

Title (en)
Steam turbine system.

Title (de)
Dampfturbinensystem.

Title (fr)
Système de turbines à vapeur.

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Abstract (en)
Steam turbine system comprising an H.P. (high pressure) turbine unit (I), an I.P. (intermediate pressure) turbine unit (II), and a L.P. (low pressure) turbine unit (III), wherein the said turbine units are interconnected and the rotors of the H.P. turbine unit and of the I.P. turbine unit are coupled (13) with each other such that during normal operation they rotate at the same speed. According to the invention the L.P. turbine unit (III) comprises a group of a relatively large number of independent, relatively small L.P. turbines (T1, T2, T3 ... Tn) wherein each small L.P. turbine forms a set with a corresponding turbo-compressor (C1, C2, C3 ... Cn) and in each set the rotor of the small L.P. turbine is coupled (25), (26), (27), (28), with the rotor of the corresponding turbo-compressor such that, during normal operation, they rotate at the same speed. The steam inlet (31, 32, 33, 34) of each small L.P. turbine and the steam inlet (45, 46, 47, 48) of each corresponding turbo-compressor is connected to the steam outlet (9) of the I.P. turbine unit, and the steam outlet (35, 36, 37, 38) of each small L.P. turbine is connected to a steam exhaust. Furthermore the steam outlets (55, 56, 57, 58) of the turbo-compressors are connected to a suitable expansion stage of the H.P. or I.P. turbine unit and or to other steam-consuming equipment. Finally the small L.P. turbines with the corresponding turbo-compressors are constructed in such a manner that during normal operation their rotors rotate at a substantially higher speed than the rotors of the H.P. and I.P. turbine units.

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