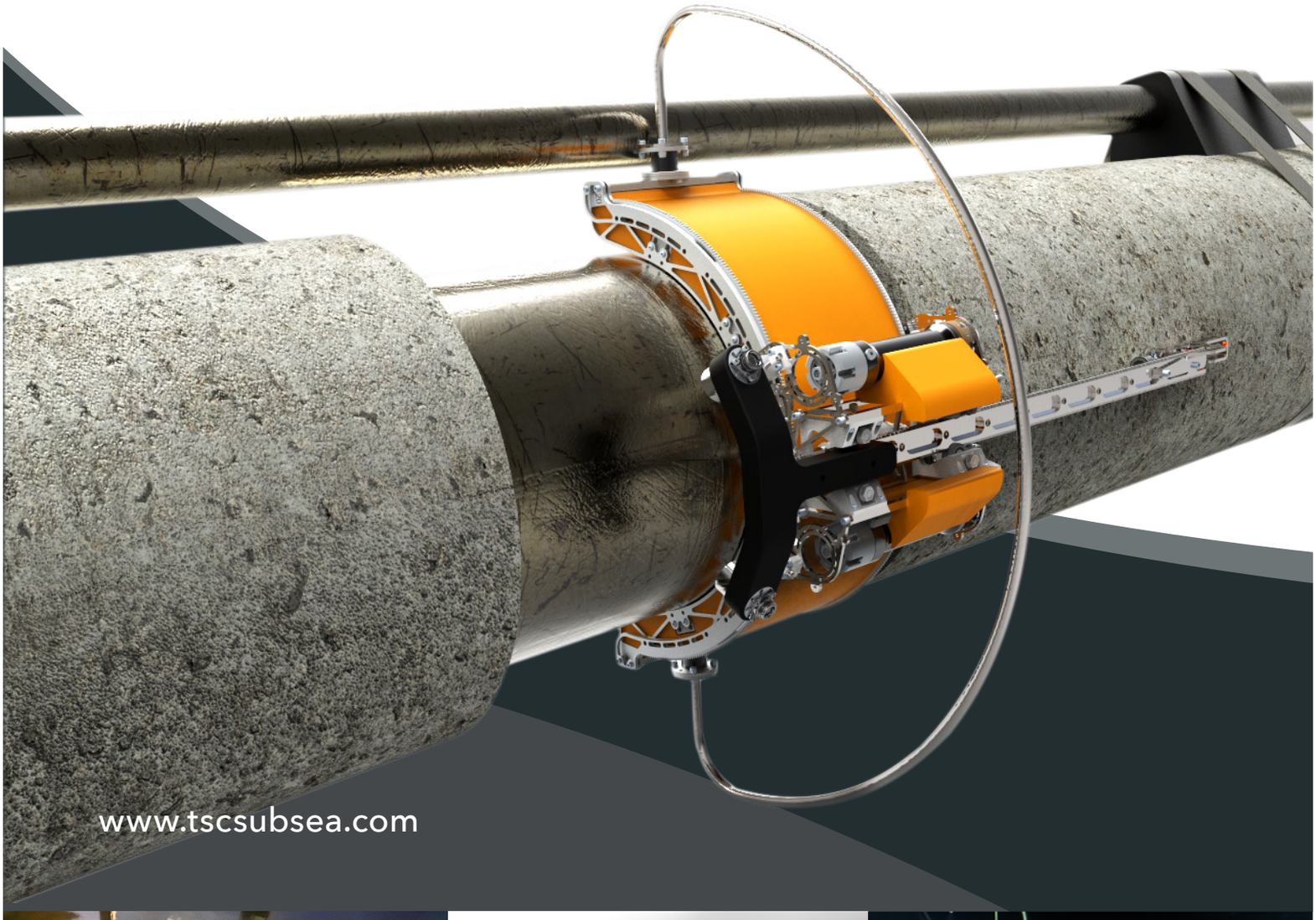
TSC SUBSEA

ARTEMIS®
vCompact

Acoustic Resonance Technology External Measurement Inspection System version Compact.



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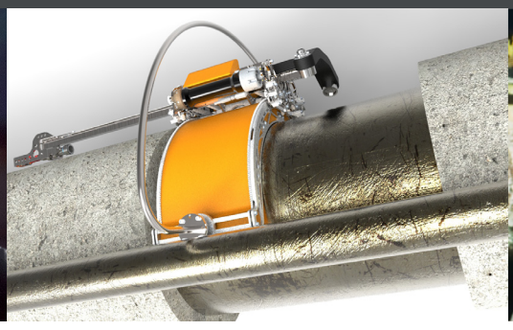
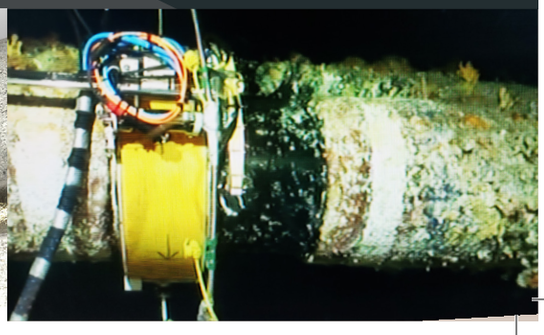




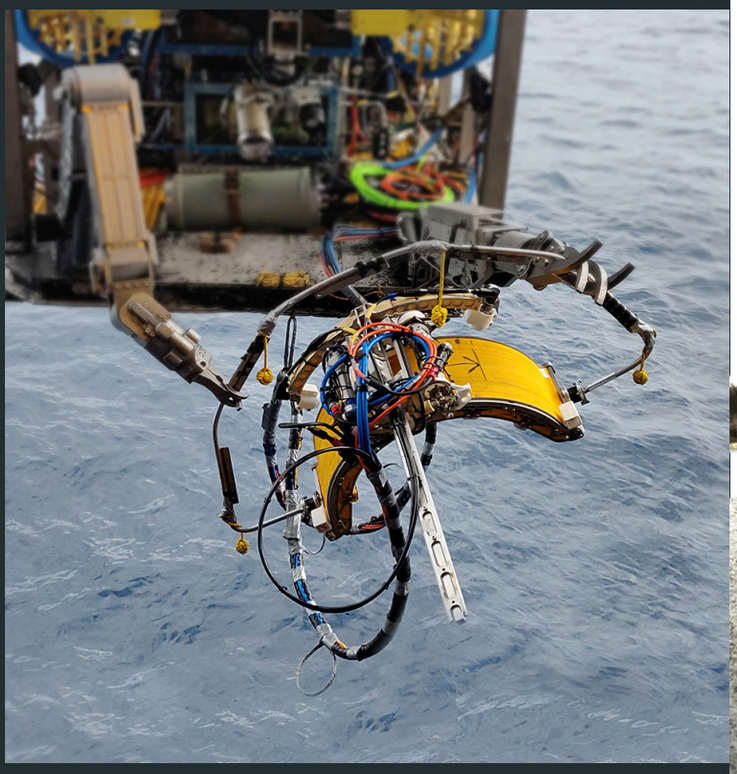
ARTEMIS®vCompact

Compact version remotely-deployed advance inspection system providing high-resolution metal loss results safely and efficiently

Making high-resolution wall thickness measurement possible through thick coating.

The ARTEMIS® vCompact has been designed, developed, and built by TSC Subsea's engineers to work in tandem with Inspection and Work Class ROV's for the remote inspection of pipelines and structures. Combining Acoustic Resonance Technology (ART), the only high-resolution inspection technology that penetrates and inspects through thick subsea coatings, with a lightweight high-precision scanner, ensures high accuracy wall thickness measurements and corrosion mapping. The ideal solution for tight access inspection without the need for coating removal.

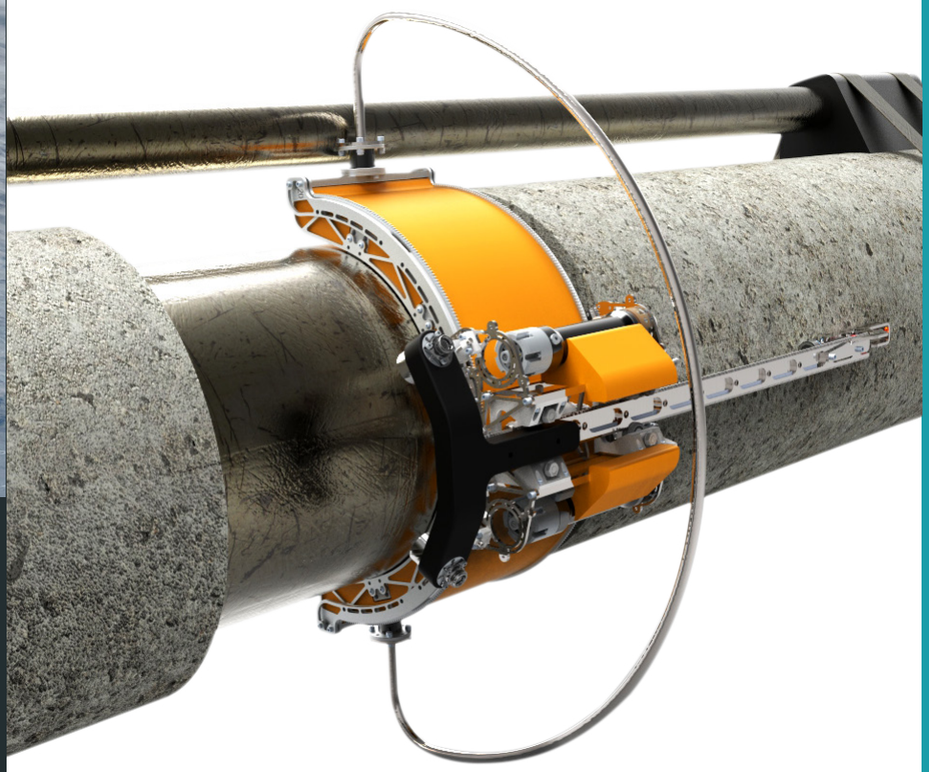
Strong magnetic feet enable the scanner to be securely fixed in position. Once delivered the ROV detaches from the scanner and stands off avoiding the need to hold station accurately for long periods. The ARTEMIS® vCompact is tolerant of swell and currents, making it ideal for splash zone and tight access areas. The scanner is powered and controlled through the ROV umbilical, requiring TCP-IP communication and 24V power. Cleaning of the surface needs to be to SA1 standard on the inspection area and on the scanner landing zone. Brace and pipe diameters in the range 89mm (3") - 3,000mm (118") can be accommodated. The scanner can also be configured to successfully tackle tight access areas around conductor guides and gusset/stiffener plates.



- ✓ **Reliable high accuracy results**
- ✓ **Cost efficient and improves safety**
- ✓ **Ideal for splash zone and tight access areas**

DEPLOYMENT/PROBE CONTROL

The scanner incorporates TSC Subsea's unique teach and learn technology, which allows the probe to accurately follow the area to be inspected. The probe is held in contact with the inspection surface using passive compliance, which ensures correct alignment with the inspection surface during inspection. Adjustments of position can be made in both parallel and transverse directions, allowing full coverage of the area to be inspected.



FEATURES

- ✓ Robust design aids ease of handling on deck and integration with ROV
- ✓ Versatile design for axial and circumferential measurements
- ✓ Designed for deployment on a range of diameters and inspection with latest Acoustic Resonance Technology (ART)
- ✓ Provides direct quantitative wall thickness measurement with highly accurate depth sizing (± 0.2mm)
- ✓ X and Y spatial resolution of 3mm pitch
- ✓ Instant data capture for audit and comparison purposes
- ✓ Dedicated control software to follow complex geometries
- ✓ Highly tolerant to marine growth and requires limited surface preparation such as HP jetting and brushing
- ✓ Buoyancy blocks fitted to reduce submerged weight for improved ROV manipulation
- ✓ The only high-resolution inspection technology that can penetrate thick subsea coating eliminating the need for coating removal

ARTEMIS®vCompact SPECIFICATIONS

Item	Specification	Comment
Depth rating	3000 meters	
Weight in air	35 kg	Cameras & other tooling excluded
Weight in sea water	16.0 kg	Buoyancy is depth specific
Diameters	89mm (3”) - 3,000mm (118”)	Frame modification could be needed outside these diameters
Nominal wall thickness range	6 – 75 mm (0.23”- 2.95”)	No real limit in thickness.
Remote operated vehicle options	Inspection Class / Work Class	
*Electrical interface	90VAC to 264VAC / 47-63Hz / 127-370VDC	5-meter-long pig tail
*Communications interface	Oil filled pressure balanced pig tail with single mode fiber optic or Copper Ethernet	100mbit Ethernet (CAT 5E) or Fiber optic
Temperature Operating	-20°C to + 45°C (-4°F to +113°F)	Deck and subsea
Minimum data collection step	1 mm radial / 1 mm axial	
Thickness accuracy	+/- 0.2 mm	
Inspection Speed	60mm/s	Example 500mm 360 degrees scan on 4” riser ~15 minutes
Transducer footprint	12-15mm	
Smallest detectable defect	Ø10 mm	For standard tool < 1” polymer coating on pipeline or riser.
Magnetic Attraction (permanent)	300kg	Adjustable to suit application
Inspected coatings	Polymer coatings and epoxies. Coal Tar/Tape/Bitumen wraps/Shrink sleeves. Novolastic and rubber coatings	PP/PE/IMPP/IMPU/SPU Multilayered Canusa/Raychem etc. Typical for jumpers

UK
Davy Avenue
Knowlhill
Milton Keynes MK5 8PB
UNITED KINGDOM

T: +44 (0)1908 317444

NORWAY
Glasskaret 1
5106 Øvre Ervik
Hordaland,
NORWAY

BRAZIL
Av. Republica do Chile 330,
14o andar, Torre Oeste, Centro,
20031-170 –Rio de Janeiro
– RJ, BRAZIL

T: +55 21 3983 1890

US
c/o NDT Global LLC
15500 International Plaza Dr,
Houston, TX 77032,
USA

sales-ts@tscsubsea.com | www.tscsubsea.com

/TSCSubsea /tsc-subsea