

EXPERTISE AND TECHNICAL CONDITION ASSESSMENT OF HYDROUNITS

Key words: technical expertise of hydrounits, nondestructive testing, dynamic state tests, technical condition assessment

The Szewalski IFFM offers a specialized technical expertise aimed:

- to identify the causes of any kind of failure and destruction of hydraulic machinery
- to assess the technical condition of hydraulic equipment (nondestructive testing of hydrounit structural components, testing of hydrounit dynamic state, etc.)
- to assess the indication accuracy of some of the measuring systems of power plants (eg ultrasonic flowmeters, vibration diagnostic systems)

Technical expertise include explaining issues such as cavitation damage, the destruction caused by water hammer and resonance phenomena, excessive vibration in the bearing nodes of hydrounit and others. Tests performed in the framework of the expertise are conducted in accordance with current standards and norms.

References:

Adamkowski, A.: *Case Study: Lapino Powerplant Penstock Failure*, ASCE Jour. of Hydraulic Engineering, July 2001, Vol.127, No.7, pp. 547-555. – [pdf version](#)

Adamkowski, A., Kiedrowski, T., Steller, J.: *On experience following from commissioning tests of a pump/turbine after runner replacement*, Proc. of Int. Conf. HYDROTURBO'2001, Podbanske, October 9-11, 2001, pp. 305-316. – [pdf version](#)

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