



The Japan Society of Mechanical Engineers



The Korean Society of Mechanical Engineers

10th INTERNATIONAL SYMPOSIUM ON PUMPING MACHINERY

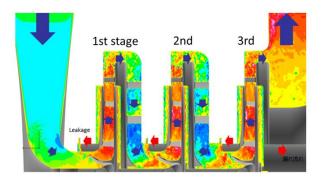
ASME/JSME/KSME

AJK2019 FLUIDS ENGINEERING

SUMMER MEETING

July 28 to August 1, 2019

Hyatt Regency San Francisco, CA, USA



PURPOSE

At ASME/JSME/KSME's AJK2019, the 10th **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 meeting.

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. <u>Applications and Systems:</u> 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. <u>Simulation of Flow and Performance:</u> 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. <u>Experimental Developments:</u> 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. <u>Hydraulic-Mechanical Interactions:</u> Rotor-dynamic analysis and related instabilities; unsteady flows, including stall, surge, and pressure pulsations, blade-vane interaction, analysis of pump-system instabilities.

ASME/JSME/KSME SYMPOSIUM ON PUMPING MACHINERY - 2019 - CALL FOR PAPERS

- Planning, Evaluation, Operation: Expert systems for diagnostic monitoring and control, commercial evaluation, selection and 5. performance-curve generation, statistical control of production and testing, hydraulic and mechanical data management, operation and maintenance.
- Design and Manufacturing Processes: Computerized design and manufacturing methods, techniques and procedures for 6. 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 PAPERS

Acceptance of presentations will be on the basis of 400 - 650 word abstracts and completed papers. Abstracts should state clearly the objective, results and conclusions. To submit an abstract, please go to https://event.asme.org/AJKFluids, make your account and login as an author. You will be prompted to upload your abstract to the website. Please select

Track: Fluid Application and Systems (FASTC) Symposium/Forum: Topic 3-2 Pumping Machinery Symposium then input the title and abstract of your paper and the authors' information. Papers will be grouped together on a CD/DVD proceedings with other presentations made at this joint Fluids Engineering meeting. The proceedings will be available at the meeting. Papers must conform to ASME standards as published in the Journal of Fluids Engineering.

DEADLINES

Abstract submission	December 4, 2018
Notification of abstract acceptance	December 22, 2018
Submission of full-length draft papers	January 23, 2019
Notification of paper acceptance	February 27, 2019
Submission of ASME Copyright Form (also for JSME, KSME)	April 14, 2019
Final paper submission	April 17, 2019

This symposium is sponsored by the ASME Fluids Engineering Division.

Lead Organizers

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