

Pipe Support Optimizer (PSO) is a fully integrated stress analysis, support location, and design tool. With this product, users can eliminate the manual trial and error steps to determine optimal support locations. PSO allows, concurrent engineering during the early piping design phase.

Features

- ✓ Finite element modeling
- ✓ Automatic identification of feasible support points
- ✓ Support location and type optimization
- ✓ Detailed stress analysis and code compliance checking.
- ✓ Full 3D interference detection for designed pipe support frame structure and surrounding plant environment
- ✓ Generation of stress isometrics and support BOQs
- ✓ Interface with PDS & PDMS
- ✓ Stress analysis may be completed in batch or single line
- ✓ Common supports located

Deliverables

- ✓ Detailed stress analysis report
- ✓ Pipe support optimization report
- ✓ Stress Isometrics

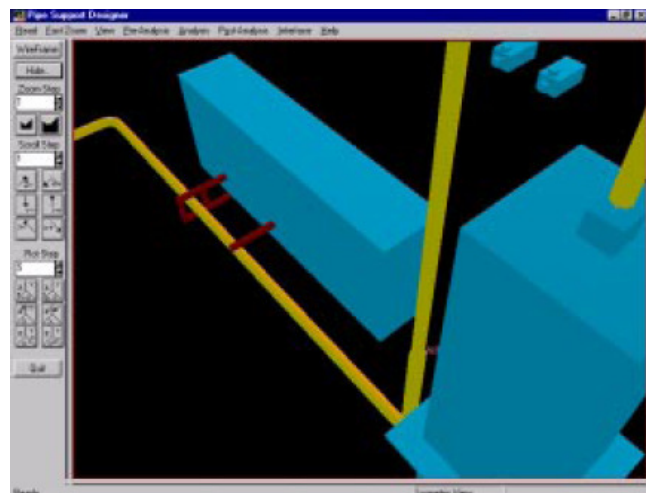
Automatic Input

The program requires the target piping data and relevant plant information (structural steel, equipment, neighboring piping, trays, ducts, walls, floors, etc.) as input. The 3D Piping & Plant model can be read directly from ASD, Pipe Router or imported from Intergraph.s PDS and CadCentre.s PDMS Plant Design Systems.

Feasible Support Locations

PSO automatically identifies feasible pipe support locations according to practical distances from supportable structures. Only feasible support locations are considered for pipe support location optimization. The user can manually edit the feasibility of such locations

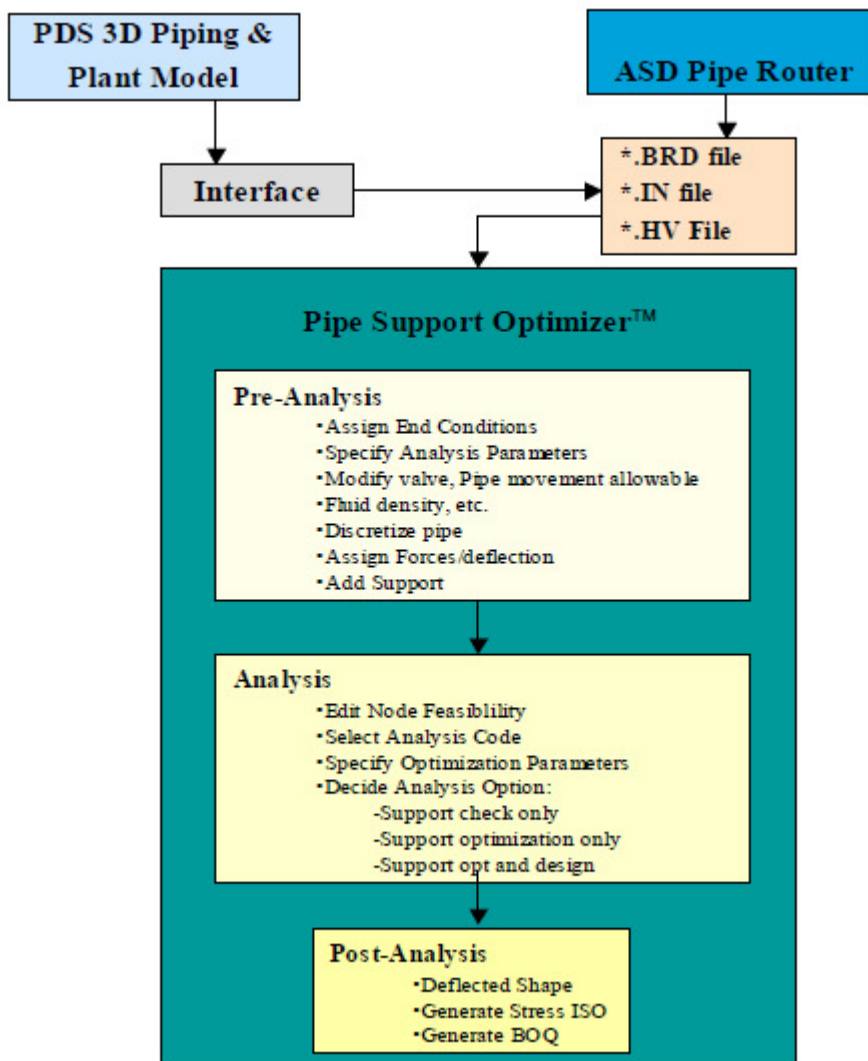
“Pipe Support Optimizer is based on advanced software algorithms that result in optimization and cost reduction....”



Support Design

After the location of the supports are identified and the forces of the supports obtained, the program designs the supports using various standard support frame patterns stored in a software library. The selection of a particular pattern is based on the piping class, the seismic class, the insulation class and the size of the pipe.

Pipe Support Optimizer Workflow



Stress Analysis and Support Optimization

The program optimizes the number of supports, the type of supports and total support cost. Eliminating the need to perform exhaustive trial-and error runs to locate pipe route supports. The user can define various analysis parameters including, concentrated loads at nodes, and allowable pipe movements.

Each stress and piping system is checked for:

- ✓ Stresses along pipe route
- ✓ Nozzle loads
- ✓ Support reaction forces
- ✓ Thermal displacement, weight, and seismic loads
- ✓ Minimized total support costs

Conclusion

ASD Pipe Support Optimizer has been used in production on proposals and conceptual design of projects, globally. Clients have renewed and expanded their usage of these solutions as part of the successful projects. We invite you to see these case studies and see how these products can help you save on your next project.