

Application Note

Flow Assurance



Product & Flow Assurance within Heated Pipelines



The implementation of SensorTran's advanced fiber-optic Distributed Temperature Sensing (DTS) solutions represents a significant advancement in the flow management of oil and molten product in pipelines, flow lines, and risers.

Distributed Temperature Sensing provides an affordable, proven, and reliable solution to ensure efficient, cost-effective trace heating and to minimize the need for chemical injection or pigging operations.

Heat distribution and threshold management likewise are easily exhibited by the use of a continuous fiber optic sensor deployed inside or outside the pipeline structure. Heating control and insulation integrity can be monitored with accuracy and precision, offering client confidence that the infrastructure is consistent and operational.

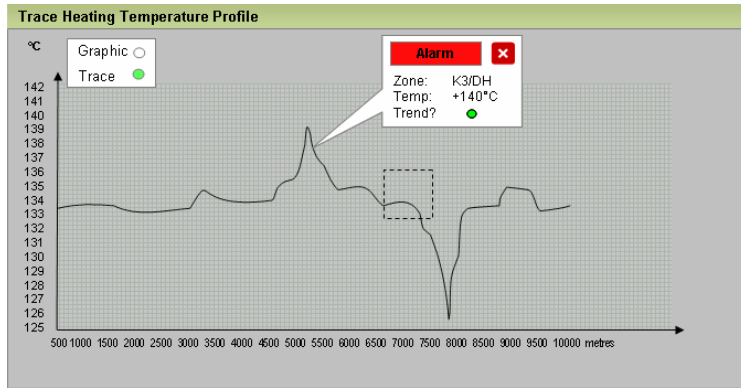
Market acceptance for such technology allows demonstration of existing installations providing peace of mind and industry support.

Better Decisions from Better Data
• provides accurate and dynamic temperature information in real-time for up to 30,000 discrete points for complete flowline monitoring
• provides temperature positional data to allow for identification of local events for exacting temperature control with no prior knowledge of performance characteristics
• provides data for optimization and control of heating systems
• minimizes expensive pigging and chemical injection processes
• identifies and tracks developing and potentially undesirable local temperature events
• provides temperature data for monitoring pipeline structure, heating and insulation integrity
• provides accurate identification of temperature anomalies describing possible hydrate formation zones





To complement the standard DTS Commander Software, SensorTran offers AssetViewer visualization software for monitoring subsea flowlines. This provides the human-machine-interface (HMI) to present the temperature and alarm information to the operator in a clear, precise, and intuitive manner. These visualizations provide an accurate asset mimic.



Typical Temperature Trace

Physical mapping of the optical fiber to the pipeline allows for a graphical representation of temperature to be displayed.

The SensorTran AssetViewer helps determine pipeline condition status and its temperature profile (both as graphical and temperature trace representations) together with trend plots for specific points.

Vulnerable or high maintenance sections can be highlighted or zoomed to allow close scrutiny and analysis.

Multiple data and system health alarms are also displayed.



Asset Map



SENSORTRAN

Optical Conclusions

Contact

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