

Pipeline flow velocity is critical to successful pigging operations. However, the optimal velocity window is not always achieved through normal pipeline flow.

This system, developed by Expro, enables computer-controlled regulation of pipeline flow, allowing real-time adjustments to increase or decrease flow velocity to match the desired pig speed. Leveraging state of the art SONAR technology, a clamp-on meter is installed on the pipeline to continuously provide highly reliable velocity measurements. These real-time measurements feed into the closed-loop control system, which precisely adjusts the flow parameters of the pipeline segment being pigged, ensuring smooth and effective pig runs.



Applications

- Low Flowrate Pipelines
- High Flowrate Pipelines
- No Flowrate Pipelines

Expro Excellence

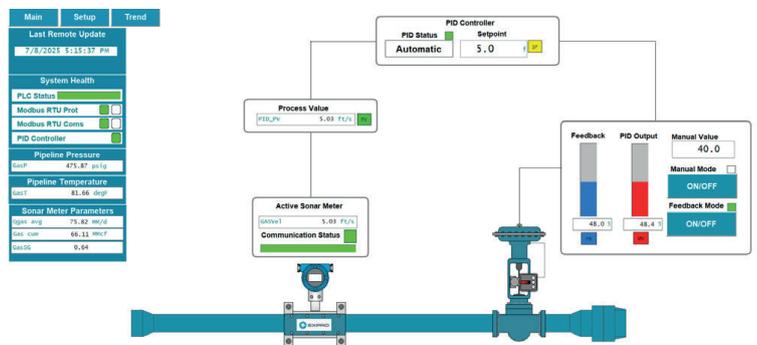
- Ideal, Stable, Consistent Pig Velocities
- Mobile, Bolt-On, Non-Intrusive
- Compatible with Any Pig
- Livestream Data to Desk

Increased

- Inspection Data Quality
- Response Time
- Operational Reliability
- Cleaning Pig Effectiveness

Reduced

- ILI Re-Runs
- Product Loss
- Emissions
- Personnel Exposure
- Manual Operations



Main	Setup	Trend
<p>Last Remote Update: 7/8/2025 5:15:37 PM</p> <p>System Health: PLC Status, Modbus RTU Prot, Modbus RTU Coms, PID Controller</p> <p>Pipeline Pressure: 475.87 psig</p> <p>Pipeline Temperature: 81.66 degF</p> <p>Sonar Meter Parameters: 5.03 FT/S</p>		
<p>PID Controller Setup</p> <p>Setpoint: 5.0, Process Value: 5.0 FT/S</p> <p>Process Value High Limit: 100.0, Process Value Low Limit: 0.0</p> <p>Output Value High Limit: 100.0, Output Value Low Limit: 0.0</p> <p>Manual Value: 40.0</p> <p>Manual Mode: ON/OFF, Feedback Mode: ON/OFF</p> <p>PID Reset, PID Status: Automatic</p>		
<p>PID Tuning</p> <p>Proportional Gain: 0.0850, Derivative: 0.0</p> <p>Integral: 0.8000, Deadband: 0.0</p> <p>Process Value: 5.03 FT/S, PID_PV: 3.41 MPH</p> <p>Active Sonar Meter: Gas Velocity (5.03 FT/S), Volumetric Rate (1.91), Quality (0.99)</p> <p>Flow Data: Gas Flow Rate Ins (76.76 MM/D), Gas Flow Rate Avg (75.82 MM/D), Pipeline Press (475.87 psig), Pipeline Temp (81.66 degF)</p>		