



DESIGN OF PIPELINES, PUMPING SYSTEMS AND SURGE ANALYSIS

Course Schedule: 12-14, June 2023



COURSE CONTENT:

Training program on Design of Pipelines, Pumping Systems and Surge Analysis is being organized for engineers involved in pipeline design and construction. Till date 18 such programs were organized at IISc Bangalore with more than 600 participants from water boards, public health engineering, irrigation and rural water supply departments of states, consulting firms (Indian and Foreign), construction companies, pump and valve manufactures. Two exclusive programs were organized for public health department engineers of Rajasthan at Jaipur and Mizoram at Aizwal.

Lecture sessions will cover Estimation of friction losses; computation of pump head; system curve analysis; basic concepts of surge; effect of column separation; parameters influencing surge; interpretation of surge results; types of pipes; design criteria for surge protection; control of surge; surge protection devices; design of air vessel, one way surge tank, stand pipe; locating upsurge control devices like zero velocity valve, surge relief valve, air valve and air cushion valve; control of surge for gravity mains. Transient analysis for circulating water systems. Case studies in water transmission mains, lift irrigation schemes and CW systems.

Computer sessions will cover usage of Surge Analysis Program Version 2 software developed at Department of Civil Engineering, Indian Institute of Science, Bangalore for surge analysis, interpretation of results and design of surge protection systems with examples and data from projects.

Software will be provided for the participants.

Co-ordinating Faculty
Dr. P Raghuvver Rao
Principal Research Scientist
Department of Civil Engineering
Indian Institute of Science

Course Fee per participant:

(includes course material, lunch and refreshments)

Total: Rs.25,000/- (Rs. 21,186/- +18% GST).

Registration Deadline: 2nd June 2023

Registration link:

<https://iisc.online/shortterm/home.html>

Any clarifications regarding payment/ accommodation in campus contact

The Office Supervisor,

CENTRE FOR CONTINUING EDUCATION

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