CALL FOR ABSTRACTS

ASME International

The Japan Society of Mechanical Engineers

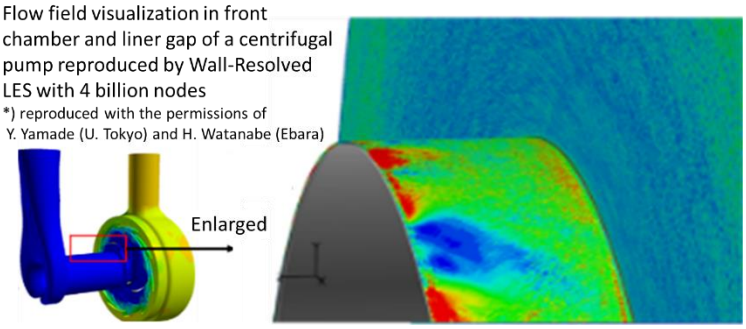
The Korean Society of Mechanical Engineers

14th INTERNATIONAL SYMPOSIUM ON PUMPING MACHINERY

ASME/JSME/KSME
Joint Fluids Engineering Conference
AJK FED2023

July 9 to 13, 2023

Grand Cube Osaka
(Osaka International Convention Center)
Osaka, Japan



PURPOSE

At ASME/JSME/KSME's AJK FED2023, the 14th **INTERNATIONAL SYMPOSIUM ON PUMPING MACHINERY** provides an opportunity for a series of papers on all aspects of pumping and pumping machinery from research and development through design and performance prediction to selection, applications, installations, operation and maintenance. The objective is to encourage further development of pumping technology through the reporting and exchange of information afforded by this joint ASME/JSME/KSME conference. The conference will be held in face-to-face style in Osaka, Japan at the Osaka International Convention Center (Grand Cube Osaka): https://www.gco.co.jp/en/

SCOPE

All categories and sizes of pumps and pumping systems will be addressed, including centrifugal, axial-flow and other kinds of rotodynamic pumps and hydraulic power recovery turbines, as well as rotary and reciprocating positive displacement pumps. Topics around which sessions will be organized are as follows:

1. Applications and Systems: Single- and multistage pumps and pumping systems for general water service; chemical and petrochemical plants; aerospace vehicles; various circulating services; oil field crude (single- and multiphase), pipelines, and refineries; fossil-fuel utility boiler feed, condensate, etc.; nuclear utility coolant, feed, charge, etc.; cryogenic services, including single- and multiphase flows in pumps and hydraulic power recovery turbines; flood and fire control; paper stock, sewage, dredge, and other solids handling applications; integral motor-pump packages; high-speed operation; and micro sizes.

2. Simulation of Flow and Performance: Analysis of steady and unsteady single- and multiphase flows in pumps, inducers, and hydraulic power recovery turbines, including cavitation, gas-liquid, and solid-liquid flows via one-dimensional and multidimensional flow analysis, including quasi-three-dimensional analysis and attendant loss models, CFD methods of flow analysis and performance prediction of individual and combined hydraulic components; pump-system interactions; model testing, including numerical and experimental simulation of sumps; and reliability and life predictions.

3. Experimental Developments: LDV and PIV measurement of flow fields, cavitation, pump-system interactions, seals, magnetic drives, canned motors, integral motor pumps, magnetic and product-lubricated bearing concepts, variable-speed pumps and control systems.

4. Hydraulic-Mechanical Interactions: Rotor-dynamic analysis and related instabilities; unsteady flows, including stall, surge, and pressure pulsations, blade-vane interaction, analysis of pump-system instabilities.

(more)

5. Planning, Evaluation, Operation: Expert systems for diagnostic monitoring and control, commercial evaluation, selection and performance-curve generation, statistical control of production and testing, hydraulic and mechanical data management, operation and maintenance.

6. Design and Manufacturing Processes: Computerized design and manufacturing methods, techniques and procedures for rotodynamic pump impellers, inducers, casings, suction bays, volutes, diffusers, crossovers and return channels; rotary pump rotors and casings; seals and bearings; magnetic bearings; modal, stress and thermal analysis; numerically controlled machining.

SELECTION OF PRESENTATIONS

Acceptance of presentations will be only on the basis of abstract. All authors must submit a one-page abstract, no copy rights. Abstracts should state clearly the objective, results and conclusions. To submit your abstract, please go to the conference website, https://ajk2023-fed.org/, and click on 'Submit Abstract'. First, please download the template of one-page abstract. When you upload your abstract, (1) please create a user account (2) select the topic keyword;

Category: VI. Fluids Engineering Applications and Systems **Topic: Pumping Machinery**

In the period of AJK FED2023, only a collection of abstracts will be distributed on the website.

PROCEEDINGS AND JOURNAL PUBLICATION

For any author who wants to publish a full-length paper, a separate link will be provided later on the conference webpage. Please select one from the followings.

For ASME proceedings of AJK FED 2023, the link will direct the authors to the ASME web tool and ASME will handle the review process of these papers as well as the copyrights. Journal of Fluid Science and Technology by JSME and Journal of Mechanical Science and Technology by KSME will provide the website for the special issue of AJK FED 2023, respectively.

DEADLINES

Abstract submission	February 23rd, 2023
Notification of abstract acceptance	March **, 2023
(Full paper submission and notification of acceptance	TBD)

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