ONLINE TRAINING

RESERVOIR AND APPURTENANT STRUCTURES, CWPRS, PUNE

Central Water and Power Research Station (CWPRS), Pune is a premier national institute offering a wide range of R&D services related to water and energy resources development, river engineering problems and the coastal development projects. As the UN recognized Regional Laboratory for ESCAP region, CWPRS has offered its services to neighbouring countries in Asia, Middle East and Africa. Reservoir and Appurtenant Structures is one of the major disciplines of research at CWPRS.

Under this discipline, studies are carried out for evolving efficient, economical and safe hydraulic designs of structures such as spillways, energy dissipators and water conductor systems involving power intakes, high head gates, diversion tunnels, sluices and outlets, surge tanks, tunnels, and tailrace tunnels/channels. The studies are carried out with the help of hydraulic models, mathematical models and analysis of prototype data in the following areas of specialization:

- **Spillways and Energy Dissipators**
  Studies include discharging capacity assessment, pressures and water surface profiles, performance of energy dissipators and plunge pool design.
- **Power intakes, Water Conductors and Tailrace System**
  Layout, location and dimensions of intake and water conductor system, submergence from the consideration of vortex, transient analysis for water hammer effect and water levels in surge tank and tail race system.
- **Vertical, Radial and Stoplog Gates**
  Layout of gates and location of airvents, optimization of hydrodynamic uplift and downpull forces, hydrodynamic pressures and air demand.
- **Canal Automation**
  Canal automation is application of automatic devices or logic to assist in controlled coordination among various canal regulating structures. It may involve wide array of technologies, ranging from simple mechanical devices to complex completely computerized controls.

Power Intake, Kholongchhu, Bhutan

Service gate installation at IBPT model, Sardar Sarovar , Gujarat

Tailrace Tunnel Punatsangchhu II, Bhutan

Information Bulletin

ONLINE
Two Days Training Course

On

Water Conductor Systems for Hydropower Projects.

November 23-24, 2020
PUNE – INDIA

100 years and beyond ...
1916-2016

Organized by

Central Water and Power Research Station,
Khadakwasla, Pune - 411024

Shri A.K.Agrawal
Director

Objectives

Multipurpose river valley projects backed by big dams and water conductor systems have played a vital role in ensuring self-sufficiency in food production, flood control, rapid industrialization and electrification. The construction of dams involves huge capital cost and recurring expenditure for maintenance. The dam hydraulics should be optimized functionally and economically before the execution of construction work. The most reliable method of investigation of flow through river sluices, power intakes and through the water conductor systems and other outlet is by performing experiments on scaled models. The approach flow conditions near intake to avoid air-entraining vortices, design of river sluices and diversion tunnels, assessment of hydrodynamic forces on control gates, design of tailrace channel etc. are normally investigated by physical models. Whereas hydraulic transient analysis for water conductor system is generally conducted by mathematical modelling.

The present training course is being organized to discuss on various modelling techniques used for hydraulic design of spillways, power intake, water conductor systems, gates, tail race system and application of canal automation. The course will provide a platform for site engineers, researchers and academicians to review the existing practices assess the future challenges and work on strategies for newly emerging modeling techniques for adopting a hydraulically efficient and techno-economically feasible hydraulic design.

Course Content

The training course will provide the state of the art information through series of lectures by CWPRS experts about techniques used in hydraulic modelling of Power intakes, Control gates, diversion tunnels, tail race channels / tunnels and water conductor systems including Hydro turbines and hydraulic transient analysis for hydro-power followed by demonstrations of physical models. Several important case studies will also be discussed during the course.

Venue and Date :

The online course will be held between 1000 and 1700 hours during 23-24 November, 2020 from Central Water and Power Research Station (CWPRS), Khadakwasla, Pune-411024 using Online web tool.

Target Group:

The proposed course is expected to be useful for professionals/ practicing and design engineers, post graduate students, academicians and researchers..

Registration

The registration fee for this course is NIL. However only approved list of participants will only be allowed to attend the online sessions. A digital certificate of participation will also be issued for the registered participants. **All Interested**

Participants need to send a email to organizers along with details (with approved email id's) as asked in the registration column. The link for joining the online tutorial will be shared with the registered participants only.

Some conditions to follow:

The online link will be shared with the participants only. All are required to maintain strict adherence to the license agreement. All participants need to keep their microphones off and their video in off mode. Method of logging in to the online sessions will be sent by separate emails to the approved participants. For further clarifications kindly contact the organizers through email.

Last date for acceptance of registration form :
15 November 2020

Coordinator

Shri B.S.Chavan, Scientist 'D'
E-mail: balkrishna0@gmail.com
Ph: 020-24103246; Mobile: 09850757015
Fax: 020-24381004
Website :www.cwprs.gov.in

Co-Coordinator

Dr. K.C.Sahu, Scientist 'C'
E-mail: erkcsahu@yahoo.co.in
Ph: 020-24103286; Mobile: 09423558150

ONLINE

Training Course
On

Water Conductor Systems for Hydropower Projects.

at

CWPRS, Pune-411024
November 23-24, 2020

REGISTRATION FORM

Name*_____

Designation:_____

Organization*:_____

Mailing Address:_____

Tel*:_____ Off: _____

Res:_____ Fax*:_____

E-Mail:_____

Alternate e-mail id (if any):

_____

Signature

*Mandatory fields