

## TCR ARABIA SERVICES RANGE – 2024

Service Department	Activities
Non-Destructive Testing (Conventional)	RT, UT, MT, PT, VT, HT, VBT & FT.
Non-Destructive Testing (Advanced)	HTHA, ECA, SWC, EMAT, LRUT, PECT, PAUT, TOFD, Corrosion Mapping, Tube Inspection (ECA, ECT, RFT, MFL, IRIS & SECT), MFL Tank Floor Scanning, Corrosion Mapping (normal & high temp), Thermography, Borescope Inspection, Helium Leak Testing & PMI.
High Temperature NDT Services	PAUT, TOFD & Corrosion Mapping (Online high temperature inspection up to 350°C)
High Temperature Hydrogen Attack (HTHA)	Combination of PAUT, TOFD and AUBT (Advanced Ultrasonic Backscatter Technique) to inspect the plant assets operating at higher temperature with hydrogen service.
Material Testing (Mechanical & Corrosion)	Hot Tensile, Tensile, Charpy Impact, Bend, Hardness, Macro, Load Tests, Nick Break, Peel Test, Fillet Fracture, Ferrite AWS A 4.2, Salt Spray Testing, Corrosion Tests etc.
Welder Qualification	WPS, PQR, WQT, Welder Certification
Heat Treatment	PWHT, Pre-heating
Metallurgical Services	In-situ Metallography, Failure Investigation, Remaining Life Assessment (RLA), Fitness for Service (FFS), Microstructure Analysis.
Inspection Manpower	NDT Technicians, Plant Inspectors, Inspection Engineers, Welding Inspectors, API 510/573/653 Inspectors, Corrosion Engineers, Coating Inspectors, Refractory Inspectors & ASNT Level III.
Engineering / Consulting Services	Stress Analysis, Risk Based Inspection (RBI), Damage Mechanism Study, Coker Drum Inspections.
Trainings	Level I & II ASNT UT, MT, PT, RT, VT, Metallurgy for Non-Metallurgists Damage Mechanisms
Civil Lab /Field Inspection	Construction material testing; Laboratory and Field tests for Soil, Aggregates, Cement and Concrete, Structural Assessment.
Calibration	Measuring Equipment, Measuring Scales, Instruments and Welding Machine etc.
Robotic Inspections	Submersible Robotic Inspection (Tanks & Seawater Basins) Robotic Inspections of buried, above-ground and unmanned locations.
Stress Analysis	Assessment of structures, piping and plant assets subjected to forces.
Boiler Assessment	Condition Assessment, Remaining Life and Fitness for Service of Boilers and other plant assets.
Product Sales	Ultrasonic Flaw Detectors, Thickness Gauges & accessories.
Coke Drum Inspections	Robotic Inspections of Delayed Coke Drums in Refineries (Representing CIA of Canada)
Scale Deposits in Pipes	Online inspections of Scales Deposits in Pipes. (Representing Chugai, Japan)
Non-Metallic Composites Testing & Inspections	Lab Testing: Mechanical Testing, Thermal Testing, Analytical Testing, Chemical Testing, Electrical Testing, Product Testing, Root Cause Analysis, etc. Field Testing: Current Condition and Remaining Service Life Predictions, Composite Thickness, Composite strength, Corrosion barrier condition, etc.