

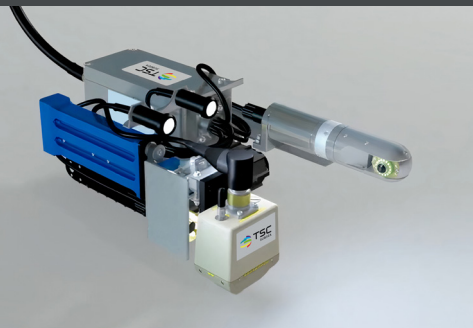
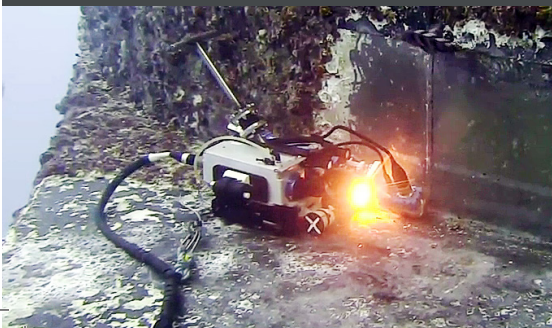


# MagCrawler™

ACFM® Remote Subsea Inspection.



[www.tscsubsea.com](http://www.tscsubsea.com)



# MagCrawler™

**Proven solutions for diverless ACFM® inspection of subsea welds, structures and pipelines.**

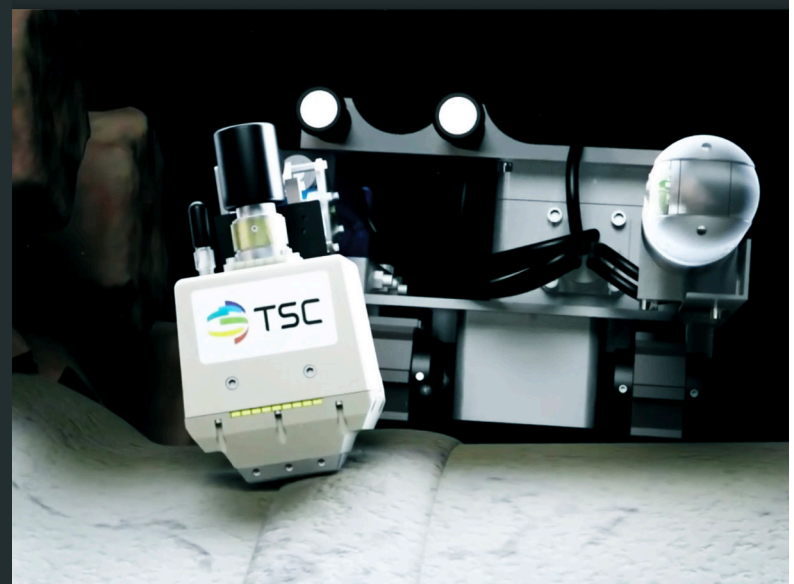
## TSC Subsea Inspection Technology.

The ACFM® MagCrawler™ represents the latest in ACFM® subsea inspection technology. It has been developed specifically to enable the ROV deployment of TSC's ACFM® Array Probes to inspect subsea geometries such as circumferential welds in pipes/tubulars, fillet and full penetration welds in plates and other welds typically found in the subsea energy sector.

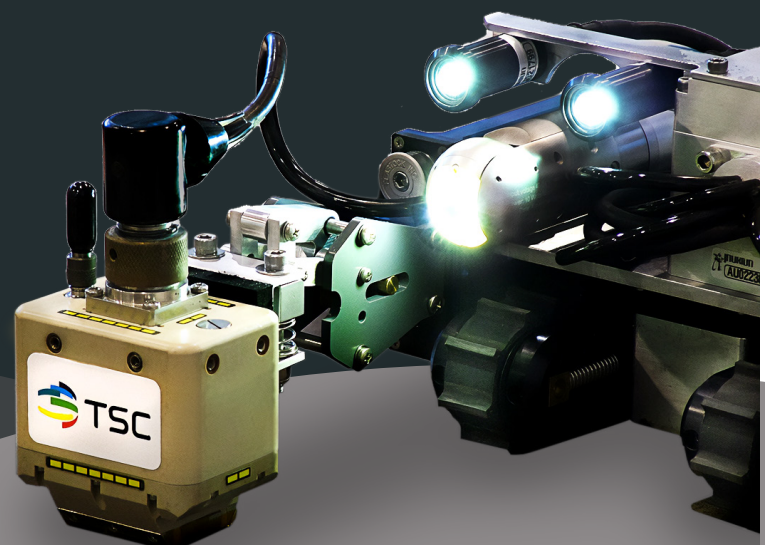
The MagCrawler™ also provides a solution where access to areas are restricted or expensive to reach using divers, such as the splash zone and confined compartments.

The ACFM® MagCrawler™ can be deployed by inspection or work class ROV and is magnetically attached to the inspection surface. The ROV can then release the MagCrawler™, avoiding the need for the ROV to hold station, allowing work in turbulent waters. Crawler traction is achieved by two rubber caterpillar tracks and are easily maneuverable to steer the crawler without damaging the inspection surface.

Typical inspection speed is 30mm/s (1.18ins/s), with a multiple pass inspection being 15 mins/m.



- ✓ **Deployed by inspection or work class ROV**
- ✓ **Ideal for splash zone and tight access areas**
- ✓ **Applications across a range of subsea geometries**



## DEPLOYMENT/PROBE CONTROL

The MagCrawler™ has motorised mechanisms which allow the probe to be deployed accurately over the weld to be inspected. A 360° rotational head allows flange welds to be inspected with full coverage of the weld and the heat affected zone without the need to resurface to reconfigure. The probe is held in contact with the inspection surface using passive compliance, so that the probe is aligned correctly with the inspection surface during operation. Closed loop feedback motor control allows accurate weld tracking and a uniform speed of scan.

Positional adjustments can be made in both longitudinal and transverse directions, which allows full coverage of the area to be inspected.

High quality ACFM® data is captured with the fine motor controls of the crawler. On board cameras provide live visual feedback to verify that full coverage is obtained and ACFM® scan criteria are being met during the scan.

## COMMON APPLICATIONS

- Caisson & Brace Support Structures
- Ship & FPSO Hull Inspection
- Jack-Up unit Spud Can Weld Inspection
- Subsea Pipeline Weld Inspection
- Splash Zone & Restricted Access Areas
- UWILD

## FEATURES

- ✓ Applications across a wide range of subsea geometries.
- ✓ Assorted tooling for varied inspection geometry.
- ✓ On-board 360° rotational head for targeted probe steering.
- ✓ Instant data capture for audit and comparison purposes.
- ✓ Can easily maneuver on diameters greater than 760mm (30 inches).
- ✓ Rated for water depths up to 150m (493ft).
- ✓ Dedicated control software to follow simple weld geometries.
- ✓ Can inspect through paint and other coatings.
- ✓ Tolerant of residual marine growth.
- ✓ Suitable for deployment by many ROV Inspection class - work class.

## MagCrawler™ SPECIFICATIONS

Unit Mass	9.0kg / 19.8lbs	
Unit Weight in Water	7.0kg / 15.4lbs	Cameras & other tooling excluded
Unit Length	450mm	Buoyancy is depth specific
Unit Width	250mm	Frame modification could be needed outside these diameters
Unit Height	190mm	No real limit in thickness.
Depth Rating	150m/15bar	
Brace Diameter Range	30ins (760mm) to flat surfaces	Scope of work specification is required. Work will be planned to ensure access restrictions are overcome.
Storage Temperature	-20 to 60°C / -4 to 150°F	
Operating Temperature	0 to 40°C / 32 to 100°F	
Communications	RS232 38400 Baud, 2 wire & screen RS485 38400 Baud, 2 wire & screen Ethernet 100 Mbps TCP-IP	SIT required to check ROV interfaces. ACFM Instrument is mounted on ROV.
Power	24V, 5A from ROV.	
Maximum ACFM Scan Speed	50 mm/s	

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