

Title (en)
GAS TURBINE AND THERMODYNAMIC POWER GENERATION SYSTEM

Title (de)
GASTURBINE UND THERMODYNAMISCHES ENERGIEERZEUGUNGSSYSTEM

Title (fr)
SYSTÈME DE PRODUCTION D'ÉLECTRICITÉ THERMODYNAMIQUE

Publication
EP 2399003 A2 20111228 (EN)

Application
EP 10705506 A 20100218

Priority
• US 2010024563 W 20100218
• US 15402009 P 20090220

Abstract (en)
[origin: WO2010096540A2] A power generation system that includes a heat source loop that supplies heat to a turbine loop. The heat can be waste heat from a steam turbine, industrial process or refrigeration or air-conditioning system, solar heat collectors or geothermal sources. The heat source loop may also include a heat storage medium to allow continuous operation even when the source of heat is intermittent. In the turbine loop a working fluid is boiled, injected into the turbine, recovered condensed and recycled. The power generation system further includes a heat reclaiming loop having a fluid that extracts heat from the turbine loop. The fluid of the heat claiming loop is then raised to a higher temperature and then placed in heat exchange relationship with the working fluid of the turbine loop. The turbine includes one or more blades mounted on a rotating member. The turbine also includes one or more nozzles capable of introducing the gaseous working fluid, at a very shallow angle on to the surface of the blade or blades at a very high velocity. The pressure differential between the upstream and downstream surfaces of the blade as well as the change in direction of the high velocity hot gas flow create a combined force to impart rotation to the rotary member.

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CPC (source: EP)
F01D 1/026 (2013.01); **F01K 3/02** (2013.01); **F01K 25/10** (2013.01)

Citation (search report)
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