

MONTHLY BULLETIN

TURBINE TESTING LAB

APRIL, 2026

Visit and interaction meeting between TTL team Mr. Benno Lotscher from NG Hydro, Switzerland on April 2 related to droplet erosion in Pelton turbines. A separate meeting was also conducted with Sahas Urja Ltd. to discuss the same problem in Dudhkoshi Hydropower Plant



Interaction meeting between TTL team and Mr. Benno from NG Hydro

Submission of the final report to Sundarijal Hydropower Plant in the project 'Condition Monitoring of Penstock Pipe of Sundarijal Hydropower Station'

Submission of the final report to Sahas Urja Ltd. in the project 'Erosion of nozzles and runners of Solu Khola (Dudhkoshi) Hydropower Plant'

Registration of new 4th year projects from DoME related to TTL for 2026

1. Numerical analysis of the synergistic effect of sediment particles and cavitation behavior in Francis turbine
2. Numerical analysis of the effect of sediment size and concentration on the erosion of Francis turbines
3. CFD investigation of droplet erosion mechanism in Pelton turbine buckets and design optimization for mitigation
4. Experimental investigation of erosion in Pelton bucket due to eroded needles at different bucket angles
5. Numerical study of Pelton turbine's efficiency due to splitter erosion
6. Fatigue behavior analysis of high-head Francis turbine under partial-load operating condition



Presentation of Mr. Mausam Bhurtel at TTL for Master by Research thesis on April 21



Tensile test of M22 bolt samples

Tensile tests carried out for M22 bolt samples as a fracture analysis process in collaboration with SMRT Lab, DoME, KU for a hydropower plant in Nepal owned by White Lotus Power Ltd.