



Semfa International Limited Advanced Inspection Services for Regional Oil and Gas Industries:

Technologies and Partner Services for On- Shore or Sub- Sea Advanced Inspection applications



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Semfa International Limited

Brief introduction to Semfa International Limited

- Semfa was established in 1985 as a consultancy and supplier of advanced technologies(services and products) from its partners who are carefully chosen to offer the most advanced solutions globally .
- Semfa has developed a strong and robust structure with its technology and service partners in conjunction with specialist country and regional partners who share the same vision and purpose as Semfa
- Semfa has a flexible and realistic vision of operating in its markets and will consider local preferences and regulations when working in that market.
- Based in Wales in the United Kingdom , the inspection portfolio and operation is led by Ron Long through his company LLR FZ LLC in the UAE

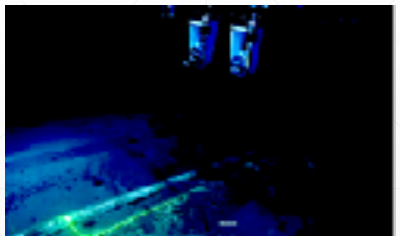


SEMFA International Limited ANDT and NDT Inspection services Partners



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Profile of Force Technology. Sub- Sea, In service Amonia Tank inspection and other specialist applications



Force Technology is a GTS approved company based in Copenhagen with offices in Sweden, Norway, United Kingdom, China, Singapore and the UAE.

Ammonia Tank Inspection - In-service inspection of welds in atmospheric ammonia storage tanks – utilising ultrasonic techniques (Pulse Echo and Time of Flight Diffraction “TOFD”) and robotic scanners to detect cracks which can run both parallel and perpendicular to the weld.

Advanced UT Subsea In-service inspection of welds and subsea pipelines - We hold several ultrasonic pipe scanners for different purposes, all of which can be fitted for a variety of geometries, in all shapes and sizes, including pipe bends. Corrosion mapping of piping, both straight and bent pipes, ranging from an outer diameter of 2” to 36”. Precise ovality measurements for subsea piping interventions, hot taps and more (qualified accuracy of up to 0.2mm)

Field Inspection Gradient Sensor - With our state-of-the-art sensor for cathodic protection inspection (CP), FiGS®, we are able to provide on-site subsea inspection of CP systems. The sensor measures electric field gradient vectors and can detect electric currents in seawater. Its design allows for highly accurate measurements with a resolution and detection level that surpasses all other field gradient sensors available in the market.

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Profile of TRSonovation:

Sonovation



TÜVRheinland Sonovation (**TRSonovation**) is a company specialised in Advanced NDT and located in the Netherlands.

TRSonovation is the owner of the PEC (Pulsed Eddy Current) technology, which can be used for wall thickness measurement through insulation and protection of pipelines, like bitumen and concrete.

TRSonovation is also specialised on weld inspection and corrosion mapping with UT, TOFD and PAUT on high temperatures up to 485 degree C and inspections of complex geometries, like nozzles, clad heavy wall reactors and special materials like stainless steel.

For the offshore market, **TRSonovation** has the unique PEC technology available to measure remaining wall thickness of the casings of your offshore wells to avoid collapsing wells.

Fitness for service services are available to support the inspections done and a complete concept called MISI (Minimum Intervention Strategy for Inspection) is available to reduce your turnaround time significantly.





Corrosion
control

Semfa International Limited

Profile of Corrocont International Limited :



CORROCONT Group, established in 1990 in Budapest/Hungary and since the 3rd year of operation has been one of the market leaders in cathodic protection and corrosion monitoring surveys of oil storage tanks and pipelines. The company has references from more than 55 countries worldwide.

The company operates in all types of corrosion related works; the main field of its operation is the diagnostic testing and cathodic protection of metal structures and pipelines in the oil and gas industries.

Corrocont Ltd. developed the integrated intensive method", the unique combination of the CIPS and DCVG inspection making it one of the most innovative companies in the area of cathodic inspection of pipelines.

Corrocont has developed a unique NDT software package (TIM) Tank Integrity management Software and hardware based on LFET (Low Frequency Eddy Current Testing) for precise corrosion measurement of tank walls ,m floors and roofs internally . It has an easy to transport Crawler equipment for tank shell and Tank Floor Scanner equipment (TST-27M) for tank bottom. Finally they have developed their own Hand scanner equipment for hard to access areas.

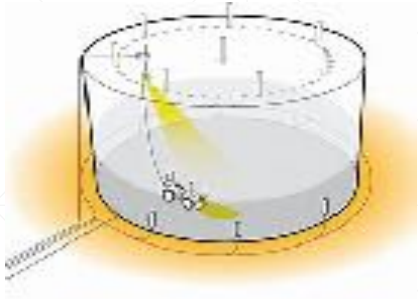


Semfa International Limited Profile of Acoustek Limited:



- **Acoustic Ltd** established In 1998, a correlation study was published between acoustic emission (AE) active corrosion test results of storage tank floors and the follow-up internal floor scans.
- They are recognised experts in this field of NDT testing
- In 2010, a European standard has been developed for this type of test “EN 15856, Non-destructive testing - Acoustic emission - General principles of AE testing for the detection of corrosion within metallic surrounding filled with liquid’.
- Acoustic Emission is the process of detection of the sound produced by discontinuities in the bottom plate when the storage tank is leaking or corrosion. Acoustic Emission (AE) monitoring is an effective tool for prioritising more conventional non-destructive inspections of above ground tanks, either process or storage vessels.
- Results obtained from AE monitoring may be assessed against an existing data bank permitting plant management to prioritise maintenance to tanks with high active corrosion rates or leaks. AE results may be used to extend inspection periods of tanks without leaks or active corrosion (PDF) Acoustic Emission for Tank Bottom Monitoring.
- Acoustek are experts in maximising the results and minimising the chances of incorrect data interpretation due to unidentified background noise and the subsequent effect on the test results. AE Identifies internal noise sources during data acquisition. These sources of noise originating from inside the tank with some guidance on how to identify them and actions recommended.

Semfa International Limited Evergreen LLC



Evergreen Industrial services is a recognized leader in tank cleaning services in North America. Their experience spans the complete project life-cycle and is supported through an extensive offering of tank cleaning capabilities – from extensive project planning and engineering to centrifuge setup, robotic sludge removal, solid waste management, transportation, degassing and vapor recovery. In order to maximize the value of our tank cleaning services for a facility owner, our turnkey solution focuses on minimizing project costs, downtime, risk, and residual waste.

Utilizing own developed robotic cleaning techniques and equipment on product separation processes, vessel and column cleaning based upon no man entry systems and have a proven track record dating back over 30 years

Evergreen also have successful track records in operating on oil sludge lagoons and ponds with sludge processing and cleaning technology and waste minimization and environmentally suitable disposal techniques and systems





Semfa International Limited Specialist Services for storage tanks : Inspection, cleaning , sludge processing



- This is an areas which Semfa has a comprehensive package of technology and services to offer oil storage tank operators and managers .
- This combines a number of partners working together under Semfa to offer an unbeatable approach to total storage tank solutions .
- No man entry tank cleaning solutions using re-suspension equipment and technology, cleaning robots and specialist pumping equipment to take sludge out of the tanks.
- Internal and external inspection using crawlers, robots and advanced inspection techniques
- Sludge processing technology ranging from standard centrifuges through to the most advanced technology which converts sludge directly into diesel or gasoline using mobile treatment plants available exclusively

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