



LES COMPTES RENDUS
DU DIXIÈME CONGRÈS INTERNATIONAL
DES GRANDS BARRAGES

THE TRANSACTIONS
OF THE TENTH INTERNATIONAL CONGRESS
ON LARGE DAMS



COMMISSION INTERNATIONALE
DES GRANDS BARRAGES

Bureau Central :
20, rue de l'Arcade - Paris-VIII

INTERNATIONAL COMMISSION
ON LARGE DAMS

Central Office :
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**DIXIÈME CONGRÈS INTERNATIONAL
DES GRANDS BARRAGES**

MONTREAL, Canada
1 - 5 juin 1970

**TENTH INTERNATIONAL CONGRESS
ON LARGE DAMS**

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**COMPTES RENDUS
TRANSACTIONS**

**VOLUME III
QUESTION N° 38**

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DIXIÈME CONGRÈS DES GRANDS BARRAGES

Montréal 1970

Question n° 38

TITRE

Contrôle des barrages et des réservoirs en exploitation.

COMMENTAIRES

Les rapports traiteront :

- 1) organisation ;
- 2) méthodes d'observation ;
- 3) inspection et décisions indispensables ;
- 4) résultats ;
- 5) sédimentation ;
- 6) évolutions défavorables à l'aval ;
- 7) problèmes spéciaux liés aux premières mises en eaux et leurs conséquences ;
- 8) modifications biologiques et climatiques ;
- 9) facteurs de sécurité ;
- 10) garanties.

TENTH CONGRESS ON LARGE DAMS

Montreal 1970

Question No. 38

TITLE

Supervision of dams and reservoirs in operation.

COMMENTS

The papers should deal with :

- 1) organisation ;
- 2) methods of observation ;
- 3) inspections and necessary actions ;
- 4) records ;
- 5) sedimentation ;
- 6) downstream degradation ;
- 7) special features and consequences during first impoundings ;
- 8) biological and climatic changes ;
- 9) safety factors ;
- 10) insurance.

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CONTROL OF RESERVOIRS WITH REGARD TO MAINTENANCE AND SAFETY (*)

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SWEDEN

In Sweden almost all important reservoirs are constructed in connection with hydro-electric plants. Private and municipal power companies produce about 55 % of the total power production. In 1968, 48.9 TWh of hydro power were produced. The hydro power generating capacity was, in the same year, 10,610 MW. With a calculated construction-cost of 200 dollars per kW installed, the hydro-electric plants represent a value of about 2,120 million dollars. Private and municipal interests thus represent a value of about 1,200 million dollars in these plants.

In many countries the control of the design, construction and maintenance of reservoirs is regulated by law. The capacity of the spillways with regard to unusual flow and the design and stability of the constructions are thereby controlled.

In Sweden supervision of the reservoirs is normally carried out by the construction departments of the different power companies. The possibility for the different companies of constantly having experts in these questions at hand is, however, rapidly getting smaller due to the successive completion of dambuilding in the different rivers.

During the past few years, too, automatisations and the remote control of the power stations have been introduced to a large extent. If the remote control should fail and none of the staff be at hand to

(*) *La surveillance des réservoirs en relation avec l'entretien et la sécurité.*