



### Fourth TTL Anniversary Program

- TTL celebrated its 4<sup>th</sup> Anniversary program on November 26, 2015
- Release of 4<sup>th</sup> Anniversary Issue by Prof. Ole Gunnar Dahlhaug and Mr. Bård Aslak Brandåstrø from NTNU and Mr. Fredrik Warring from Research Council of Norway
- Program accompanied by the project exhibition program Aviyantaa'15 of Mechanical Engineering Department and release of the second issue Aviyantaa
- Photo Galleries and full news [here](#)

### Other highlights

- Study progress presentation by Assistant Prof. Krishna Prasad Shrestha (PhD candidate), Mr. Juben Bhaukajee (MS) and Mr. Balendra Chhetri (MS)
- Discussion on future cooperation between Water Power Laboratory, NTNU and TTL, KU
- Motivational lecture on hydropower engineering and its prospects by Prof. Ole Gunnar Dahlhaug

### Completion of RenewableNepal Projects

- Project experience sharing from the project representatives on 24<sup>th</sup> November

**RNB-15-PID-02 project "Incubation of Turbine Design Services as a Spin-off Company from TTL and Developing Competences for Designing and Manufacturing Francis turbines for Low Head Applications"**

### Project Outcomes

- Formation of Turbine Design Services TDS as spin-off company from TTL
- Design and fabrication of low head Francis turbine reflecting TTL competences in whole range of Francis turbine
- Development of basic spreadsheet tool in designing Francis turbine to train local manufacturers and designers



### **RNB-15-PID-16 project “Development of guidelines for welding repair of hydro-turbines”**

#### **Project Outcomes**

- A guideline for welding repair of hydro-turbines has been prepared
- Upgradation and competence development of existing laboratory facility for material test at Turbine Testing Lab
- Participation in international workshop on small hydropower technology
- Transfer of knowledge to undergraduate students enrolled in the position of interne in the project

#### **KETEP Project**

- Completion of Rotating Disc Apparatus (RDA) fabrication and its initial testing at the workshop
- Modifications suggested and working accordingly

#### **Visits**

- Prof. Bhola Thapa, Dean SOE, Registrar – KU and Chairman of TTL visited State Key Laboratory of Hydrosience and Engineering -Tsinghua University, China on October 20, 2015 and discussion on future prospects of collaboration between the two institutions
- Prof. Wei Zhou from Nanyang Technological University, Singapore visited to TTL on 16<sup>th</sup> November and discussion on possible research collaborations
- Visit by Hon. Giriraj Mani Pokharel, Minister for Education, Government of Nepal to Turbine Testing Lab, Kathmandu University, Dhulikhel on November 22, 2015
- Visit by TTL team to Khimti Power Plant to be acquainted with earthquake related damages in the plant components



### TTL Flooring

- Completion of TTL flooring
- Dewatering and crack inspection in the reservoir walls

### Academic Workshops

- Mr. Binaya Baidar participated in a Workshop on small wind energy systems for policy makers in Nepal, October 1-3, 2015 in collaboration with Arizona State University, VOCTEC, USAID, NAST, Green Empowerment, Lalitpur, Nepal

### Publications

- Khanal Krishna, Neopane Hari. P., Rai Shikhar, Thapa Manoj, Bhatt Subendu, Shrestha Rajendra, 2015, A methodology for designing Francis runner blade to find minimum sediment erosion using CFD, Renewable Energy, Vol. 87, Part 1
- Ravi Koirala, Mahabharat Vyas Shrestha, Baoshan Zhu, Hari Prasad Neopane, Bhola Thapa, "Development of testing facility for Performance Estimation of Hydraulic Turbines", Asia Clean Energy Summit 2015, October 27-28, 2015, Marina Bay Sands, Singapore.