ASSET INTEGRITY MANAGEMENT (AIM) SOLUTIONS FOR FLOATING ASSETS

IEV CAPABILITIES STATEMENT

COMBINING DISRUPTIVE TECHNOLOGIES & PROVEN ENGINEERING CAPABILITIES

Established in **1987** and an **ISO9001:2015** and **ISO4500:2018** certified company.
We have served major Global Oil and Gas operator and major contracting companies worldwide for over 35 years.

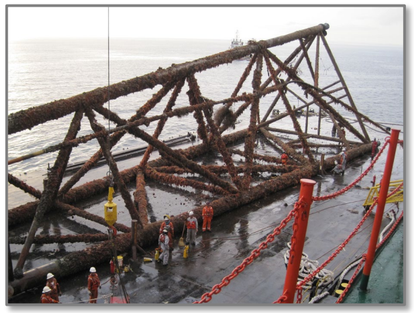
NOTABLE ACHIEVEMENTS

- ✓ **Proprietary technology, MGP** has been installed in over 700 structures worldwide to date.
- ✓ **Installed the first TLP** in Malaysia
- ✓ **Installed the first refurbished oil platform** in Malaysia and delivered 1st oil within 12 months from LOI
- ✓ **Underwater coating:** Applied more than 25,000m2 Alocit coating on 2200 jetty piles from splash zone to underwater in 2017 and continues to protect to date
- ✓ **Repair & Rehabilitation:** Over 50 various Freespan Correction, Diamond Wire Cutting and Structural strengthening repair projects carried out since 2003
- ✓ **Subsea Pipeline Inspection:** Over 10 pipeline inspection projects completed since start of inspection segment in 2020
- ✓ **Decommissioned the first oil platform** in Malaysia
- ✓ **Decommissioned the first FPSO** in Malaysia
- ✓ **Decommissioning :** Completed 19 Decommissioning Studies and removed more than 19 structures in Asia
- ✓ Established a **Centre of Disruptive Technologies** and a **Global Distribution Network** and a resilient company that has survived oil price crash, financial crisis and pandemic.

OUR BUSINESS UNITS

ASSET INTEGRITY MANAGEMENT (AIM)

Offering range of **disruptive technologies** to maintain integrity and extend the life of both offshore and onshore assets.



DECOMMISSIONING (EPRD)

Provision of **complete turnkey decommissioning solutions** ranging from engineering study, planning, removal and disposal.

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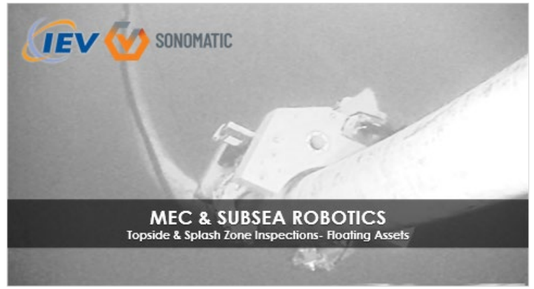
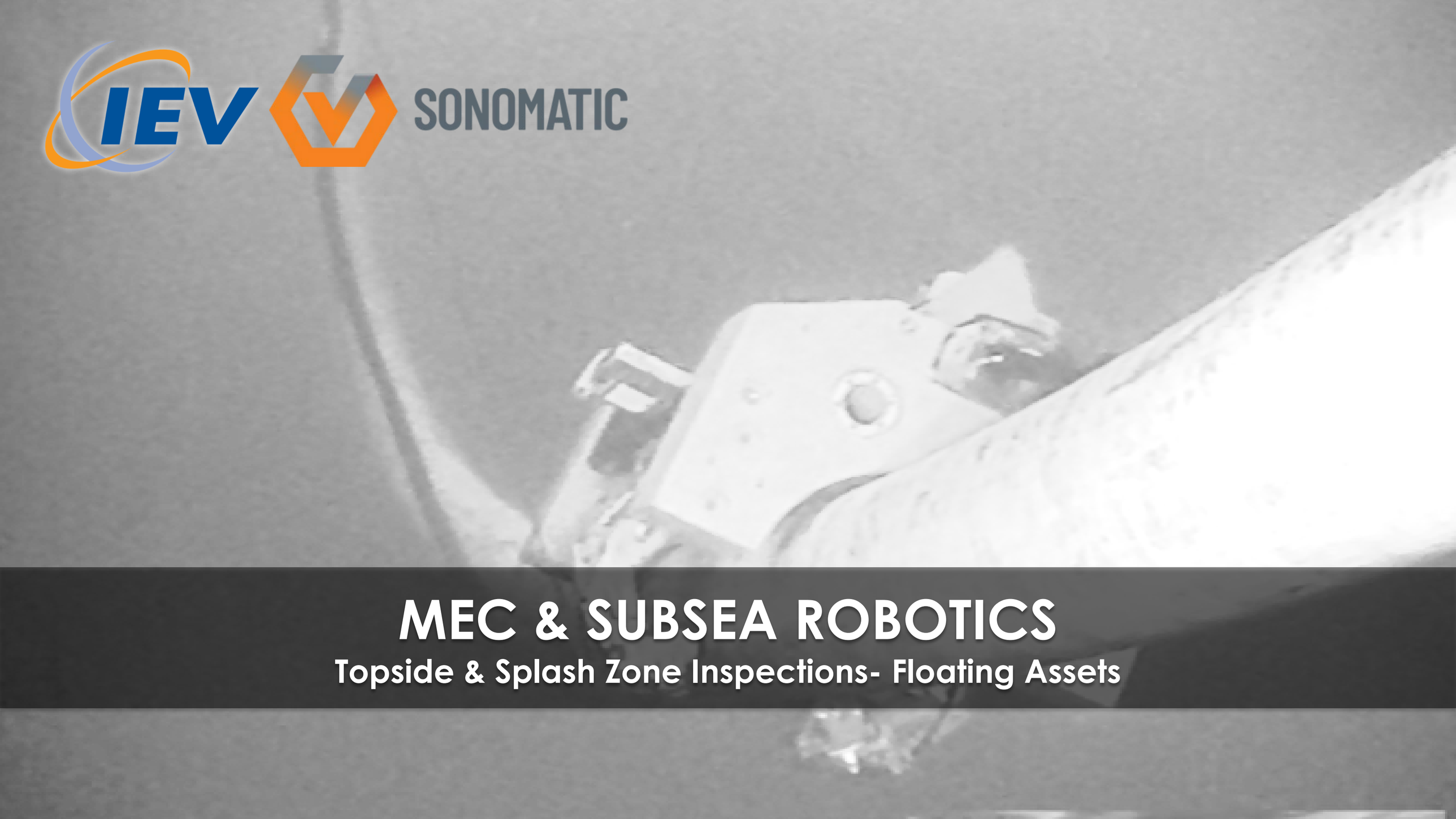
AIM - FLOATING ASSETS - DASHBOARD

ADVANCED INSPECTION



CORROSION CONTROL



MEC & SUBSEA ROBOTICS

Topside & Splash Zone Inspections- Floating Assets

MEC & SUBSEA ROBOTICS: INTRODUCTION

Offering safer operations, operational cost reduction & lower carbon footprint, the robotic crawlers and subsea tooling have been developed and used to carry specific tasks on subsea pipelines, both rigid and flexible risers and structures.

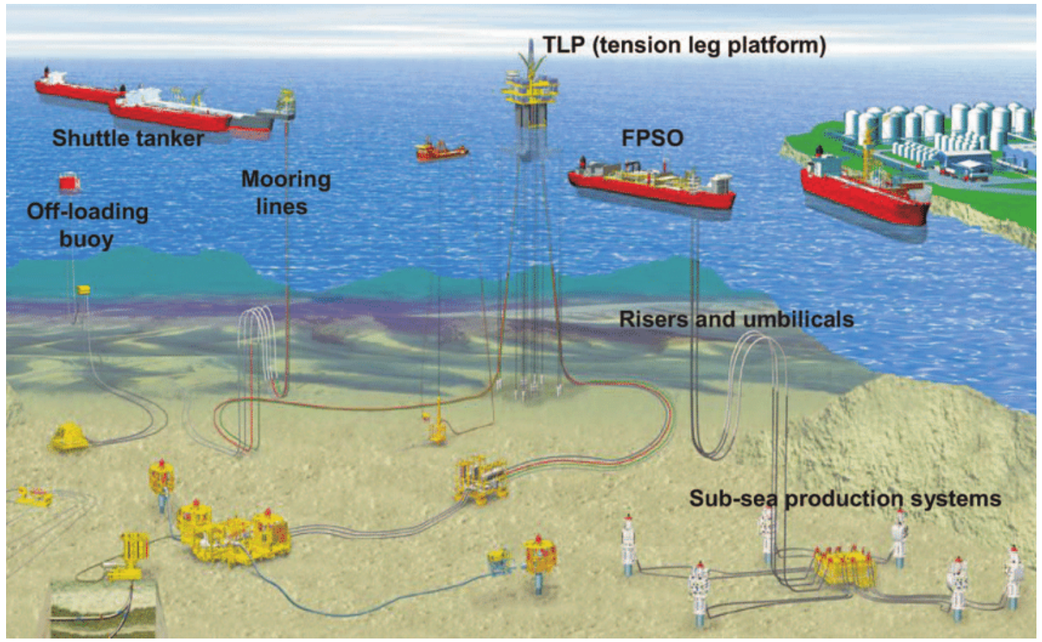
Target Applications

Topside
- Pressure Vessels
- Piping

Splash Zone
- Risers
- Caissons
- Conductors
- Flex Joint
- Fairleads
- Mooring Chains
- Tension Legs
- Hulls
- Cargo and Ballast Tanks
- Spider Buoys

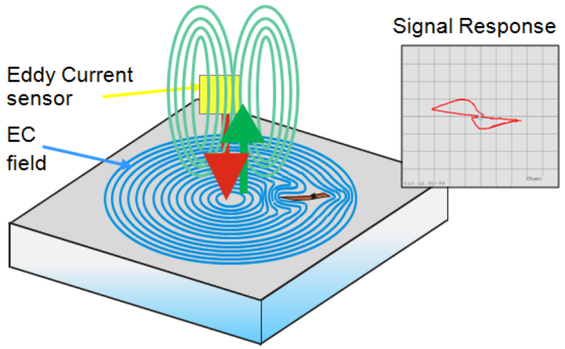
Inspection Tasks

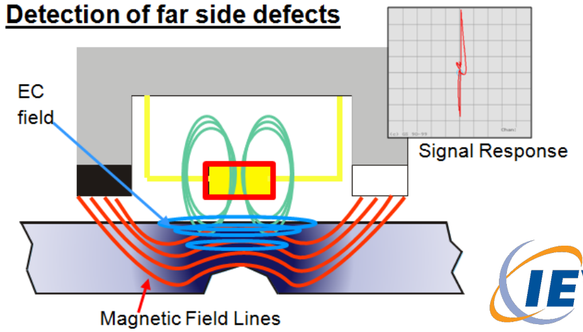
- ✓ Corrosion mapping
- ✓ MIC – Microbiological Corrosion detection
- ✓ CUI – Corrosion Under Insulation detection
- ✓ Insulated and Coated lines Corrosion mapping
- ✓ Caviblaster and HPWJ Cleaning
- ✓ Visual inspection (GVI/CVI)
- ✓ NDT Inspection above/below water
- ✓ Screening and Quantitative Inspection
- ✓ Flexible Risers flooded annulus detection
- ✓ Flexible Riser armor defects mapping
- ✓ Automated Subsea Inspection
- ✓ Bends Inspection
- ✓ Photogrammetry
- ✓ Measurements
- ✓ 3D modeling
- ✓ Life Extension
- ✓ Weld Inspection
- ✓ Critical Girth Weld inspection
- ✓ Tension Leg Girth Weld inspection
- ✓ Flow Assurance
- ✓ Emission Monitoring
- ✓ Oil pollution and emission detection



Magnetic Eddy Current (MEC) Technology

The signal information (amplitude, phase, shape) provides online analyzable details related to **WALL LOSS**, **SIZE OF THE DEFECT** and **POSITION**.





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MEC & SUBSEA ROBOTICS: VALUE PROPOSITION

Offers the following:

- ✓ Platform based solutions
- ✓ Specialised inspection robots
- ✓ Resident vehicles
- ✓ Shared toolbox
- ✓ Rapidly deployable assets
- ✓ Remote operations
- ✓ Combination crawler/ ROV
- ✓ Bespoke inspection technique

- MEC and PECT are **complementary** and **redundant** techniques to increase the accuracy of the detection and **reduce false positive**.
- The MEC technique with its **accuracy and speed is more efficient and covers more area in a shorter time** as compared with conventional radiography.
- MEC is the tool of choice for straight pipe runs. However for complex geometries like pipe bends, PECT technology complements MEC and also provide redundancy.

CARRIERS

- Subsea Robots
- Crawlers
- ROV
- AUV
- USV

PAYLOADS

ACFM – Alternate Currents Field Measurement
EMAT Electro Magnetic Acoustic Transducer
MEC – Magnetic Eddy Current
TOFD – Time of Flight Diffraction
PAUT – Phased Array Ultrasonic Testing
AUT – Automated Ultrasonic Testing
DRS - Dynamic Response Spectroscopy
CT – Computer Tomography
Multiskip Screening

HD Cameras
Photogrammetry Kit
3D Sonar

Caviblaster – Cavitation Blasting
HPWJ – High Pressure Water Jet

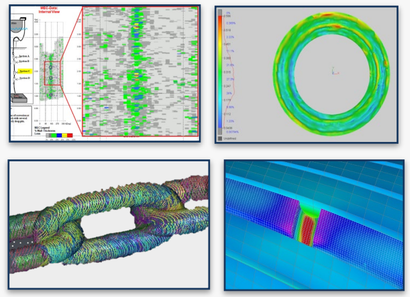
OPERATIONS

- Worldwide Footprint
- R&D
- Engineering
- Project management
- Operation management
- Remote Operations
- Training

DATA

From data to actionable information

- Real Time Info
- Custom software
- Communications
- Custom Reports



	MEC Technology	PECT Technology
Speed	High - as fast scanning (1ft/sec)	Low – as static measurement (2 sec each)
Resolution	Axial: ≥2mm (5/64’’), Circumference : ≥10mm (0.39’’)	General : ≥ 50mm x 50mm (2’’ x 2’’)
Accuracy	Range: +/- 10% (to potential +/- 5%)	Range ≥ +/- 10%
Geometry reach	Straight pipe areas	Straight and bend pipe areas

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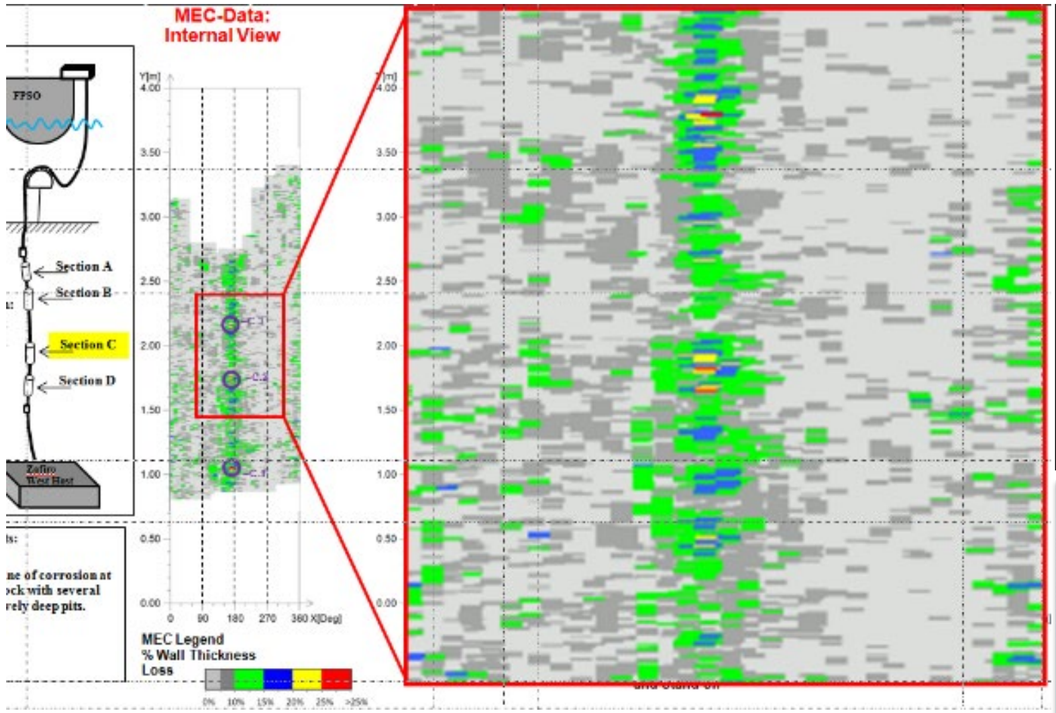
MEC & SUBSEA ROBOTICS: TECHNOLOGY

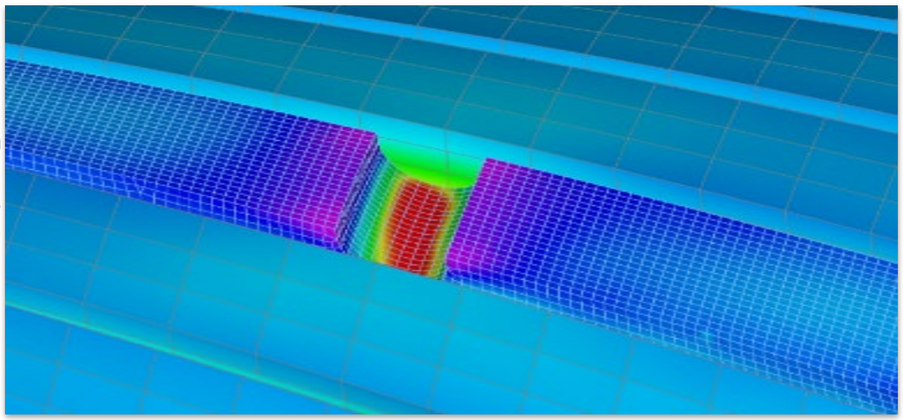
MEC – MAGNETIC EDDY CURRENT

- The technique allows to **scan through coatings**. Its high resolution identifies small volumetric isolated pitting up to general wall loss from inside or outside of the wall.
- The technique **requires little to no preparation** scanning above and below water with high speed and high accuracy.
- Well usable as fast scanning and mapping technique for **larger areas and distances in short time** above and below water.



Displaying c-scan mapping of the **internal** and **external** wall condition **separate** as well as **combined** is possible as well as **individual** defect sizing.

Indication	EL [m]	Orientation [deg]	Length [mm]	Width [mm]	Surface Location	Max. Wall Loss [%]	Description
1	0.80	105	200	60	external	25	
2	-3.20	230	20	20	internal	20	
6	-6.00	170	50	30	internal	40	
7	-6.45	220	30	40	internal	45	
8	-6.70	50	50	50	internal	45	
9	-6.85	220	30	30	internal	50	
10	-6.90	240	25	30	internal	55	



MEC Offers:-

- IN-SERVICE INSPECTIONS
- FAST SCANNING
- INSPECT THROUGH VARIOUS TYPES OF COATINGS
- LOW INSPECTION PREPARATIONS
- HIGH POD - PROBABILITY OF DETECTION
- HIGH ACCURACY
- HIGH SENSITIVITY
- INTERNAL/EXTERNAL DEFECTS DIFFERENTIATION
- DETECTION OF ISOLATED PITS, CORROSION AREAS, CRACKS
- C-SCAN WITH MAPPING
- COST EFFECTIVE

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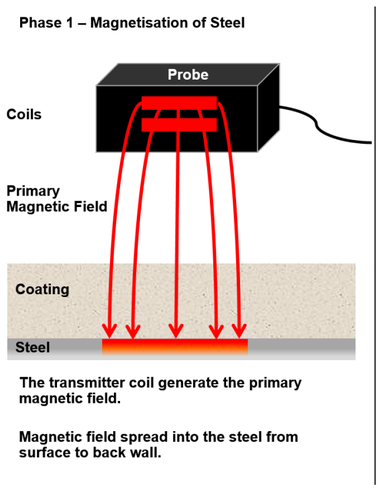
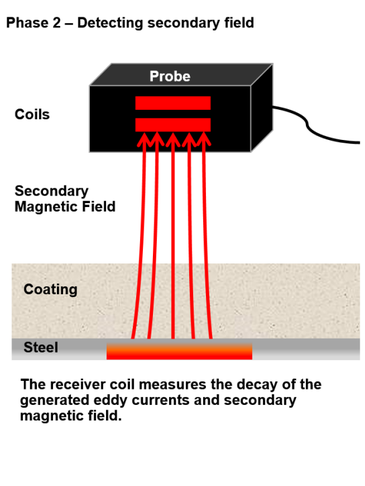
MEC & SUBSEA ROBOTICS: TECHNOLOGY

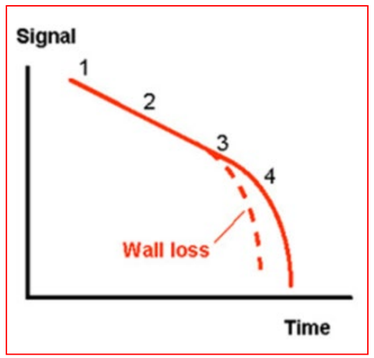
PECT – PULSED EDDY CURRENT TESTING

The Pulsed Eddy Current Technique is a static type electromagnetic measurement technique.

The sensor placed at the point to be inspected (footprint) generates electromagnetic pulses to the steel to be inspected. The pulsed primary field generates an eddy current field in the material which responses with a secondary field. In case of wall loss area larger than 10% than the footprint, the receiver coil measures the decay of the secondary field with a decreased response time which demonstrates wall loss.



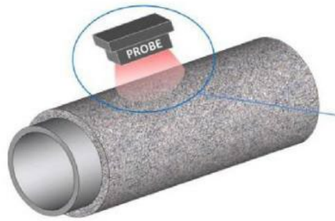


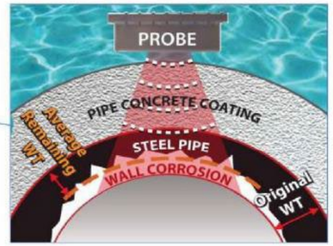


This PEC inspection is capable to be performed through thick coatings or insulations of up to 8”. As an electromagnetic technique it won’t require preparation or coating removal.

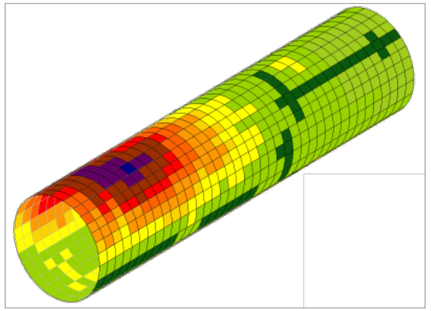
PECT is used on:

- Non-metallic pipe protection (concrete, composite wraps, coatings, and more)
- External corrosion product as blisters
- Corrosion under insulation (CUI)
- Marine growth
- Limited access areas as elbows, supports, valves

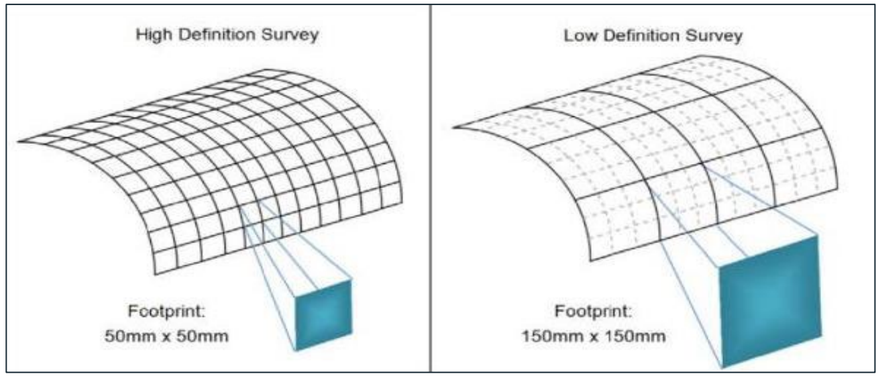




The measurement in the footprint area provides an average wall loss information.



Color coded wall thickness readings are displayed on the laptop during data recording. An Excel file can be produced as well.



Acquisition can be performed in high and low resolution for fast screening.

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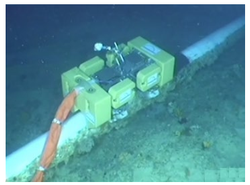
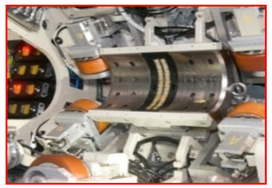
MEC & SUBSEA ROBOTICS: EQUIPMENT

EQUIPMENT

SUBSEA / SPLASH ZONE – MEC COMBI FAMILY

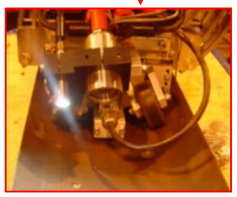
MEC Combi Crawler	MEC MPS200+	MEC-Combi Pipe Crawler V1	MEC-Combi Pipe Crawler V2	MEC – Hug Crawler
				

Core: **MEC** Pole Shoe & Sensor Array
Focus: external/internal corrosion Mapping



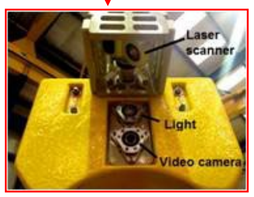
ADD-ON Techniques for MEC-Combi concept

UT Array
Absolute WT Mapping



PEC
Average WT Mapping

Eddy Current Array *Crack Detection*



Subsea Laser *Geometry Scan*

HD Camera *Visual Inspection*

Applications

- Pipe OD : 2” to flat
- Wall Thickness Range : Up to 1 ½ ”
- Coating: Up to ½ ”
- Length Range : Not limited;
- Temperature Range : 200°F / 90°C
- Inspection Coverage : 360° with multiple pass

Typical Performances

- POD >>95%
- Ability to distinguish internal/external defects
- Fast scanning, max speed 90ft/min (30m/min)
- Accuracy typical +/- 10%, (fine tune +/- 5%)
- Smallest Defect Size: Ø 3mm
- Resolution: 2mm axial 10mm circumferential
- Sizing Depth +/- 5% to 10% of nominal Wall Thickness
- Wet/Dry inspection technique; no couplant and no coating removal required
- Capable of online pre-analysis of data with offline final data analysis

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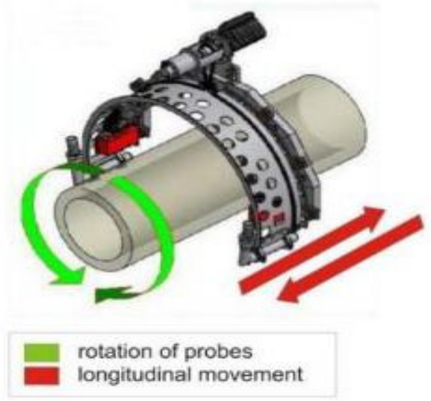
MEC & SUBSEA ROBOTICS: EQUIPMENT

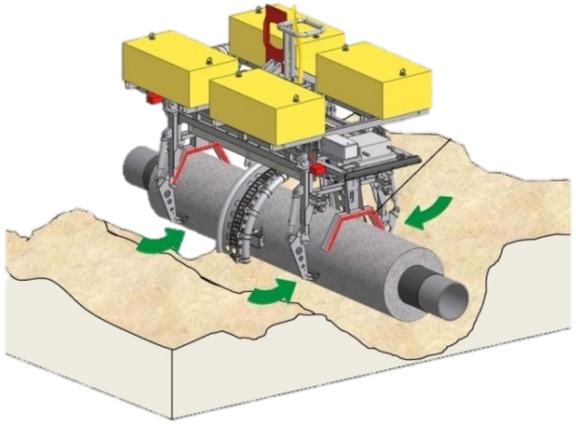
EQUIPMENT

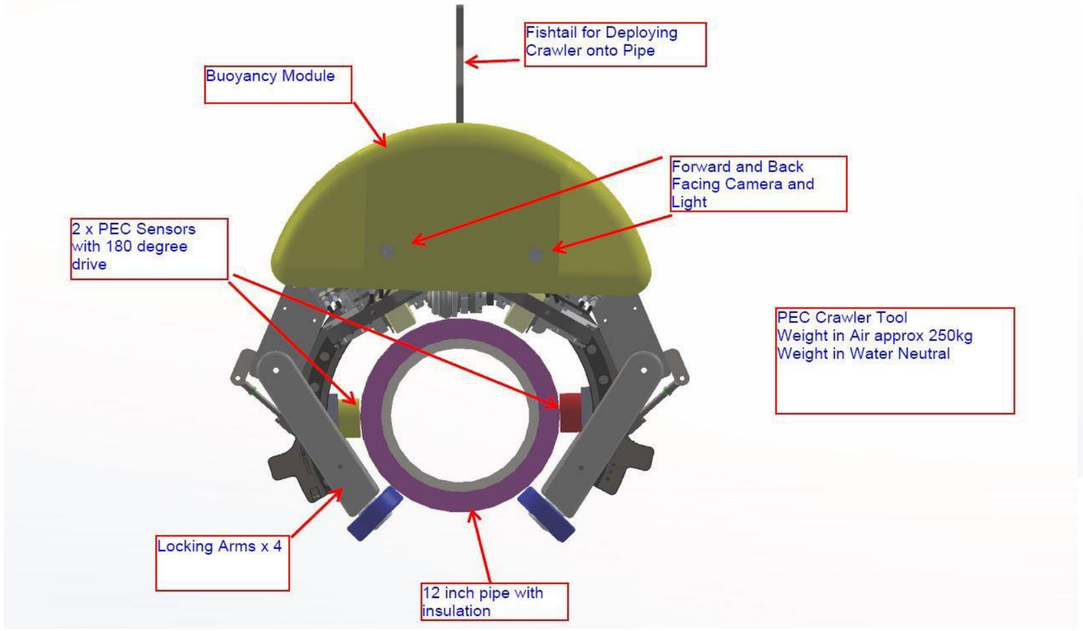
SUBSEA / SPLASH ZONE – PEC CRAWLER

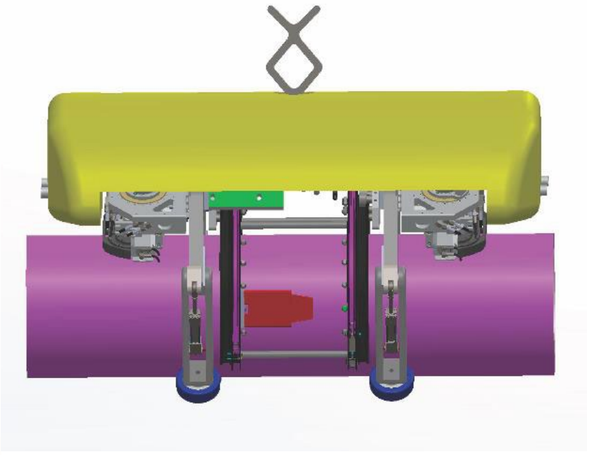
PEC - PULSED EDDY CURRENT

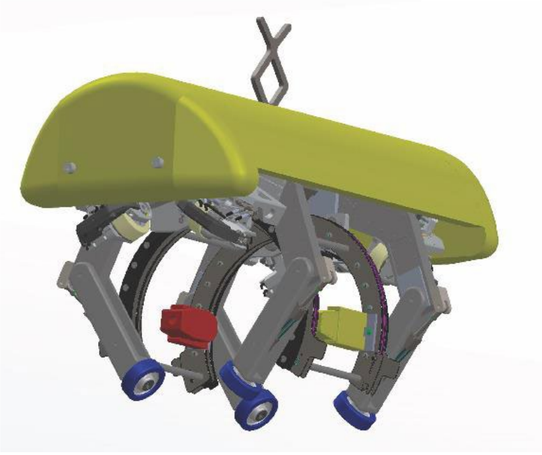
Multiple PEC probes on a ROV or Diver operated deployment frame.







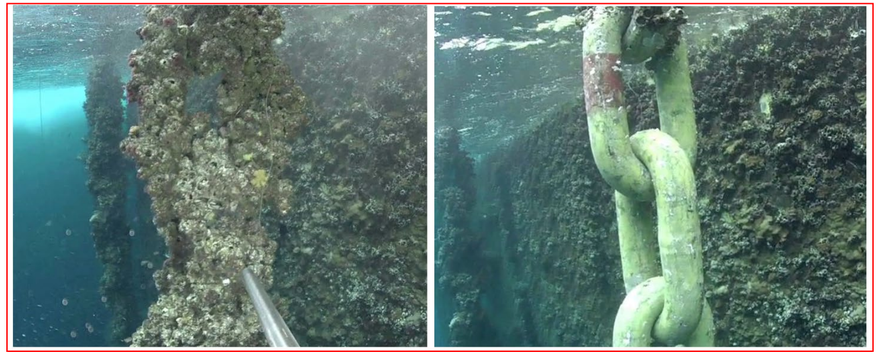




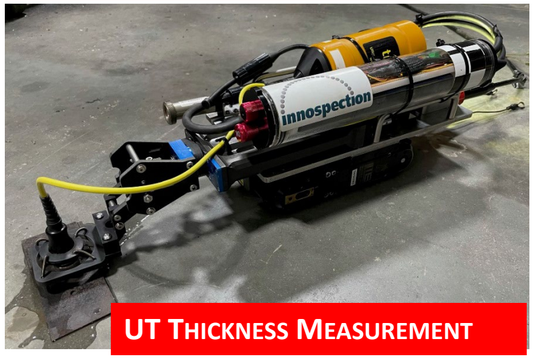
MEC & SUBSEA ROBOTICS: EQUIPMENT

EQUIPMENT

SUBSEA / SPLASH ZONE ROBOTIC CRAWLERS



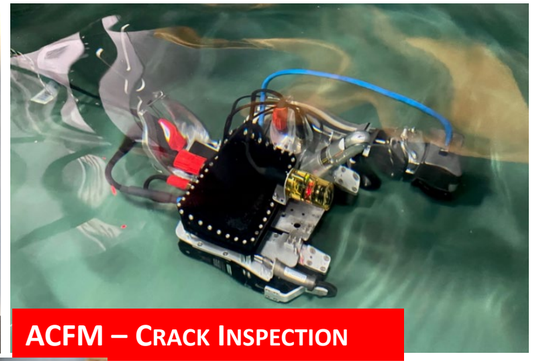
GVI / CVI CONFIGURATION



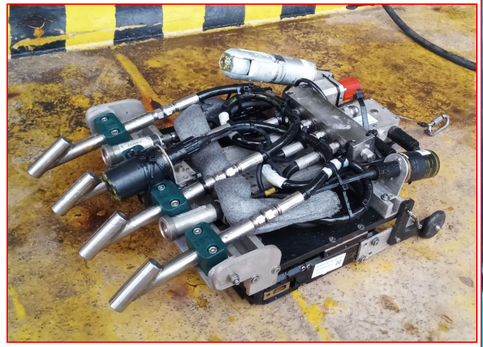
UT THICKNESS MEASUREMENT

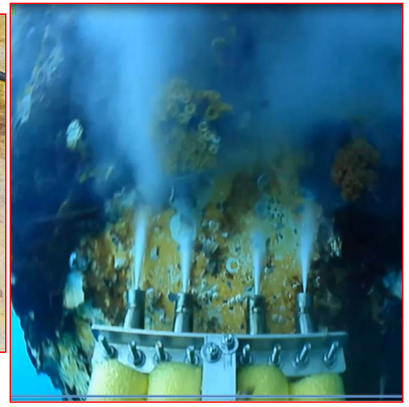
CAVIBLASTER CLEANING

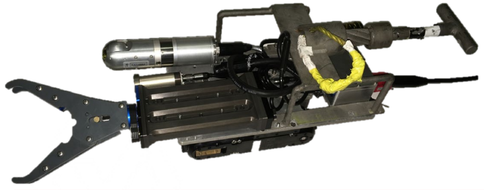
CP MEASUREMENT



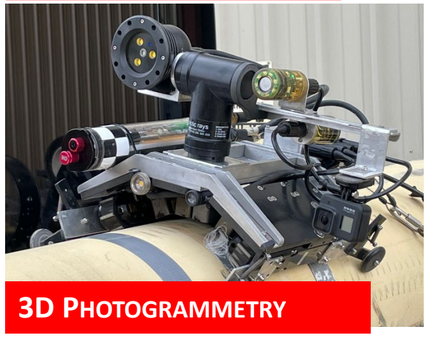
ACFM – CRACK INSPECTION



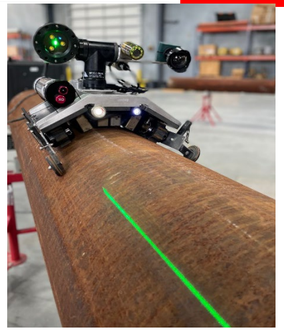




SPECIAL MISSIONS CONFIGURATION



3D PHOTOGRAMMETRY



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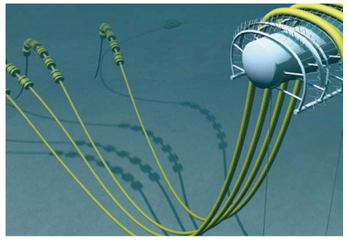
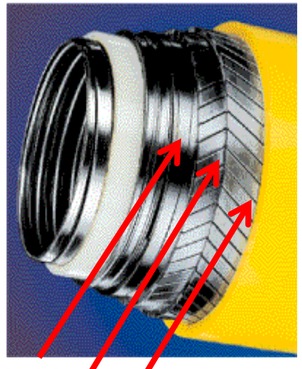
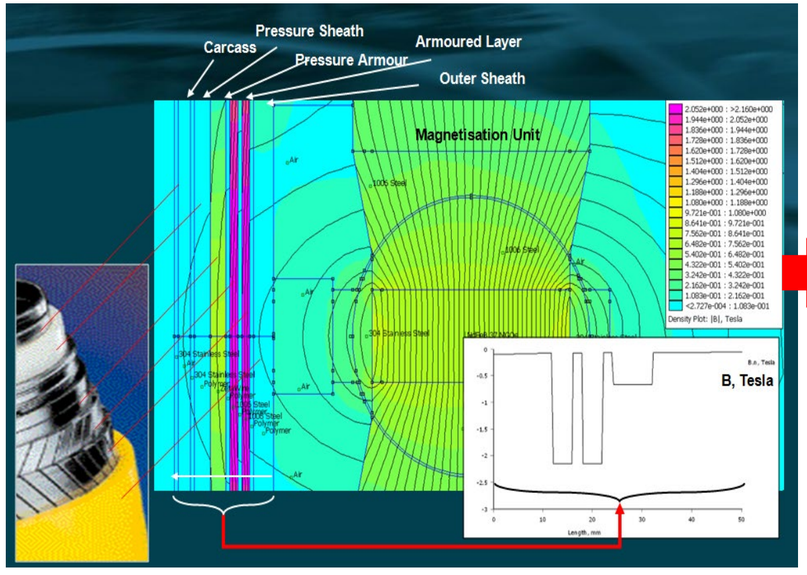
MEC & SUBSEA ROBOTICS: FLEXIBLE RISER INSPECTION

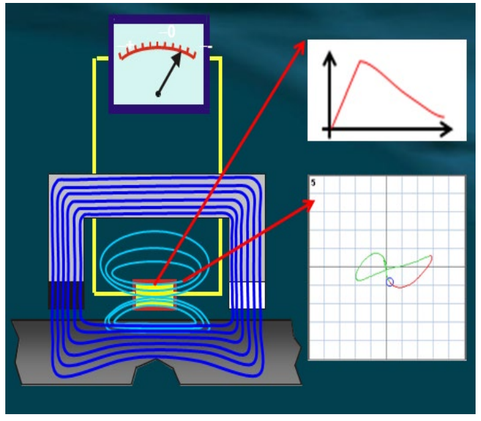
MEC-FIT (Magnetic Eddy Current Flexible Riser Inspection Tool)

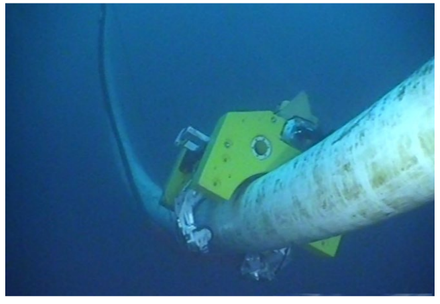




- Detection of corrosion / cracking in up to 3 wire layers by external scan
- Detection wire misalignment
- Distinguish defects / wire gaps/ wire/ misalignment
- Fast external scanning
- No couplant required
- Data for FlexIQ-Flexas Model



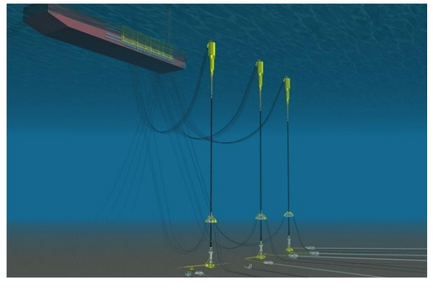




Pressure Armour wire Layer

2nd Armour wire Layer

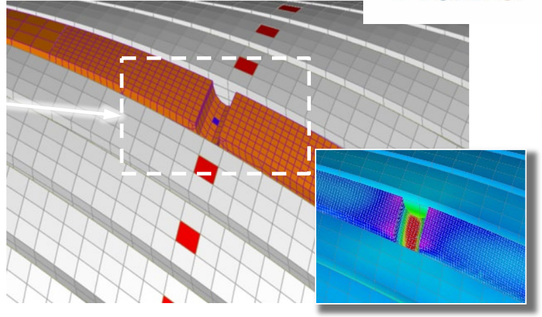
1st Armour wire Layer

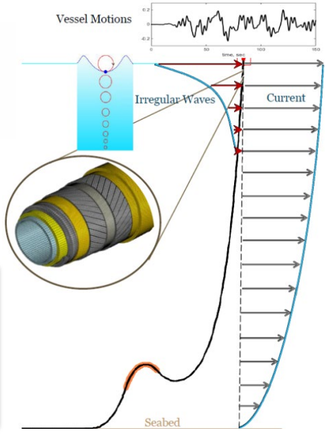


- External scan, detection in 2 (up to 3) layers; corrosion (pitting/general), cracking , wire misalignment
- Scanning in axial & circumferential direction
- Fast external scanning
- No couplant required

Inspection Data Transfer - Riser Assesment

FlexIQ





- Defect information for fatigue life predictions developed for damaged flexible pipe .
- Flexas (INTECSEA) as a support Solver.

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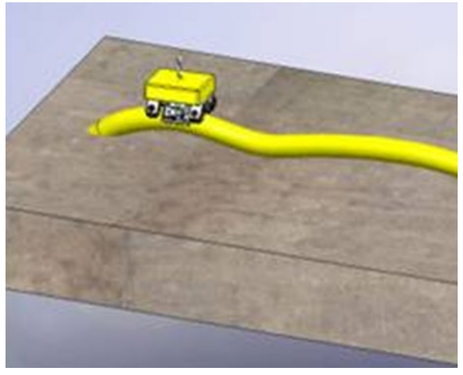
MEC & SUBSEA ROBOTICS: FLEXIBLE RISER INSPECTION

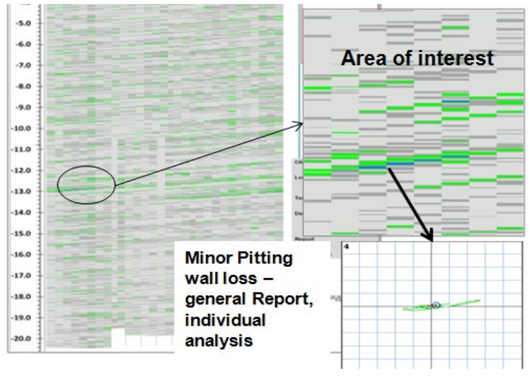
Case Study- MEC-FIT (Magnetic Eddy Current Flexible Riser Inspection Tool)

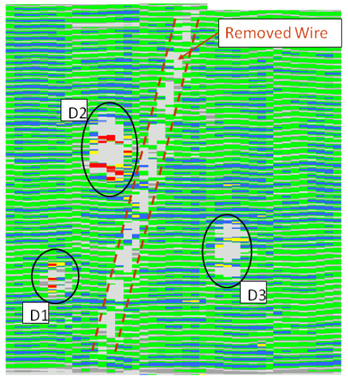
- Operation at a 4” Flexible Riser scanning with top side deployment tool MEC – Hug
- Detection target Pitting detection 1st & 2nd annular wire

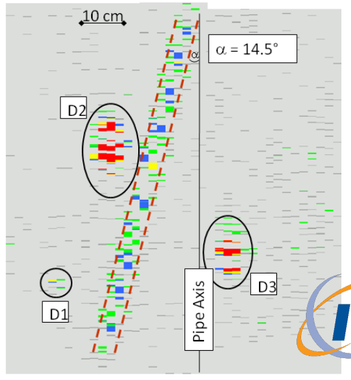
- Subsea Flexible Pipe Flowline scanning in upheaval buckling area
- Detection target wire misalignment & local pitting/cracking 1st & 2nd annular wire

http://www.innospection.com/en/df/vids and https://youtu.be/9n0PpjAHCOM









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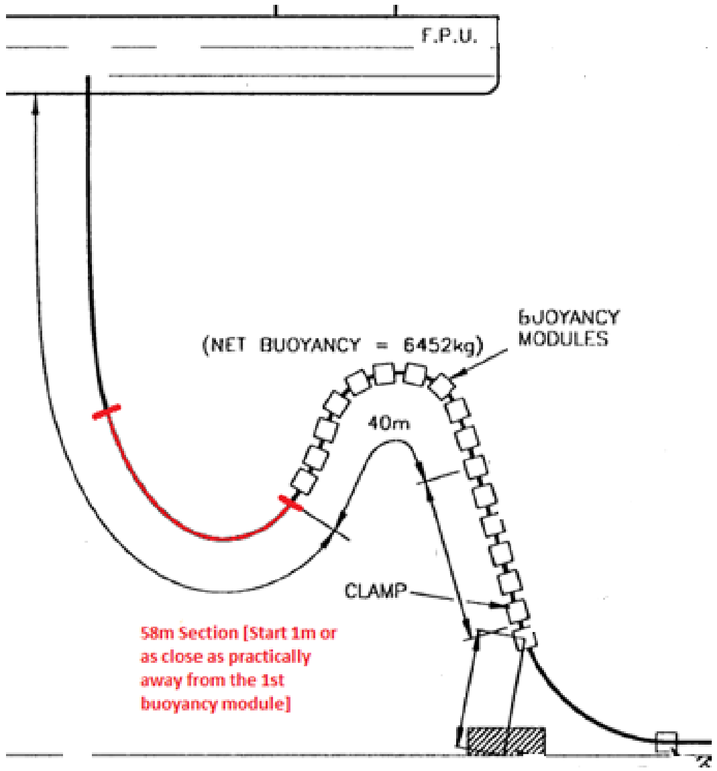
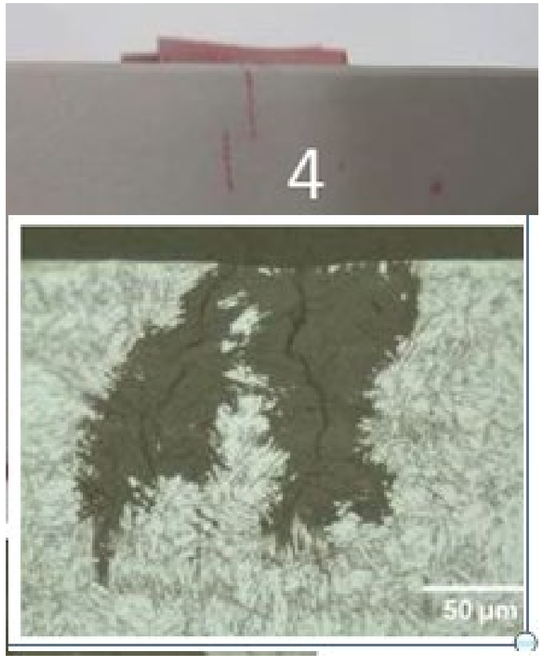
MEC & SUBSEA ROBOTICS: FLEXIBLE RISER INSPECTION

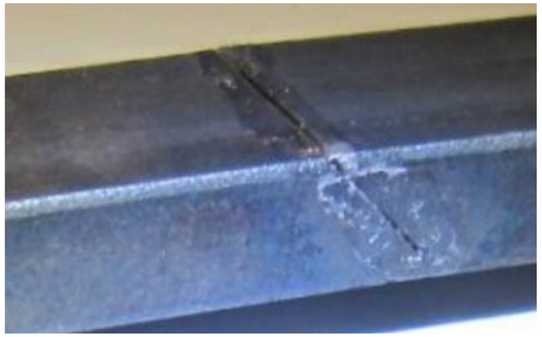
Case Study- MEC-FIT (Magnetic Eddy Current Flexible Riser Inspection Tool)

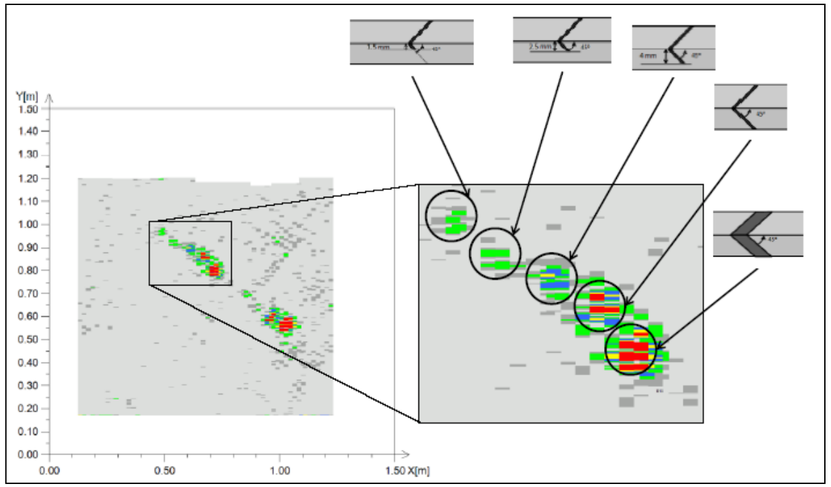
North Sea Case : Wire Crack Detection of 55 degree Wire Flexible Riser
Flexible Riser set up: Armour wire SCC verification tests

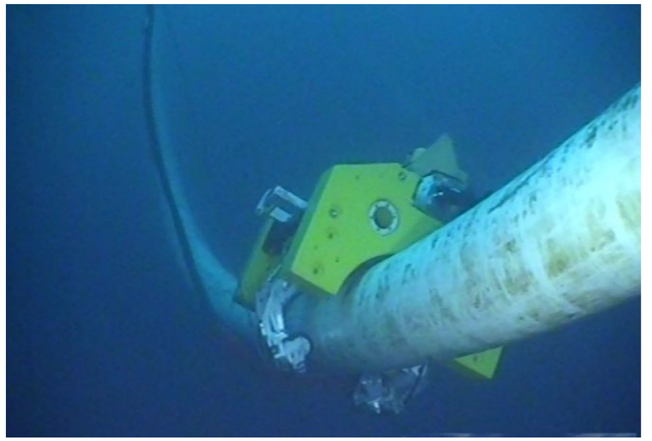
- Target of the technique verification to detect tight cracking in single wire with expected orientation of 45° and 90°to the wire cross section.
- Cracking to be detected on the inner wire & outer wire layer.
- Self crawling MEC – Combi Scanner top site deployed





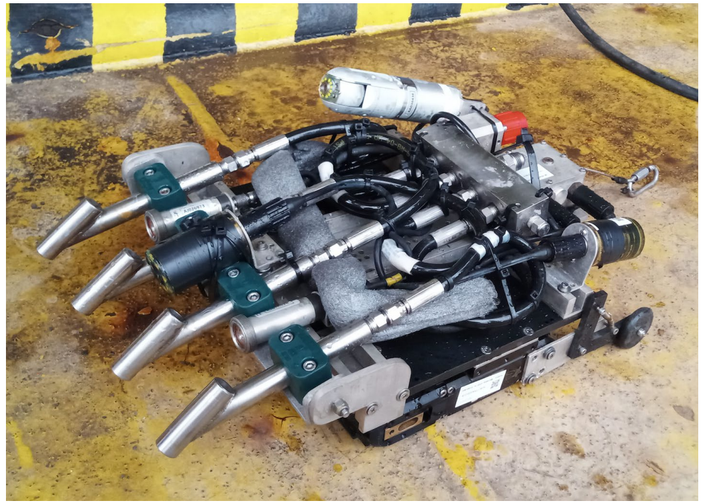






MEC & SUBSEA ROBOTICS: MOORING CHAIN INSPECTION

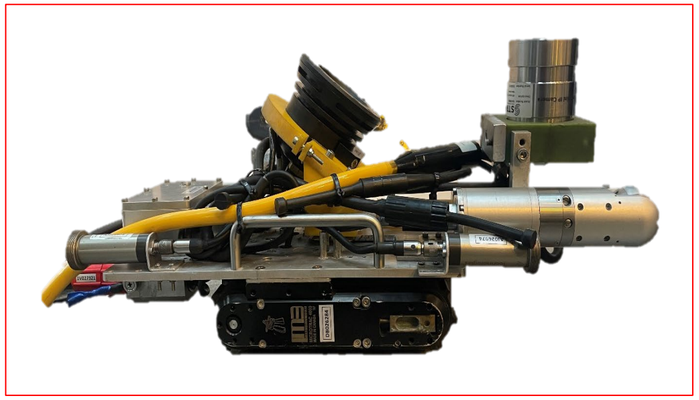
Case Study – Mooring Chain Inspection inside a Fairlead



Robotic Crawler - Cleaning Configuration

Fairlead internal BEFORE Caviblaster cleaning

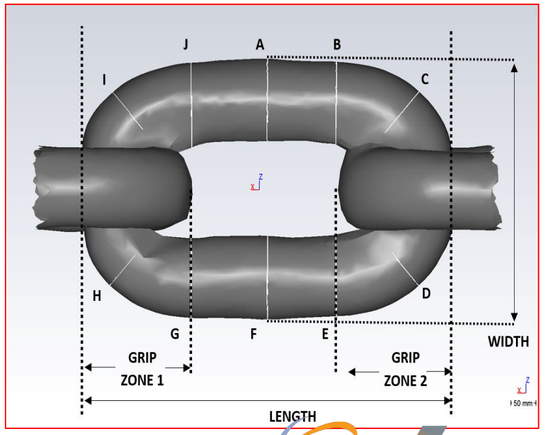
Fairlead internal AFTER Caviblaster cleaning



Robotic Crawler - Photogrammetry Configuration

Mooring Chain Measurable 3D Model

Mooring Chain Image



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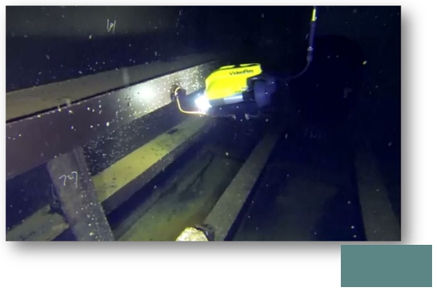
ADROV

Small, Versatile and Multi-functional

ASSET DEPLOYED ROV (ADROV): INTRODUCTION

+ *Subsea Inspection & Survey*
  - Conventional & Advanced NDT
  - ACFM & CP Inspection
  - HD CVI/GVI & Photogrammetry
  - Sonomatic Deployment tool
+ *Sub Sea Maintenance & Repair*
  - HP Blasting, Brushing and cleaning
  - Crane IRM package
  - Flare Integrity package
+ *Marine Science*
  - Coral & rig to reef Monitoring
  - Habitat mapping & Monitoring
  - Oil Spill Response Monitoring



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ADROV: EQUIPMENT SPECIFICATIONS

ROV Equipment
- Mini ROV CSS - Observation ROVs
- Subsea Crawlers
- Magnetic attachment systems
- ROV Tether Management System
- Digital Video Recorders

Cleaning
- Water Blaster
- Mechanical Spot Cleaning Tool
- Dredge

Cameras
- HD Cameras
- Tooling cameras
- Stereo 3D Camera System (modelling)
- Probe camera (20mm OD with 4 m spool)

Tools
- Manipulator Arms
- Chain Calliper / Gauges
- Inclinometers

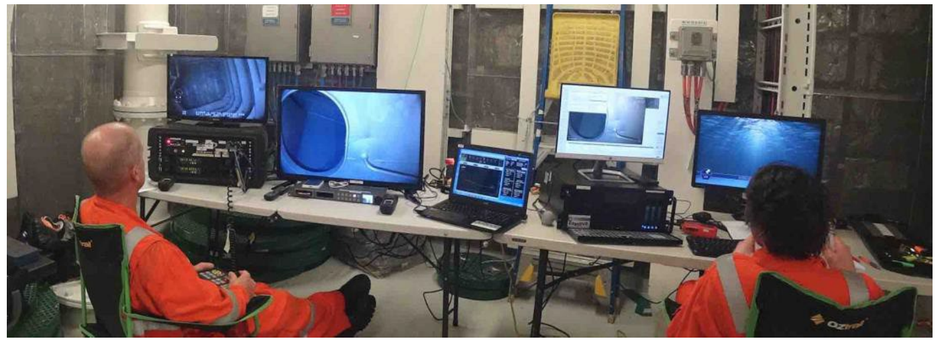
Navigation
- Scanning Sonar
- Sonar reflectors

NDT / Sensors
- Ultrasonic Thickness Probes
- Cathodic Protection Probes
- Accelerometers









ADROV: EQUIPMENT SPECIFICATIONS

Other technology integrated with the Mini-ROV CSS

NDT / Sensors

- Weld crack NDT
- Eddy current
- Flooded Member Detection

Tools

- Penetration isolation plugs
- Torque tool
- Seabed sediment collection

Navigation / Survey

- Survey-grade positioning
- Multi-beam sonar
- Laser scanner or profiler

Cleaning tools

- High Pressure Water Blaster
- Mechanical scraper
- Dredging
- Flail tool

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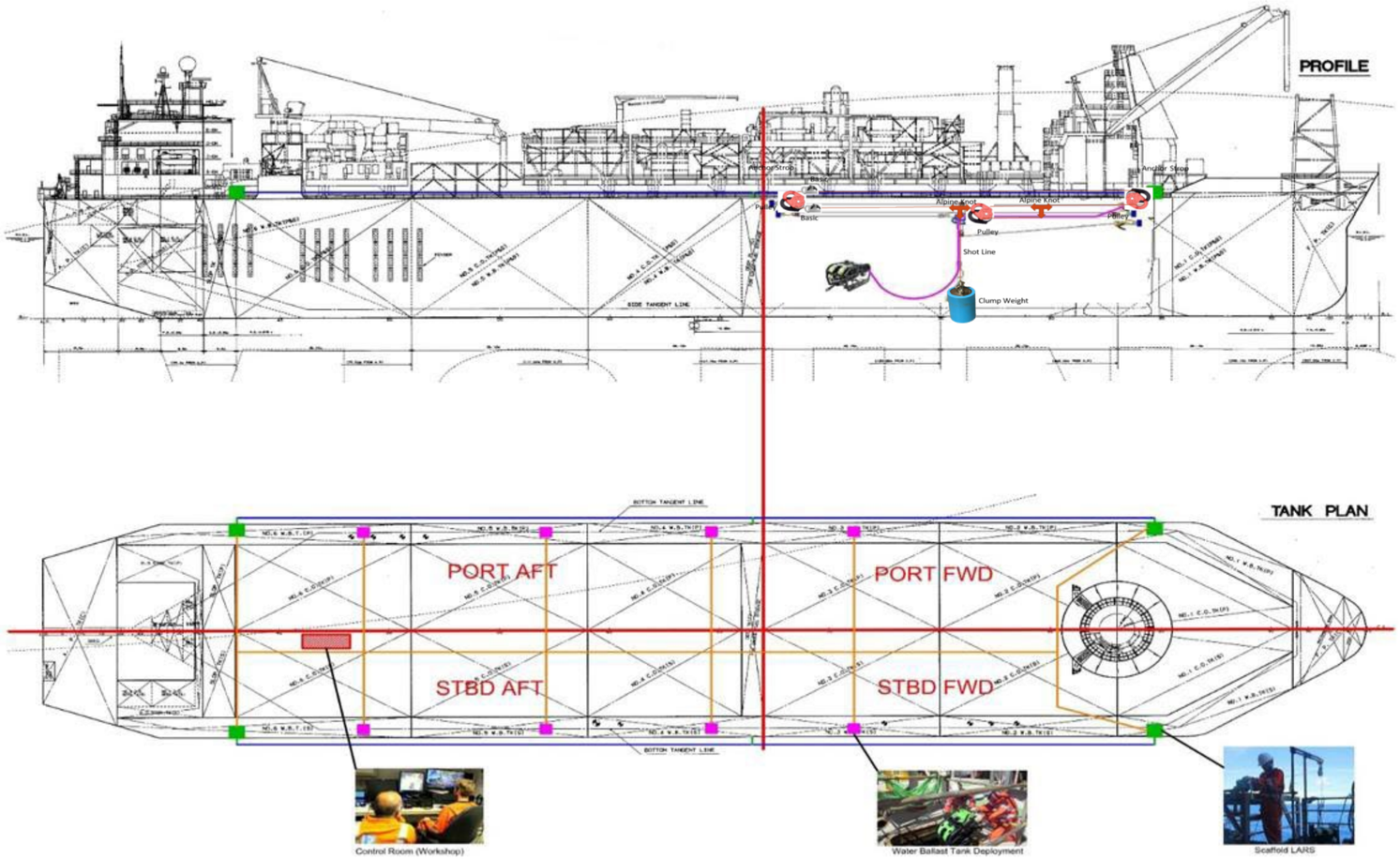
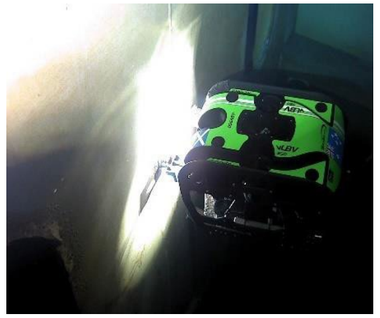
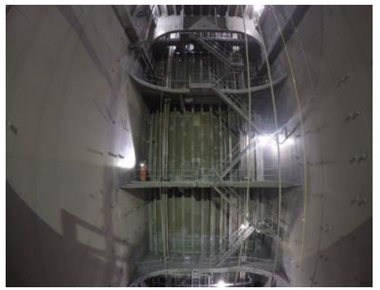
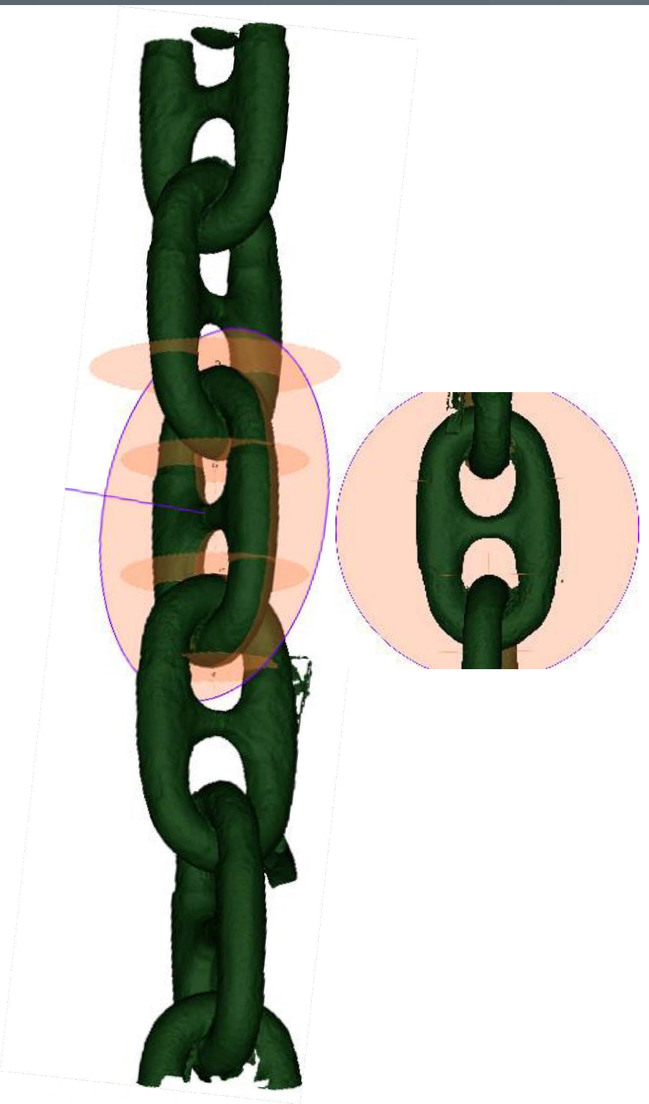
ADROV: FPSO ROV CLASS INSPECTION







ADROV: FPSO MOORING INSPECTION



Start	End	Nominal	Measured	Error	Scale error
10	11	20	20.037	0.037	0.19%
12	13	20	19.518	-0.482	2.41%
14	15	20	19.606	-0.394	1.97%
10	12	50	49.983	-0.017	0.03%
11	13	50	50.064	0.064	0.13%
12	14	50	50.136	0.136	0.27%
13	15	50	49.977	-0.023	0.05%
10	14	100	100.076	0.076	0.08%
11	15	100	100.027	0.027	0.03%

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DRONES IN FLOATING ASSET INSPECTIONS

AUAV: DRONES IN ASSET INSPECTION

Established in 2013, AUAV is an Australian based company which offers topographical survey, inspection, 3D modeling, and consulting services for drone applications on the following scope:-

- Pipeline easement surveys.
- Flare stack inspections.
- Gas leak detection.
- Corrosion monitoring.
- Internal confined space inspections of tanks and ducting.
- Offshore digital engineering.

DRONES IN FLOATING ASSET INSPECTION

Internal drone asset inspections use lightweight impact-tolerant drones designed to protect the airframe and camera. The drones can enter closed and confined spaces and inspect:

- Interior of tanks
- Ducting
- Pressure vessels
- Large bore piping
- Other GPS-denied environments

DRONES IN FLOATING ASSET INSPECTION : BENEFITS

- **Safer**: Avoids human intervention in risky areas such as inaccessible areas, confined spaces, heights, or hazardous zones.
- **Faster:** Depending on the type of assets, inspection duration is cut down by 2 to 10 times over traditional methods.
- **Cost-effective**: Reduce/ no shutdown/ downtime, no need for rope access, EWP or helicopters for inspections
- **Better Data Capturing**: Better coverage on the whole asset inspection, with high-resolution imagery and an optional 3D model for record-keeping. Automated defect and change detection between inspections are also possible.
- **Access to Inspection Results**: inSite online data platform has been designed to provide drone inspection results to all stakeholders.

DRONES IN FLOATING ASSET INSPECTION: CAPABILITIES

The following defects can be detected efficiently:-

- Cracking
- Corrosion
- Wear and tear
- Missing parts such as nut and bolts
- Distortion
- Hot areas

Drone Data Analysis, Processing & Reporting:

- Data processing, analysis and reporting provided.
- Reporting on specialist areas of expertise via collaborative partners, ie; solar farm analysis or telco tower reporting.
- Has leading edge “AI” analysis machine learning solutions.
- In-house software enables analysis and measurement of specific issues.
- Able to provide consultation and in-house drone inspection program to suit the Client needs.
- Can be fully customised to suit Client’s requirements and accessible via cloud-based online data platform: AUAV inSite.

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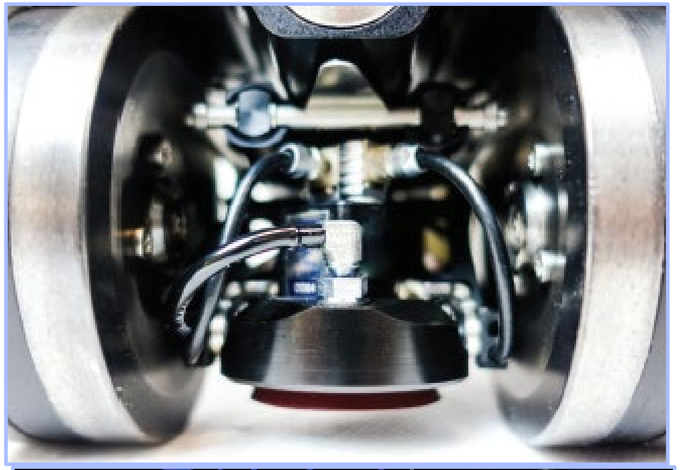
RDVI FOR FLOATING ASSET INSPECTIONS

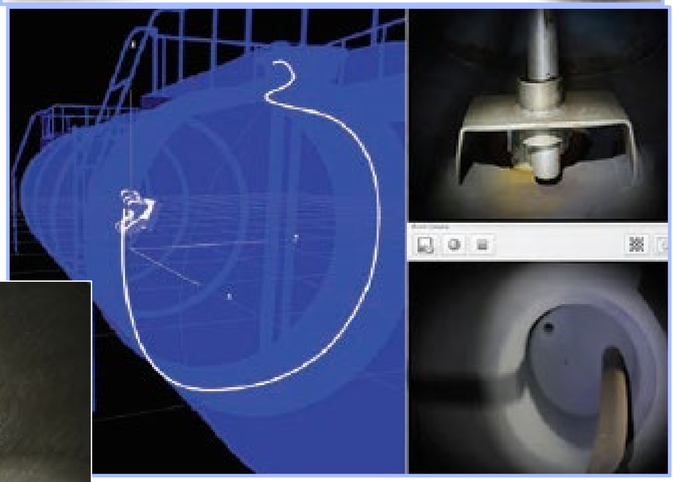
REMOTE DIGITAL VISUAL INSPECTION (RDVI)

RDVI is the use and application of Remote Digital Video Camera systems to internally inspect equipment without the need for Confined Space Entries and to minimise Intrusive requirements.

RDVI Applications

- Front End Engineering and Design for RDVI
- Pre-Inspection planning & assessment
- RDVI specific Inspection & Test Plans and Vessel Access Plan development
- Hydrocarbon enriched Environment Inspections
- RDVI In- service Inspections
- FOSAR (Foreign object Search & Retrieval)
- QA / QC Inspection verification





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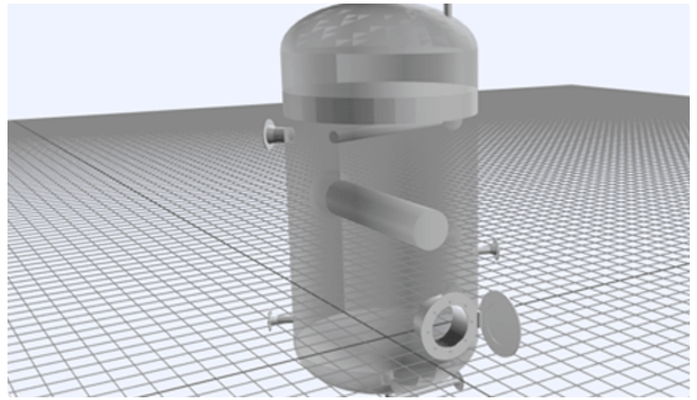
RDVI: BENEFITS

- Reduce Shutdown time frames
- Reduce Shutdown costs
- Reduce Confined Space Entries
- Reduce Intrusive access requirements
- Improve Asset Integrity Management
- Align with other NII techniques
- Improve process integrity
- Improve maintenance planning
- Improve process evaluation
- Reduce risk profiles
- Improve safety records

RDVI : CAPABILITIES

- Leak point reduction.
- Significant reduction of inspection activities and duration.
- Historical RDVI data application.
- Identification of high-risk locations.
- Online Inspections.
- Reduction in resources required for inspection.
- Dedicated and systematic inspection access with focused inspection points/ targets.
- Simulated planning and inspections.
- RDVI specific work pack generation.
- Integration with dedicated NII processes and NDT methods.
- Proprietary and remote NDT applications.



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RDVI : OTHER APPLICATIONS / INSPECTIONS

- Propane / Ethylene / Methane Chiller
- Dehydration Beds
- Regeneration Packages
- Separators & Condensers
- De-aerators
- Shell and Tube
- Reboiler Exchangers
- Fin Fan Exchangers
- Headers
- Acid Gas Incinerators
- Flare Knock Out Drum

- Pressure Piping
- Flow Meters
- Coil Systems
- Heat Recovery Steam Generators
- Steam Systems
- Turbines & Generator Packages
- Absorbers
- Air & Nitrogen Receivers
- Process Control – Valves etc
- Scrubbers
- Electric Exchangers

- PCHE's
- Membrane Filters
- Compressors
- Columns

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AIM - FLOATING ASSETS – CORROSION CONTROL

CORROSION CONTROL

WAX-TAPE

IEV

TRENTON
Wax-Tape® Systems

MICROCRYSTALINE WAX-TAPE

A Proven Corrosion Control Technology since 1949

TRENTON WAX-TAPE SYSTEMS

Tape

- Microcrystalline Wax and Corrosion Inhibitors on non-woven synthetic fabric
- A 2+1 step solution – Primer - Tape + OuterWrap (if required)
- Thick thermoplastic coating (avg 2mm)
- Tape firms up providing excellent adhesion and mechanical strength.

Primer

- A blend of microcrystalline wax, plasticizer, and corrosion inhibitors.
- Paste like consistence
- Displace moisture and wet surface

IEV TRENTON Wax-Tape® Systems

TRENTON WAX-TAPE SYSTEMS

1. Inert and **not biodegradable**
2. Conformability to **irregular fittings**
3. Compatibility with many **types of materials**
4. **Minimal** surface preparation
5. **Easy to apply –** Easy to cut and mold into desired shape
6. Can be applied over **wet surfaces**
7. **Hydrophobic** - Acts as a barrier that prevents contact with air, water, and micro-organisms.
8. **No drying or curing time**
9. **Expands and contracts** based on the operating environment.
10. Resistance to **weathering and UV (sunlight)**.
11. Will **not dry or crack**.
12. **Environment Friendly** - Non-toxic, non-carcinogenic, low Volatile Organic Components (VOCs)
13. Can be **painted** after tape firms up. (Acrylic Latex, or other waterbased paints, etc.)

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TRENTON Wax-Tape® Systems

TRENTON WAX-TAPE SYSTEMS

WAX-TAPES	Wax-tape #1	Wax-tape #2	HT-3000
Color	Brown	Aluminium (Grey)	Brown
Thickness	1.8 – 2.3 mm	1.8 – 2.3 mm	2.5 mm
Dielectric strength	236 volts/mil (9,2 Kv/mm)	170 volts/mil (6,7Kv/mm)	200 volts/mil (8Kv/mm)
Operating temp	-45°c – 49°C	-45°c – 60°C	-1°c – 110°C
Application temp	-17°c – 43°C	-17°c – 60°C	-1°c – 110°C
Operating positon	underground, underwater, high condense lines	aboveground and belowground	aboveground and belowground
Recommendation	Outerwrap		

PRIMER	Pile primer	Temcoat primer 3000
Color	Brown	Brown
Pour point	Non melting	
Flash point	350°F (176°C)	
Dielectric strength	100 volts per mil (4Kv/mm)	
Application temperature	32°F – 200°F (0°C – 93°C)	0°F – 230°F (-18°C – 110°C)

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TRENTON Wax-Tape® Systems

TRENTON WAX-TAPE SYSTEMS

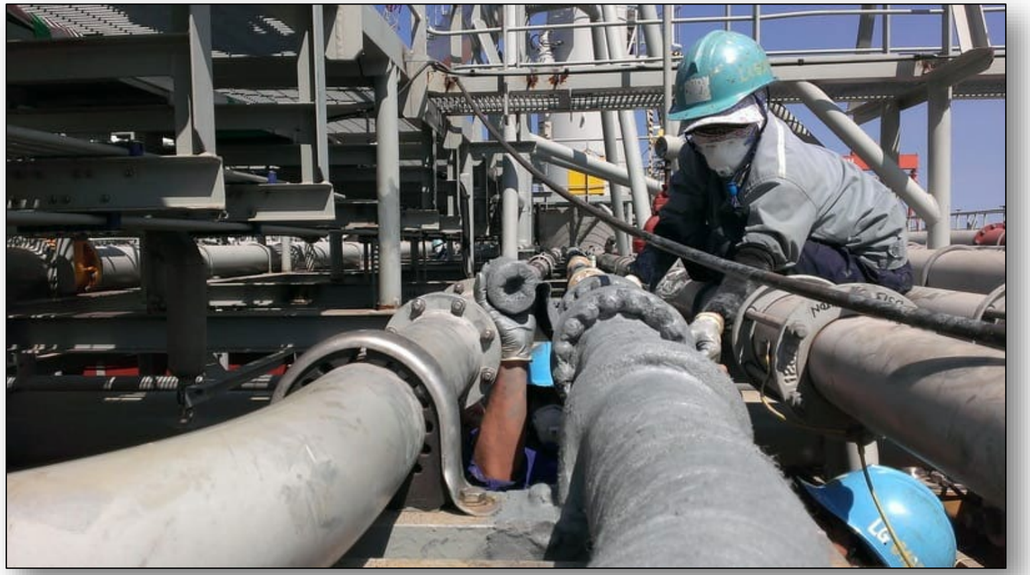
WAX-TAPES SYSTEMS FOR DIFFERENT APPLICATIONS ON OFFSHORE ASSETS

A range of Wax-Tape systems are available for different applications such as:

1) System for complex components including Flanges, valves, bolt & nuts, riser clamps, gantry joints and structural supports at low and high temperature
2) System for dynamic and static pipe supports
3) System for piping at low & high temperature, and wet & dry conditions
4) System for splash zone areas
5) System for underwater risers and pipelines

IEV TRENTON Wax-Tape® Systems

PIPES & PIPELINES



Pipes

Bends

Condensing Pipelines

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TRENTON Wax-Tape® Systems

VALVES & FLANGES

Valves

Flanges

Pipe Supports

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MOORING CHAINS

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Creating Value through Disruptive Technologies

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