

Title (en)

Steam injected engine with auxillary high pressure steam turbine.

Title (de)

Motor mit Dampfeinspritzung und mit einer Hilfshochdruckdampfturbine.

Title (fr)

Moteur à injection de vapeur avec une turbine auxiliaire à vapeur à haute pression.

Publication

**EP 0319699 A2 19890614 (EN)**

Application

**EP 88118125 A 19881031**

Priority

US 12608787 A 19871130

Abstract (en)

A steam injected gas turbine engine, including a compressor, a combustor, a high pressure turbine and a power turbine for producing the output power for the engine. A high pressure boiler is included downstream of the power turbine to produce superheated steam at very high pressures and high temperatures. The steam passes through an auxiliary steam turbine for extracting power output from the steam to increase the engine output. The steam is injected back into the engine, as for example, directly into the combustor. The thermal efficiency and power output of the engine system is substantially increased thereby at constant high pressure turbine rotor inlet temperature.

IPC 1-7

**F01K 21/04**

IPC 8 full level

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CPC (source: EP)

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Cited by

CN102325978A; CN102325979A; EP0676532A1; US5564269A; US10537840B2; WO9408128A1; US7987677B2; US8474264B2; US9062607B2; WO2010098709A1

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