

PATENT NO. 360290
A HYDRO POWER SYSTEM

APPLICATION NO. 345/DEL/2013

APPLICANT

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ABSTRACT

The present invention discloses a hydro power system. The hydro power system includes a rotatable turbine operated by flow of water, an asynchronous generator operatively coupled to the turbine and configured to generate voltage at a specific frequency in response to rotation of the turbine, a load operatively coupled to the asynchronous generator, a voltage controller operatively coupled to the asynchronous generator and load for regulating the voltage generated by the asynchronous generator in response to a variation in water flow rate and a variation in the load, a frequency controller operatively coupled to the asynchronous generator and load for regulating the frequency of the generated voltage in response to a variation in water flow rate and a variation in the load, and a digital signal processor operatively coupled to the voltage and frequency controllers for providing gating signals thereto for enabling the regulation of the generated voltage and frequency.

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CLAIM 1

A hydro-power system comprising a rotatable turbine (101a) operated by flow of water; an asynchronous generator (101) operatively coupled to the turbine (101a) and configured to generate voltage at a specified frequency in response to rotation of the turbine (101a); a load (103) operatively coupled to the asynchronous generator (101); a voltage controller (105) operatively coupled to the asynchronous generator (101) and load (103) for regulating the voltage generated by the asynchronous generator in response to a variation in water flow rate and a variation in the load (103); a frequency controller (107) operatively coupled to the asynchronous generator (101) and load (103) for regulating the frequency of the generated voltage in response to a variation in water flow rate and a variation in the load (103); and a digital signal processor (111) operatively coupled to the voltage and frequency controllers (105, 107) for providing gating signals thereto for enabling the regulation of the generated voltage and frequency.