

RESERVOIR AND APPURTENANT STRUCTURES , CWPRS, PUNE

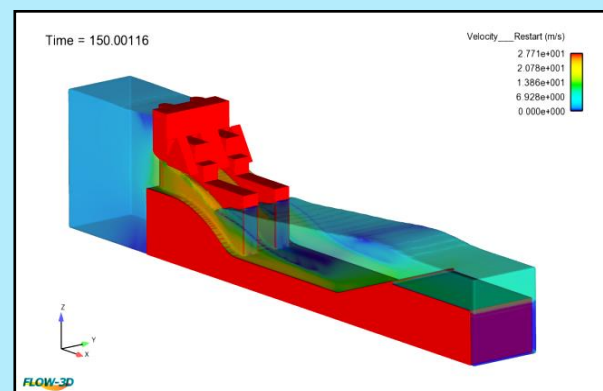
Central Water and Power Research Station (CWPRS), Pune is a premier national institute offering a wide range of R&D services related to water and energy resources development, river engineering problems and the coastal development projects. For more details about CWPRS, please visit www.cwprs.gov.in

Reservoir and Appurtenant Structures is one of the major disciplines of research at CWPRS. Spillways and Energy Dissipator (SED) is one of the major technical divisions under this discipline. The division was established in 1958 to study the spillways of dams constructed immediately after independence, for irrigation, generation of power and flood control. Under this division, 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, sluices and outlets, tunnels, and tailrace tunnels/channels. The studies are carried out with the help of physical and mathematical models.

SED division has played major role in optimizing the spillway design of many projects of National and International importance. Few major important projects are Sardar Sarovar, Bhakra, Salal, Koyna, Ukai, Nathpa Jhakri, Omakareswar, Indiarasagar, Srisailam, Ranjitsagar, Hirakud and many more. Salma dam spillway, Chhukha, Kurichhu, Tala, Punatsangchhu-I and II, Mangdechhu, Kholongchhu, Arun-3, Bekmhe, Khaleelkan dam spillway etc are few international projects studied at SED Division. So far model studies for more than 160 projects have been carried out at CWPRS, Pune.



Physical model studies for spillway & energy dissipator



Simulation of flow over spillway using CFD code



Tail race tunnel system

Tunnel spillway



Two Days Online Training Course on EVOLVING THE HYDRAULIC DESIGN OF RESERVOIR AND APPURTENANT STRUCTURES USING PHYSICAL AND NUMERICAL MODELLING

12-13 January, 2021



Organized by

Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development and Ganga Rejuvenation
Central Water & Power Research Station
Khadakwasla, Pune -411024

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 over spillways and through the water conductor systems and other outlet/ head regulators/ canal etc. is by performing experiments on scaled models. The rapidly varied flows with complex geometry, supercritical velocities due to high heads leading to cavitation damages, intense turbulence causing hydrodynamic forces on the spillway and appurtenant structures are normally investigated by physical models. Numerical modelling using CFD techniques is also emerging as complementary tool.

The present training course is being organized to discuss on various modelling techniques used for hydraulic design of spillways, power intake, water conductor and tail race system. 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 spillways, energy dissipators, power intakes and tail race systems. Several important case studies will also be discussed during the course.

Venue and Date

The online training course will be held between 1000 hrs to 1700 hours from 12^h-13^h January 2021 using online web tool from Central Water & Power Research Station (CWPRS), Khadakwasla, Pune-411024.

Participation

The proposed course is designed for professionals/ practicing and design engineers, post graduate students, academicians and researchers. The nomination of the participants may be sent to the programme coordinator latest by 1st January, 2020. The registration fee for this online training course is **NIL**. However, only approved list of participant 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 email (approved email Id's) to organisers along with details as mentioned in the registration form. The link for joining the online training course will be shared to registered participant only. Methods of logging in to the online sessions will be sent by separate emails to the approved participant. For further clarifications kindly contact the organisers.

Registration

The registration fees for this online training course are **NIL**. As the Training Programme is conducting in Online mode there is no restrictions on total number of participants.

Coordinator

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ONLINE Training Course on

EVOLVING THE HYDRAULIC DESIGN OF RESERVOIR AND APPURTENANT STRUCTURES USING PHYSICAL AND NUMERICAL MODELLING

at

**CWPRS, Pune-411024
12-13 January, 2021**

REGISTRATION FORM

Name: _____

Designation: _____

Organisation: _____

Mailing Address: _____

Tel: Off. _____ Mobile _____

Fax: _____

E-mail: _____

Date (Signature of the participant)