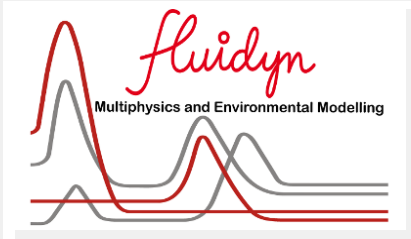


Flow Induced Vibrations - A Comprehensive Exploration of Dynamics in Motion



Upcoming Events:

25th - 27th March 2024
Conference in Beijing, China
Fluidyn is participating in 24th **China International Petroleum & Petrochemical Technology & Equipment Exhibition**.

4th week of March
Training on Fluidyn VENTIL
Free of Cost, 2 day training program on **Fluidyn-VENTIL**. Registration link will be shared soon.

Past Events:

25th January 2024
Webinar on Explosion Modelling
Over 60 participants attended this free On-demand webinar. **Click here** for the recording of the webinar.

January 11th, 2024
Webinar on Revised MoEF guidelines in India.
Webinar to address Strategies to Align with the Revised MoEF Guidelines for Environmental Clearance. Email us to know more.

November 28th -30th, 2023
WNE- World Nuclear Exhibition, Paris
We participated in **WNE 2023**, the world's leading Civil Nuclear Exhibition.

October 10th-13th, 2023
POLLUTEC 2023, LYON
We participated in **Pollutec 2023**, the largest show on solutions for environment. We presented two innovations, **Fluidyn-SENSORMAP** and **Fluidyn-BFC** on this occasion.

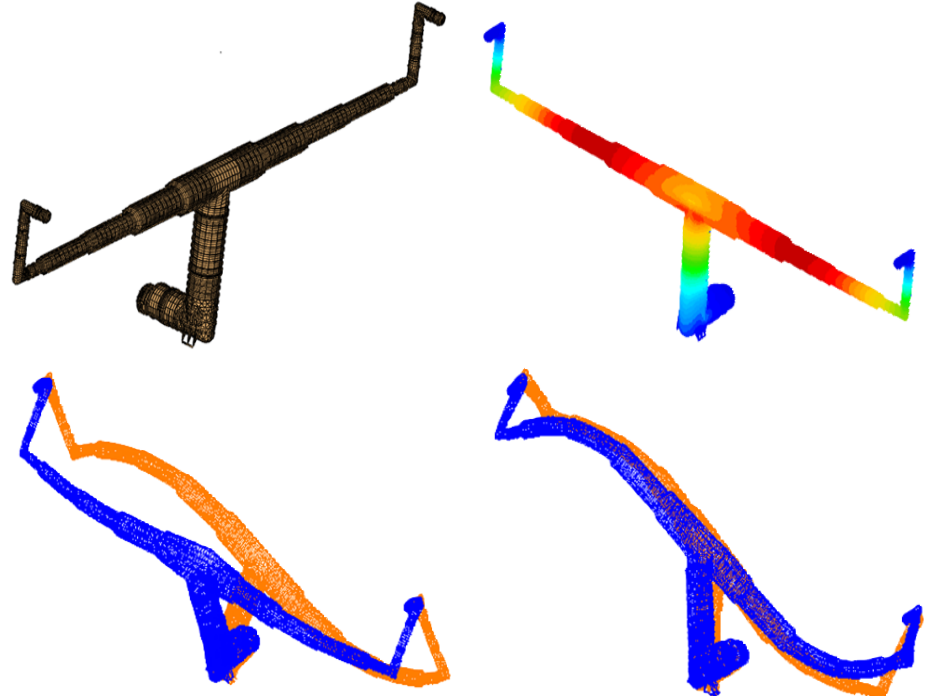
September 21st to 25th, 2023
International Trade Show, Greater Noida, India
We exhibited in **UP International Trade Show 2023**, the biggest Sourcing Show in India.

September 20th, 2023
DRDO Bhawan (Defence Research & Development Organisation), New Delhi
Fluidyn attended a seminar on DGNAI Integrated QA Architecture organised by Indian Navy.

In the dynamic landscape of fluid and structural engineering, understanding the complexities of flow-induced vibrations of piping systems or other slender structures has become a pivotal aspect of equipment integrity. As a leading multi-physics design analysis tool providers, we bring forth our expertise in deciphering the complexities of flow-induced vibrations through our equipment specific simulation softwares - **Fluidyn-MP FSI** ;**Fluidyn-PIPE**.

This spans from predicting aero-elastic behaviour of valves, pumps, flow control surfaces preventing flutter to the damping of vibrations of bridges, airborne objects, blades of rotating machines etc. Our customised/equipment specific softwares allow a design engineer to do advanced analysis of flow-induced vibrations in ducts and pipelines of condensers, blowers pumps. etc.

Furthermore, **Fluidyn-MP FSI** can also perform shock-load structural nonlinear transient response analysis due to explosions, impact etc. to mitigate the consequences in case of such off-design accidental scenario. It provides comprehensive insights, enabling engineers & designers to foresee safety, and equipment life threatening operating conditions of their systems.



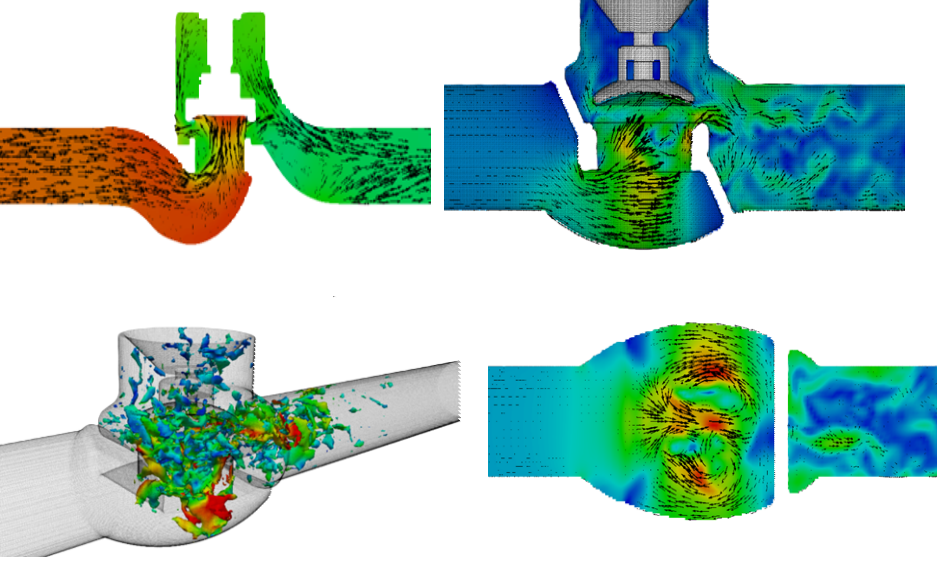
Mode shapes of air-cooled condenser predicted by Fluidyn-MP

Fluidyn-PIPE performs coupled simulation of pipe lines having pulsating fluid flow and vibrations, **Fluidyn-MP FSI** performs modelling of Fluid Structure interaction for displacements and deformation as well as structural and thermal-induced stresses. Together they seamlessly perform simulation of large equipment with the pipelines. These distinctive features championed by the Fluidyn team, positions us as global leaders in the field of Flow-Induced Vibration (FIV) analysis

[Read more](#)

Flow-Induced Vibrations in Industrial Valve

Proper design of the valves ensures the correct supply of the fluid to the destination and gives the correct pressures and velocities required for various applications in oil and gas industry, pharmaceutical industries etc. Failure of this may lead to inappropriate/dangerous outcomes like improper fluid mixing, components failure etc. In addition to this, excessive vibrations in the flow lines may cause fatigue fracture in the piping, support structures and welds. To avoid such scenarios, must study the fluid flow while it is interacting with structure and the corresponding structure's response. Using FIV simulations, we may check the safety of the structure for various fluid flow parameters, like density, velocity of the fluid, and dimensions of the pipe etc. Also, we may study the influence of external disturbances on the pipelines during their regular day-to-day operations.



Flow-Induced vibrations in pipelines connected through Industrial valve

Fluidyn signs MoU with Alliance University, Bangalore



Fluidyn has entered into a Memorandum of Understanding (MoU) with Alliance University Bangalore. The MoU aims to foster collaborative engagement in academic and applied research, industrial consultancy, and software development and validation. Under this agreement, Fluidyn will provide academic research versions of its software licenses for UG and PG students. Faculty members will be encouraged to propose projects to industrial and government agencies utilizing Fluidyn software.

CONFERENCES:

ROOMVENT 2024 - The 17th Roomvent conference with theme Healthy Air Together.

April 22 - 25, 2024 at Stockholm, Sweden

Fluidyn will be presenting the below three abstracts at this conference:

Abstract 1: User comfort in a laboratory assessed though CFD simulation. (With ORANO Projets).

Abstract 2: Performance assessment & improvement of mixing in ventilation outlets using CFD Simulation.(With ORANO Projets).

Abstract 3: Effect of Aerosols on Hazardous Species Dispersion.

HARMO22 - The 22nd international Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes - June 10-14, 2024 at Estonia.

We are participating and presenting our abstracts at this conference.

Abstract 1: Calculating high resolution CO₂ emission maps at city scales and in timescales needed for net zero emissions targets using data inversion modelling (With EVERIMPACT).

Abstract 2: Application of CFD modelling for the performance of mitigation solution and impact reduction on landfill in windy environment



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