

MULTI-INDUSTRY SOLUTIONS

Staying away from the cookie cutter approach, TCR ensures all its offerings are comprehensive and actionable. TCR brings about the necessary transformation for their customers by creating NDT techniques that target individual corrosion damages with the assistance of expert team members.

GAS – Evaluating Storage spheres, terminal, jetty, and LT transfer lines for CUI, SCC, IGC, Pitting

POWER – In-depth knowledge of boiler tubes, outlet headers, main steam line, and turbines

FERTILIZER – Assessing reformer section, ammonia converter, ISR and RGC

EPC/INFRA – Lower testing costs for WPS/PQR and material strength/ composition and NDT

REFINERY – Inspection of CDU/VDU, FCCU, hydrogen manufacturing, storage tanks, REAC, and reactors

PETROCHEMICALS – Analysis of reactors, storage tanks & high-temperature transfer lines/acid

WATER TREATMENT – Understanding of pumping station & transfer lines for MIC, Pitting, erosion

O&G SERVICE – Failure studies in tubing/drill line tooling for fatigue, corrosion fatigue, pitting and crevice corrosion

OFFSHORE RIGS – Analysis of wellbore piping, chain links, pumps/rotary equipment, and drilling rigs

WASTE TREATMENT – Evaluate Incinerator boilers and their tubing, transfer lines, scrubbers

QATAR CLIENTS



GLOBAL CLIENTS



Complete Quality Assurance Partner for Optimum Plant Health

TCR undertakes all aspects of mechanical destructive and NDT tests, metallurgical and asset integrity management-based consulting, engineering design, and simulated corrosion research. Global experts with deep industry-specific plant experience from TCR are passionate about metallurgy and problem-solving. A dedicated sample collection center and operational NDT setup are operational at the offices of TCR's representative agent BIEWU International Trading in Doha, Qatar.

TCR Qatar
BIEWU International Trading WLL
P.O. Box: 24534
#3, Al Emadi Building,
Ras Bu Aboud Street
Ummgwallina, Doha, Qatar

✉ Qatar@tcreng.com

🌐 www.tcr-qatar.com

☎ +974 44354768



TCR QATAR

Actionable Test Results

A BRAND FROM THE LEGACY OF TCR ENGINEERING SERVICES, INDIA
WITH BIEWU INTERNATIONAL TRADING WLL IN QATAR



APPROVED BY QP FOR MATERIAL
TESTING AT TCR'S ISO 17025
ACCREDITED LABS IN INDIA

Delivering Outcomes, Fueling Growth

TCR empowers its clients through services that generate economic value by identifying and addressing customer needs effectively. It's comprehensive end-to-end offerings allow customers to procure wisely, planning damage specific inspection, manage shutdowns and use actionable insights for enhancing profitability and achieving growth.

Materials Testing Laboratory

Mechanical

Fatigue and Fracture Toughness Testing

CTOD, K1c, J1c, Fatigue crack growth, High Cycle Fatigue Test

Physical Testing

Tensile & Bend Testing, Impact Testing, Hardness Testing, Nick Break and Weldability, Creep and Fasteners

Metallurgy Evaluation

Macro and Micro Examination on SEM/EDS & Optical Microscope

Chemical

Material Composition:

Spectrometers (XRF, OES, ICP, AAS), Wet Chemical, Oil Analysis by Ferrography, RoHS Compliance, Lead Inspection

Refractory Testing

Ores and Minerals Testing

Sand Content

Oxygen, Nitrogen and Hydrogen

Corrosion

Corrosion Studies: Intergranular Corrosion - ASTM 262, Pitting -ASTM G48, Chloride Stress Corrosion - ASTM G 36, Corrosion of Aluminum - ASTM G67, Salt Spray - ASTM B117, Sour Gas (HIC/SSC) - NACE TM0284/TM0177, Stress Oriented Hydrogen Induced Cracking (SOHIC) - NACE TM0103 Adhesive / Cohesive Strength, HVOF Coating Test

Non Destructive Testing (NDT)

Conventional

Base Line NDT

Ultrasonic Inspection, UT Thickness, Dye Penetrant, Magnetic Particle, Ferrite Measurement, Holiday Detection Surface Roughness, Demagnetization, Paint and Coating Thickness

Metallographic Replica

In-Situ Metallography Replica, SEM and EDS analysis, Microstructure Characterization for RLA

Positive Material Identification (PMI)

Advanced

Phased Array and ToFD

Heat Exchanger: Eddy Current, RFET, IRIS, MFL, Helium Leak Testing, Acoustic Eye, Saturated Eddy Current

Tank Inspection: Robotic Inspection of Coker Drums, Acoustic Emission Testing of Tanks, Remote Inspection of Tank Bottom

Boiler Health: EMAT, Automated Reformer Tube Inspection (ARTiS), Oxide Scale Measurement

In-Service

NDT targeting specific Corrosion Damages: HTHA Inspection, One Micron Detection using UT, Carburation Detection, HIC detection, High temperature Corrosion Mapping, Mid wall fissures detection, Stepwise Crack Detection (SWC)

Visual Inspection: Thermography, RoV based RVI, Boroscopy, Videoscopy,

Storage Tank: In-service robotic tank inspection, Tank Condition by Thermography

Welder Certification and Procedure Qualification

Welding Inspectors visits for qualification of Welder

PQR Testing per coupon as per ASME Section IX, AWS D 1.1, API 1104, QP-STD-R-006, QP-STD-R-002

Renewal of Welder ID Cards

Post Weld Heat Treatment: Electrical Resistance HT with Talented Team & Pre-Heating

Welding Procedure Specification (WPS) development

Weldability Evolution:

Microstructure & micro-hardness Tests

Welding Consumable Evaluation: Tests as per ASME Section 2 part C

Plant Health Assessment

Consulting

Failure Analysis

Remaining Life Assessment

Fitness for Service as per API 579 ASME FFS 1 (Level 1 and 3)

Fire Damage Assessment

Engineering Design and Analysis Services for Plant Supports: Computer Aided Designing (CAD), Computer Aided Engineering, Reverse Engineering and Prototyping, 2D to 3D Conversion, Finite Element Modeling, Piping Stress Analysis

Research

Studies: API 590/581 guideline based Risk-Based Inspection study program to research corrosion damages and mapping of Turnaround data based on Business/Operations Risk

Contract Research and Development: Technical Help For Indigenization, Selection of Materials, Quality Improvement, Solutions Of Critical Weld Problems

Sourcing & Procurement

Third Party Inspection and QA

Factory Audit, OEM Development, Raw Material Inspection, Picking of Samples and Testing Coordination, Initial Production Check, In-Production Check, Random Inspection, Loading Supervision

Product and Material Sourcing

Turnaround and Shutdown Management

Expert Consultants

RBI and Asset Integrity Management Experts

Metallurgists and Corrosion Scientists

API Plant Inspectors with 510, 570, 653 as well as 579/580 certs

ASNT Level III Experts and SNT-TC-1A or PCN Level II Techs

QA/QC Inspectors for Static and Rotating Equipment

Welding Inspectors with AWS or CSWIP

Painting/Coating Inspectors with NACE or BGas

Mechanical Destructive Testing and Lab Chemists

Refractory Consultant

Valve Specialists

Heat Treatment PWHT specialists

Engineering Design Consultants on CAD/CAM

Simulated Process and Engineering Researchers



I.

SOURCING & PROCUREMENT INSPECTION

Identifying the needs of Traders and Suppliers to procure wisely by establishing material strength and composition

II.

CONSTRUCTION & COMMISSIONING INSPECTION

Addressing the needs of EPC and Infrastructure companies to create baseline data and faster completion of weld joints

III.

IN-SERVICE INSPECTION

Planning corrosion damage specific inspection with the usage of high temperature probes and robotics

IV.

TURN-AROUND INSPECTION

Manage shutdown through expert manpower as well as strong understanding of API 580/581 guidelines set by RBI

V.

CONTINUUM INSPECTION

Actionable insights for enhancing Plant's profitability and achieving growth through engineering research based on metallurgy and design