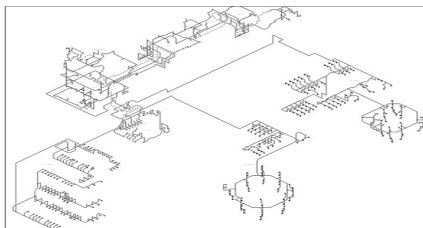


Pipeline Network Design & Solution

With more than 10 years of petrochemical plant services, MDICOT has delivered its skill and expertise in providing practical and transient analysis of pipe networks to more than 6 plants in the petrochemical industry. Most of the solutions provided are advanced in technique, yet practical and cost-effective. The solutions have been proven at the petrochemical plants and continuously fine-tuned to real operating conditions. Our team consists of experienced practitioners and skilled specialist in each analysis of services. Now we are proud to offer these transient analysis solutions to both petrochemical plants and others who wish to pursue the most practical and reliable plant solutions.



What we can do and analyses:

- Model a wide range of system components and surge suppressing devices for both design and operational cases
- Initiate transients based on time or events in the system
- **Prevent Maximum pressure and Vacuum pressure** due to pressure surge by slowing system component changes such as valve closures or pump speed
- Calculate **hydraulic dynamic forces** on pipes for **pipe stress analysis**
- **Compile libraries** of your frequently used piping components and quickly select them from a history list
- System design with operating conditions and scenarios
- **Quickly and easily change system input data**, including valve positions, pump operation, control set points, pressures and more
- Analyze pressure surge effects on systems containing fluids

Recent applications include:

- Ensuring that pressure surges are within design allowable
- **Sizing and locating** surge suppression equipment
- **Determining imbalanced pipe forces** for sizing and design structural supports
- Troubleshooting existing systems to examine the cause of operational problems
- Evaluating the effect of pressure surges due to vapor cavity collapse
- To balance the system in order to **eliminate excess flow** for cooling water systems

Simulation applications include:

- Loading and unloading systems analysis
- Large/Complex cooling water supply systems modelling
- Onshore/Offshore firewater systems surge analysis
- Steam Hammer & Dynamic force analysis
- More details please contact us

Industries Covered:

- Water Plant
- Petrochemical Plant
- Power Plant
- Oil and gas production and Processing Industry

Our services to clients include:

- Consultancy
- Troubleshooting
- System design and audit
- Failure investigation
- Cost/Benefit Analysis
- Assessment of unit performance
- Manpower supply for review the results

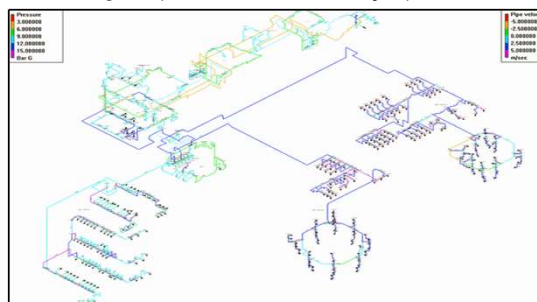
Benefits:

- **Prevent potentially catastrophic effects of pressure surge or dynamic forces** and other undesirable system transients
- **Mitigate possible financial and environmental issues** associated with inadequate systems design or operational procedures
- **Avoid lost revenue resulting from incidents that cause down time**
- Validate the design of safety features
- Understand the transient response of your system
- Know the dynamic interaction of valves, pumps and other components

The Engineering Analysis Team

The team comprises multi-skilled staff backed up by a highly experienced project leader who QAs all the pipeline analysis output of the team.

- Process Engineer (**Transient Analysis**)
- Piping Engineer (**Pipe Stress Analysis**)
- Civil Engineer (**Vibration foundation Analysis**)



The Analysis Tools

MDICOT uses PipeNet Vision Software

PIPENET

LEADING THE WAY IN FLUID FLOW ANALYSIS



PIPENET Transient Module Introduction

1. The PIPENET Transient Module identifies instabilities and flow problems, giving a better understanding of the piping network performance.
2. The PIPENET Transient Module identifies startup problems during design phase. It helps in improving design for safety, reliability and controllability, and therefore reducing downtime.
3. The PIPENET Transient Module can calculate time dependent pipe forces resulting from hydraulic transition. These results can then be exported to software packages, such as CAESAR II and TRIFLEX for piping stress analysis.
4. The PIPENET Transient Module allows the user to output selected variables graphically. The graphs can also be viewed as movies in real time.





PIPENET Transient Module Application

- Loading and unloading systems analysis
- Cooling water systems modelling
- Firewater systems surge analysis

- Generating loads for pipe stress analysis
- Subsea and cross country pipelines
- Process safety

CONTACT US



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