



Turbine Testing Lab

Monthly Bulletin July, 2016

KETEP 2015- 2017 Project

- Procurement of the accessories for the test rig of **5 kW cross- flow turbine** done and fabrication works underway.

Energize Nepal Project

- **Royal Nepal Embassy (RNE) & Kathmandu University (KU)** signed an agreement on 27th July, 2016 to support the Energize Nepal project with a total of **NOK 25 millions** over 5 years.
- The project aims to improve the capacity in Nepal to utilize its huge renewable energy resources with focus on hydropower sector.
- This project builds on the previous successful collaboration between **KU, Hydrolab, Sintef and NTNU**.

Conference

- Mr. Sailesh Chitrakar, Ph.D candidate from TTL currently in exchange program at NTNU, Norway participated in **28th IAHR symposium on Hydraulic Machinery and Systems** held at Grenoble, France on July 4- 8th, 2016.

Workshop/ Training

- Dr. Hari Prasad Neopane, Member Secretary TTL participated in the **Hydropower Project Techno- Economic Assessment Training (Module III)** organized by USAID South Asia Regional Initiative for Energy Integration (SARI/EI) in Delhi, India from 24th - 30th July 2016.

Lab activities

- Archiving of all the reports, documents, publications etc. of TTL started in **e-learning portal** for easier search and reference purpose.
- Design & estimates for the outer shed of TTL done with the collaboration of KU- CED.

Publications

- B.S. Thapa, O.G. Dahlhaug and B. Thapa, Velocity and pressure measurements in guide vane clearance gap of low specific speed Francis turbines, **28th IAHR symposium on Hydraulic Machinery and Systems**, 4-8 July, Grenoble, France.
- S. Chitrakar, B. S. Thapa, H. P. Neopane and O. G. Dahlhaug, Numerical investigation of the flow phenomena around a low specific speed Francis turbine's guide vane cascade, **28th IAHR symposium on Hydraulic Machinery and Systems**, 4-8 July, Grenoble, France.



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- B. Baidar, R. Koirala, H.P. Neopane, M.V. Shrestha and B. Thapa, Strategic rehabilitation of the earthquake affected micro- hydropower plants in Nepal, *28th IAHR symposium on Hydraulic Machinery and Systems*, 4-8 July, Grenoble, France.

Internship Program

3 students from Mechanical final year group started their **45 days internship program** at TTL from 17th July, 2016. Individual student has been assigned the work/ duty with the titled listed as:

- Assessment of R&D activities at TTL and identification of future activities to complete the research bridge.
- TTL laboratory operation and facility management.
- Design of low head Francis turbine for erosion handling: A case of Kaligandaki hydropower plant.

Academic Projects

- Printing of **Archimedian Screw Turbine** in Rapid Prototyping Machine (RPM) at TTL as a part of project work for the mechanical final year students from **Institute of Engineering (IOE), Pulchowk**.
- Facilitate the master student from **Department of Pharmacy, KU** to conduct her project work on stereo zoom microscope available at TTL.