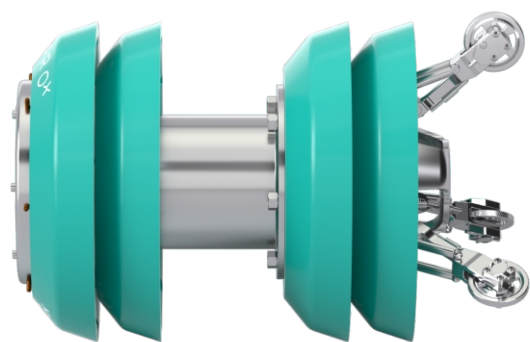
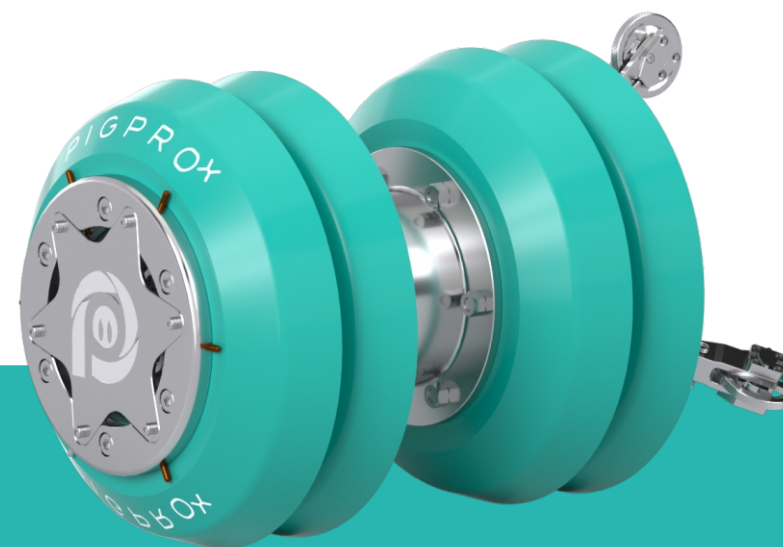


Meter-by-meter thermal & flow data
empower smart operation of heated crude oil pipelines



ThermaPara Intelligent Pig



BETTER PIGPROX BETTER SOLUTION

Meter-by-meter acquisition of temperature, pressure
flow data to support wax simulation, insulation assessment
pipeline parameter optimization

Deyuan Technology Co., Ltd.

Website: www.pigprox.com

Email: info@pigprox.com

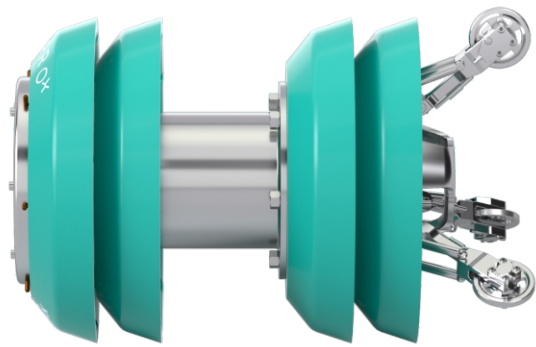
Tel: +86 28 8531 3153

Address: Rm 1801, Unit A, Zhonghang International Exchange Center,
777 North Yizhou Street, High-Tech Zone, Chengdu, China

Deyuan Technology Co., Ltd.

ThermaPara Product Overview

Designed exclusively for hot crude oil transmission pipelines, PIGPROX ThermaPara continuously collects full-line thermal and flow parameters. Combined with thermal and wax precipitation simulation models, it realizes wax risk assessment, insulation failure localization and flow condition analysis. The measured data helps optimize heating, pumping and maintenance plans, reducing energy consumption and eliminating potential pipeline hazards for stable, low-cost pipeline operation.



PIGPROX[×] ThermaPara Intelligent Pig

Features & Benefits

- 01

Wax precipitation assessment
Simulates wax thickness and distribution along the pipeline, identifies high-risk wax deposition areas, and supports pigging and wax-control planning.
- 02

Insulation failure localization
Compare measured operating data with thermal models to locate insulation damage, aging, water ingress, and abnormal heat-loss sections.
- 03

Process optimization
Supports optimization of heating, pumping, flow rate, pipeline design and maintenance strategies to reduce energy consumption and improve safe operations.

Application

- 01

Operation monitoring, energy analysis and risk prediction for long-distance heated crude oil pipelines
- 02

Insulation assessment, aging renovation and energy-saving upgrades for in-service crude oil pipelines
- 03

Wax precipitation analysis, pigging optimization and transportation parameter adjustment
- 04

Numerical simulation, transportation scheme optimization and design parameter verification for new pipelines

Technical Specifications

Item	PIGPROX ThermaPara Intelligent Pig
Diameter	4" to 56"
Medium	Crude oil and refined oil
Compatible PIG Trap	Standard PIG trap, PIG valve, short spool, temporary launcher & receiver
Bend Passability	≥ 1.5D
Deformation Passability	≤ 20% OD single-dent deformation
Startup Differential Pressure	≥ 0.1 MPa (≥ 14.5 psi)
Operating Speed	0.1 – 5 m/s (0.33 – 16.4 ft/s)
Operating Temperature	–20 to 80 (–4 to 176); Customization available for higher temperature ranges
Operating Pressure	≤ 10 MPa (≤ 1,450 psi); Customization available for pressures above 10 MPa (≤ 1,450 psi)
Battery Duration	Standard: 100h; Longer duration battery available upon request
Detection Parameters	Temperature, pressure, flow velocity

Sizing Accuracy

Temperature	± 0.2° C (± 0.36° F)
Pressure	± 0.05 MPa (± 7.25 psi)
Flow Velocity	± 0.1 m/s (± 0.33 ft/s)