in the turbine, defines the increase of torque. The Hybrid Tesla-Pelton Wheel can be used like a pump, compressor or vacuum pump if operates in reverse way, that means, the working fluid goes into the openings near the centre (3) of the discs (2) and goes out at the ends of the discs (2) (effect that is obtained turning the shaft by a motor).

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Citation (search report)

- [XY] US 6210116 B1 20010403 - KUCZAJ JOHN E [US], et al
- [Y] US 2767906 A 19561023 - DOYLE DEWEY I
- [X] GB 2110766 A 19830622 - GLASS BENJAMIN GORDON
- [X] US 2005169743 A1 20050804 - HICKS KENNETH [US]
- [X] US 2783964 A 19570305 - OSCAR THEIMER
- [X] US 1013248 A 19120102 - WILKINSON JAMES [US]
- [X] US 1289960 A 19181231 - TAYLOR JOHN [US]
- [X] US 6632071 B2 20031014 - PAULY LOU [US]
- [A] JP 2007198334 A 20070809 - MATSUSHITA ELECTRIC IND CO LTD
- See references of WO 2009109020A1

Cited by
WO2013130901A1; DE102022108559A1; DE102022108559B4

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