

**Penstocks, pressure shafts
& pressure tunnels**

workshop

ICOLD



European Club

European Working Group on Penstocks and Pressure shafts **Workshop**

Milano, 3-4 November 2022

Alfredo Granados
Secretary of the ICOLD European Club



ICOLD European Club

MAIN AIMS:

- Interchange of up-to-date information related to:
 - Design, operation and maintenance and behaviour of dams and reservoirs.
 - Social, environmental and economic aspects of dams and reservoirs.
 - Legislation, standards and practice applied.
- Encourage research on matters of current interest to the members.

MEANS:

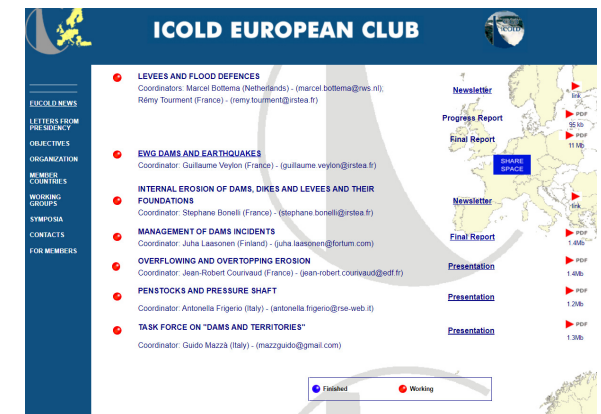
- European Working Groups **7 active working groups**
- European Symposia ➡ **12th Symposium Interlaken, 5-8 September 2023**
- European R&D Projects **ETIP Hydropower**

Milano, 3-4 November 2022



Current European Working Groups

- Dam legislation (G. Ruggeri)
- Levees and flood defences (R. Tourment)
- Dams and earthquakes (G. Veylon)
- Internal erosion of dams (S. Bonelli)
- Overflowing and overtopping erosion (J.R. Courivaud)
- **Penstocks and pressure shafts (A. Frigerio)** ←
- Dams and territories (G. Mazzà)



Contact and information could be found on the ICOLD European Club website:

<https://cnpgb.apambiente.pt/IcoldClub/>

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EWG Penstocks & Pressure shafts

- The EWG work focus on a specific topic.
- Starting point was the work done by ITCOLD.
- Very important element of the hydropower infrastructure.
- Knowledge on materials, calculation methods, incidents, practical experiences are going to be shared and review.

Today's workshop is an important item of the work.

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November 3-4 2022

Online & in presence

Date and time
November 03, 2022
14:00 - 17:00, UTC+1
November 04, 2022
09:00 - 12:00, UTC+1

Location
Centro Congressi FAST
Piazzale G. Amendola 2
20121 Milan
Italy

Registration
Send an email to fast@fast.it by October 15, 2022 allowing the registration form received via email together with this brochure. For Italian engineers, health certificate Professional (CPI) will be available.

organized by

in collaboration with

Workshop program

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Day I - November 03, 2022

09:00 - 14:00
14:00 - 14:30
14:30 - 15:00
15:00 - 15:30
15:30 - 16:00
16:00 - 16:30
16:30 - 17:00
17:00 - 17:30
17:30 - 17:45

Day II - November 04, 2022

09:00 - 09:30
09:30 - 12:00
12:00 - 13:00
13:00 - 14:00

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Buckling produced after a maintenance stop of one of the groups in a Spanish HPP
(Martín-Candilejo et al. 2022)

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Thank you very much for participating!
Enjoy the workshop!