Small Water Power Generation

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Abstract: *In the field of power generation, water power generation has a great contribution in the world. It is popular due to having efficient and reliable form of clean source of renewable energy. It can be an excellent method of harnessing renewable energy from small rivers and streams. The small water power project designed to be a run-of-river type, because it requires very little or no reservoir in order to power the turbine. The water will run straight through the turbine and back into the river or stream to use it for the other purposes. This has a minimal environmental impact on the local ecosystem. In this project, the basic concept of hydro power generation is shown. A proto type turbine was designed by Solid Works software. The turbine power and speed were directly proportional with the site head, but there were specific points for maximum turbine power and speed with the variation of the site water flow rate. Turbine is rotated by using the thrust of water of velocity of water. Alternator is attached with turbine shaftand so rotation of turbine is the result in rotation. This concept highly increases the overall efficiency. Power generation by this water power generator is calculated. To the sum up, it can be said that if this concept will be applied in the Hydro power plant, the output of power generation will be increase.*

Keywords- Power Generation, Hydro Power Plant, River Stream, Small River, Turbines.