PRODUCT SHEET

DRG
Dynaflow Research Group

BOSfluids®

Surge analysis tool of choice

FEATURES

- Steady state analysis
- Transient flow analysis
- Cavitation and vapor pockets
- Equipment database
- Material database (steel, GRE, fluids)
- Transient upset scenarios
- 3D Intuitive user interface
- 3D piping modeling
- Coupling with pipe stress software
- CAESAR II® export
- 2D plots of pressures and flow rates
- 3D visualisation

APPLICATIONS

- Water hammer events
- Cooling water systems
- Firewater systems
- Deluge systems
- Potable drinking water systems
- Buried and above ground piping
- Filling of piping systems
- Offshore systems
- Gas and LNG

BOSfluids® from DRG is an interactive computer simulation package that lets the user calculate steady state and transient flow in liquid or gas carrying piping systems. The software package analyses fluid transients and computes the forces, pressures, flow rates and velocities experienced in the piping system with engineering accuracy.

WATER HAMMER AND PRESSURE SURGES

Common problems in the Oil & Gas, Chemical, Power and Water industry can be addressed related to water hammer and pressure surges that are caused by transient events like valve closure or pump trips. These scenarios are often encountered when evaluating the integrity of jetty on- and off-loading systems, (deluge) fire water systems, cooling water systems and oil transportation lines. The software BOSfluids uses a clear and detailed 3D interface designed for strong interaction with frequently used Oil & Gas pipe stress software packages.

More than 30 years of experience with Oil & Gas problems has been incorporated in BOSfluids and it is being continuously updated based on real world problems to improve the simulation capabilities.

INTERFACE WITH CAESAR II®

The software BOSfluids simplifies the way both static and transient flow analyses of gas and liquids in pipe systems are performed. It analyzes fluid transients and relates this information to the forces, pressures, flow rates and velocities in the piping system with engineering accuracy.

The software has a bi-directional interface with Intergraph's pipe stress analysis software CAESAR II®, eliminating redundant work processes and thereby improving the quality of both pipe stress and fluid flow calculations.

INTUITIVE 3D USER EXPERIENCE

The BOSfluids user interface streamlines the procedure for input, analysis and post-processing of the piping network. The piping network is created through the user input of nodes and elements that are instantly illustrated in the 3D viewer. The user selects the type of element from the list, (i.e. pipe, valve, pump or surge vessel), and fills the required parameters relating to that element, with the element displayed in the 3D viewer.

The 3D viewer allows the user to visually inspect their piping network whilst it is being created. This assists the user in identifying any potential errors as they are builing the piping network model. Likewise, the user can interact with the 3D viewer by rotating and panning the model, and selecting elements to modify the input parameters.

EXTENSIVE POST-PROCESSING

The fluid flow solution in a piping system can be rather complex. BOSfluids is equiped with extensive visualisation tools to let the user fully understand the results, such as 2D graphs of pressure and flow rates, 3D plots, reports and line graphs.

TECHNICAL SPECIFICATIONS

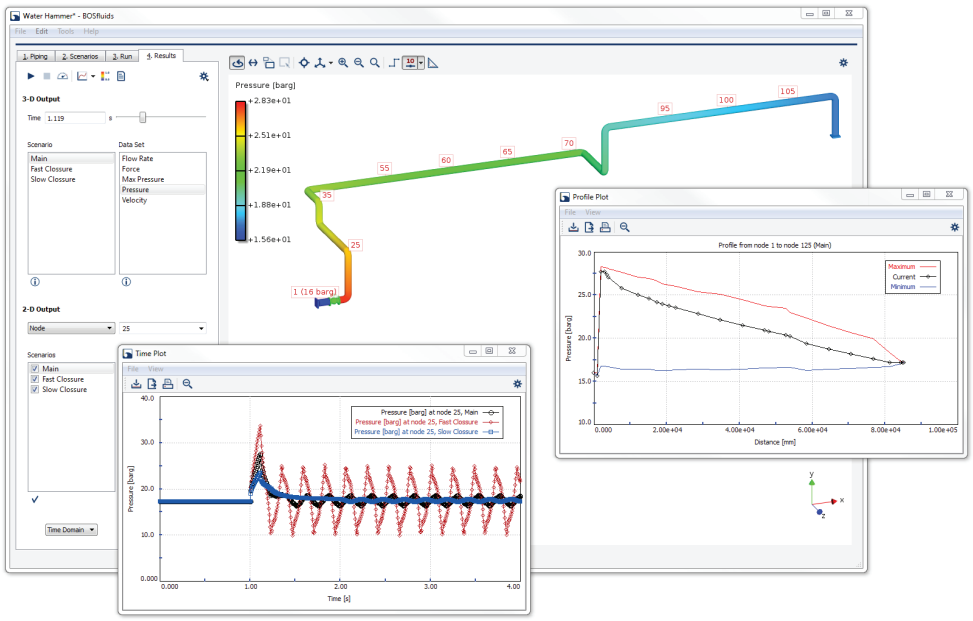
Microsoft Windows®-compatible

APPLICATION AREAS

Aerospace
Architectural
Beverage
Brewing
Building Services
Chemical
Equipment
Food
Offshore
Petrochemical
Pharmaceutical
Piping
Power
Process and Plant Design
Shipbuilding
Steelwork
Water Treatment

INTERGRAPH® PROCESS, POWER & MARINE - OFFICIAL RESELLER

Intergraph Process, Power & Marine (PP&M) is the official reseller for BOSfluids in Europe. Soon to be known as Hexagon Process, Power & Marine, Intergraph PP&M is the leading global provider of engineering software for the design, construction and operation of plants, ships and offshore facilities. Intergraph is the owner and distributor of the pipe stress software CAESAR II®. For more information, visit ppm.intergraph.com.



ABOUT DYNAFLOW RESEARCH GROUP

Dynaflow Research Group (DRG) specializes in the advanced end of the engineering spectrum around the themes of Flow, Vibrations/pulsations, Mechanical and Fiberglass Engineering. In these fields DRG provides engineering consulting services, software and training courses.

The flow experts of DRG solve complex problems related to vibrations, pressure surges and flow assurance using advanced techniques like Computational Fluid Dynamics (CFD). Most often they deal with various multi-disciplinary aspects like the static and dynamic analysis of fluids and gases and of related mechanical components.