Patent Search

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Abstract:

IMPROVED OPERATION OF A REACTION TURBINE AND METHOD FOR THE SAME ABSTRACT An improved operation of a reaction turbine and method for the same are disclosed. The reaction turbine includes one or more guide vanes configured to control a flow of water to direct the flow of water from the scroll casing to a runner. The reaction turbine includes a draft tube configured to discharge the flow of water from the outlet of the runner towards a tail race at an exit of the reaction turbine. The reaction turbine includes a water regulating means configured to regulate the flow of water discharged from the draft tube towards the tail race, thereby controlling a water level at the tail race. FIG. 2

Complete Specification

Claims:WE CLAIM:

1. A reaction turbine (20) comprising:
   a scroll casing;
   one or more guide vanes mechanically coupled to the scroll casing, wherein the one or more guide vanes are configured to control a flow of water to direct the flow of water from the scroll casing to a runner;
   a draft tube (41) mechanically coupled to an outlet of the runner, wherein the draft tube (41) is configured to discharge the flow of water from the outlet of the runner towards a tail race at an exit of the reaction turbine; and
   a water regulating means (80) disposed at the tail race(70) of the reaction turbine, wherein the water regulating means (80) is configured to regulate the flow of water discharged from the draft tube towards the tail race, thereby controlling a water level at the tail race.
2. The reaction turbine (20) as claimed in claim 1, wherein the scroll casing is configured to protect the runner, a plurality of runner blades, the one or more guide vanes and one or more internal parts of the reaction turbine from an external damage.
3. The reaction turbine (20) as claimed in claim 1, wherein the water regulating means comprises an arrangement of a wall shaped structure.
4. The reaction turbine (20) as claimed in claim 1, wherein the water level at the tail race is maintained within a first predefined level and a second predefined level.
5. The reaction turbine (20) as claimed in claim 1, comprising an energy recovering means built within the water regulating means, wherein the energy recovering means comprises at least one low head turbine configured to recover an energy of the flow of water discharged from the tail race

View Application Status

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