



Remote robotic inspection of pipelines, confined spaces, and submerged environments.

Deeptech born in the Business Incubator of COPPE/UFRJ. Modular robotic platforms, with integrated NDT sensors, which remove people from risk areas and deliver reliable data.

3.200+
km inspected

8
Sectors served

Zero
Accidents in operation



SANEP · Urban Infrastructure, 2024

01 CRAWLERS

Remote visual inspection (RVI) of pipelines, galleries, tanks, and confined spaces.

Ø4-100"
Diameters

Up to 1000m
of umbilical

50 m
submersible

- Full HD and 4K PTZ cameras, 12x optical zoom
- Self-centering lifting platform
- Batteries for up to 5 h; mobilization in 2 cases
- Distance encoder and inertial navigation (IMU)
- LIDAR, laser and ultrasound; digital twin of the asset
- Welds, coatings, valves and internal corrosion

References: SANEP · Samarco · Anglo American · CEMIG



Petrobras P-52 · hull side, 2025

02 MAGNETIC ROBOT

645 MAG, winner of Petrobras CSPI 2023: hulls, FPSOs, tanks and metal structures.

0.1 mm
UT accuracy

4.5 kg
The payload

50 m
submersible

- Patented magnetic wheels: adhesion on up to 2.5 cm of paint, debris and barnacles
- Ultrasonic thickness (Cygnus) and electrochemical potential
- 4K Pan/Zoom cameras; batteries for up to 5 h
- Plug & play, LIDAR and laser sonar
- VAC (tank cleaning) and hydro jetting versions up to 4,200 psi

References: Petrobras: P-52 · REPLAN · CENPES



ROV Pivot · Total, 2023

03 ROVs

Underwater inspection of rivers, dams, reservoirs, pipelines and offshore.

305 m
Depth

3 knots
current

4K
Photos and video

- Photon, Pivot, Revolution and Spectra (1,000 m)
- Dead Reckoning (IMU + DVL), without USBL
- UT, cathodic protection, sonar, laser and photogrammetry
- Turbidity filter, cleaning and hydroblasting
- Up to 700 m umbilical; replaces divers
- Real-time video and full recording

References: MODEC · CEMIG · TotalEnergies



Vibra Energia · Release, 2024

04 PIPERS®

In-line inspection and leak detection in non-piggable pipelines.

Ø3-70"
Pipelines

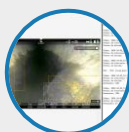
150 mL/min
Lower leakage

3,200+ km
inspected

- Ø1.5", Ø2.2" and Ø2.8" balls; emergency use
- Operates with pipeline under load, without stopping production
- Liquids and gases, up to 200 bar and 100 °C
- Leaks, corrosion (MFD) and cracks by SCC
- Air pockets, deposits and clandestine derivatives
- 24-hour recording; inertial tracing via pig

References: Transpetro · Vibra · Brava · Rio+ Sanitation

COMPLEMENTARY SOLUTIONS



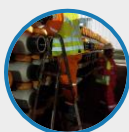
Orion Eye®

AI that detects anomalies and generates the report: from 6 hours to 1 hour of analysis.



Cameras & Reels

Submersible PTZ cameras from 30 to 2,000 m and motorized reels up to 2,100 m.



Metrology OMS

Laser measurement of tube ends (0.05 mm), fit-up and welds.



Consulting and training

Pipeline integrity programs (PIM), procedures and training in robotics.

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