

Title (en)
SYSTEM FOR MINIMIZING VALVE THROTTLING LOSSES IN A STEAM TURBINE POWER PLANT

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Application
EP 79300255 A 19790220

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Abstract (en)
[origin: EP0004415A1] This invention relates to a system for reducing steam throttling losses which occur across turbine governor valves, by adjusting boiler throttle pressure so as to obtain optimum governor valve setting thereby providing for maximum power production efficiency. In a typical valve grouping sequential positioning pattern, the flow rate is assumed to be F3 where valves 1, 2 and 3 are fully open causing substantially no throttling losses; however, valves 4 and 5 are partially open causing some losses. An optimum valve position program (56) is operative to determine optimum flow demands corresponding to optimum valve positions (72 and 71) which are greater and less than the present flow demand. Then, the closest optimum flow demand, e.g. (72) is selected. Based on this optimum flow demand, a throttle pressure control program (34) adjusts throttle pressure setpoint so that the governor valve (4, 5) positions change to (72). A major advantage of this invention is fuel savings due to maximum time spent in the optimum valve position conditions.

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