

**ICOLD 25th Congress / ICOLD 83rd Annual Meeting  
Symposium Hydropower'15**

**25ème Congrès de la CIGB / 83ème Réunion Annuelle de la CIGB  
Symposium Hydropower'15**



**Stavanger 2015**

Dear ICOLD Colleagues and Friends

Trondheim, 28 May 2015

### **Come to Norway - Feel the Power**

The technical program is now finalized and ICOLD would like to welcome you to Stavanger for an inspiring and interesting week full of recent knowledge.

The 1 ½ day international Symposium will focus on dams used for the production of hydroelectric power, which is the main purpose for dam construction in Norway. The detailed program is available on the web page. In between the Symposium and the Congress, several technical tours are still open for participation. The technical tours will visit construction sites and existing dams of varying types and sizes. The rip rap failure test at the Svartevann tour will be used in a recent research project on the stability of downstream slopes of rock fill dams.

The Congress program deals with the four Questions (96-97-98-99) and 186 papers have been submitted to the Congress, from 31 different countries. The detailed program is now being drawn up by the General Reporters, Chairmen and the Session Secretaries and will be available on the web pages for the event.



*from Professor Leif Lia  
VP of ICOLD/NNCOLD  
and member of the  
ICOLD Norway 2015  
local organizing committee*

### **Q96: Innovation and utilization of dams and reservoirs (17 - 18 June)**

Climate change, increasing population, economic growth, solar energy, wind energy, urbanization, bio diversity, the sixth crisis etc. are changing the world, at a rapid pace. Dams can reduce the negative consequences; they can contribute to better conditions in the future. Q96 will give a view of those trends. Selected articles and invited speakers will present views, projects and ideas relevant to all those trends.

### **Q97: Spillways (17 - 18 June)**

Changes in climate, legislation and analytic techniques often result in the need for Adding Discharge Capacity to Existing Spillways. The impacts of enhanced flood safety requirements for spillways are presented. Gated spillways are widely used around the world. Gate Reliability and Impacts will be discussed and incidents and cases studies will be presented. New spillway designs, methods for predicting floods and calculating the risk and reliability have been developed and implemented by practitioners around the globe. These topics will be presented in Types of Spillways: Gated or Un-gated and Uncertainty in Flood Estimation and Impacts on Design. Q97 will present a broad view of all of the aspects involved in spillway design. Speakers will present cases, experiences, new methods and designs. The chairman and general reporter will give their recommendations and conclusions. Sharing this information will lead to increased knowledge of spillways and safer dams.

### **Q98: Embankment dams and tailings dams (18 - 19 June)**

This Question will be presented in four main topics:

#### Innovative design of high rockfill dams

Experience from the construction and operation of real large rock fill dams will be presented and discussed in this session.

#### Internal erosion

One of the three major failure modes for embankment dams is still internal erosion. Mechanisms and monitoring of embankment dams will be highlighted in the discussions and measures to counteract internal erosion will be evaluated.

#### Foundation and intersection between rockfill and concrete wall

Different conditions in the foundations and combinations of different dam types introduce major challenges in the construction of dams. New solutions for the intersection between the rockfill section and the concrete section wall will be presented and discussed in this session.

### Innovative design of tailings dams

The discussions will focus on the planning process, design, construction, monitoring and evaluation of the safety for such dams.

## **Q99: Upgrading and reconstruction of existing dams (18 - 19 June)**

Four subtopics will be discussed:

### Upgrading triggered by operational or environmental considerations

During the lifetime of a dam many things may change. New regulations for environmental issues, new activity downstream of the dam, new safety regulations etc. may come. Advantages and disadvantages have to be compared to find the best solution for the upgrading of the dam.

### Maintenance of reservoir capacity in areas with sedimentation

The discussion will focus mainly on methods and tools for sediment handling.

### Better utilization of the reservoir by extension of the dam height

With better knowledge of the hydrology and the dam behavior and new construction methods, extension of the existing dam can be an interesting solution compared to the construction of a new dam. Case studies will be presented.

### Upgrading of monitoring systems

Upgrading of the monitoring systems can be achieved both by the upgrading of the equipment and by the implementation of new equipment in addition to the existing system. The discussion will focus on new methods for the monitoring of existing dams and the optimization of the systems with regard to new regulations for environmental and safety issues.

## **Overview of General Reporters, Chairmen and Session secretaries for the Questions**

	Question 96	Question 97	Question 98	Question 99
General Reporter	Mr. Luc DEROO (France)	Mr. C.R. DONNELLY (Canada)	Dr. XU Zeiping (China)	Mr. Laurent MOUVET (Switzerland)
Chairman	Prof. Dr. Ignacio ESCUDER-BUENO (Spain)	Prof. A. SCHLEISS (Switzerland)	Mr. J. P. TOURNIER (Canada)	D. BADENHORST (South Africa)
Session Secretary	Siri Stokseth (Norway)	Hilde Marie Kjellesvig (Norway)	Tore Valstad (Norway)	Goranka Grzanic (Norway)

**Remember to register at our website, if you have not done so yet. The latest news about the event can always be found at [www.icoldnorway2015.org](http://www.icoldnorway2015.org).**

**Welcome!**