

TCR Technology Newsletter

4th Quarter
2017

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Topic of the Quarter – Construction Material Testing Laboratory / Civil Laboratory

TCR Arabia provides CIVIL Laboratory & Field Test Services for Construction materials, like Concrete, Cement, Precast concrete units, Masonry units, Natural Building stones, rocks, marble stone; cement tiles, ceramic tiles, Soil, Aggregates, & Sand.

TCR Arabia also provides Services for Structural Assessment/ Concrete deterioration Analysis



The Material technology and testing department covers a wide range of specialized services, which extends from routine testing of construction material to consultation on complex problems related to material technology and its applications.

The Material testing in TCR Arabia is conducted in accordance with American Standards (ASTM), British Standards (BS), German Standards (DIN), European standards (EN), or International Standards Organization (ISO).

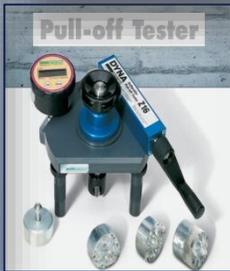
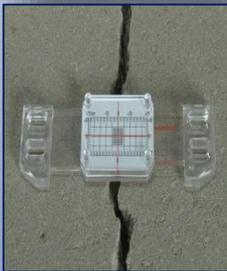
CONCRETE DISTRESS INVESTIGATION:

Concrete is a fundamental building material with many beneficial properties arising from its strength, versatility and ready availability. However, a number of deterioration and distress mechanisms could occur as a result of the interaction between the concrete and its environment. When concrete starts to deteriorate, it is essential that it is investigated by experts.

THIS SERVICE INCLUDES:

Specialist site teams for non-destructive and destructive testing to determine the depth of cover to concrete, the condition of the reinforcement bars, crack monitoring, visual surveys, delamination surveys, UPV surveys, core and dust sampling.

STRUCTURAL ASSESSMENT OF CONCRETE:



- Visual inspection of concrete structure (Structural assessment)
- Petrographic examination
- Crack Mapping (Crack measurement)
- Cutting of Concrete Core (Extraction of concrete core)
- Rebound Hammer Test for Hardened Concrete (Hardness)
- Determination of ultrasonic pulse velocity
- Determination of concrete cover to reinforcement (Pachometer test)
- Pull off strength (Bond test)

Advisory Services:

We offer consultancy services on many aspects of construction and materials technology. These include appraisal of specifications, establishment of QA and QC schemes for material / product assessment, failure investigations and statistical analysis of performance tests. We are also able to devise test methods where no suitable standard exists.

Topic of the Quarter – Construction Material Testing Laboratory / Civil Laboratory

CONCRETE TESTING:

Concrete Tests Such as for Fresh concrete, Hardened Concrete, Precast concrete Units, Cement, Masonry units, Natural Building stones, rock, marble stone; cement tiles, ceramic tiles etc.

Complete range of equipment for:

- Testing on fresh concrete: Temperature, Consistency and workability, density and unit weight, air content, Water content.
- Testing on Hardened concrete: Compressive strength, Flexural Transverse Strength tests, density modulus of elasticity and Water absorption.

SOIL, ROCK & AGGREGATE TESTING:

TCR Arabia Provides Soil Test services for the material like Backfill, Sub-Base, Sub-Grade, Aggregate Base Course, Sand, Graded Sand, Fine Sand, Silt, Clay, General fill material, Gravels, etc. And Tests for Coarse & Fine Aggregates like Gabbro Aggregates, Lime Stone Aggregates, Light Weight Aggregates, Gravel Aggregates & Sand.

Complete range of Equipment for testing of:

Soils:

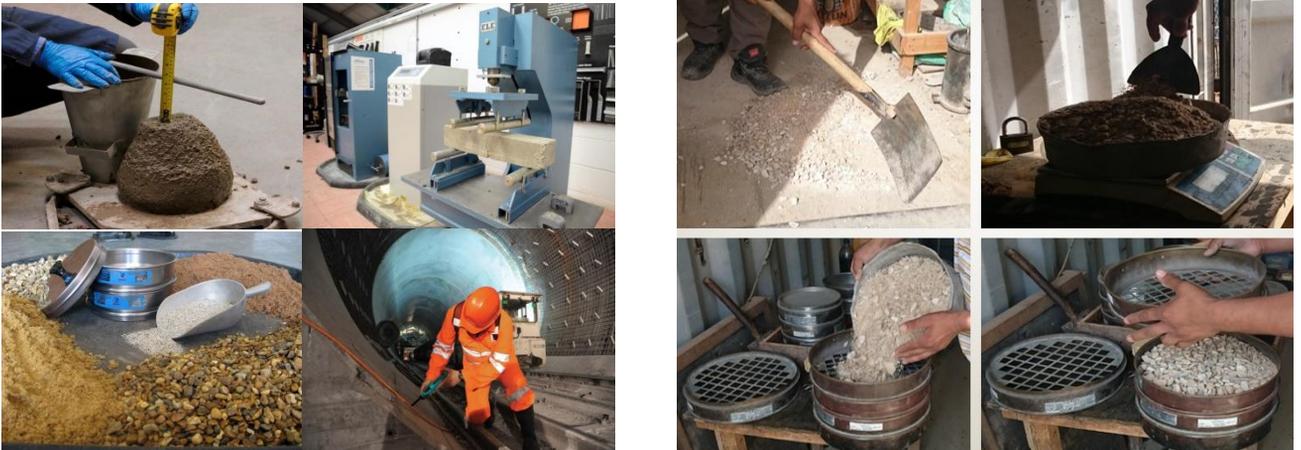
- Classification tests - grain size distribution, plasticity characteristics, particle density & Specific gravity.
- Compaction related tests – proctor, C.B.R, maximum & minimum dry density.

Rocks:

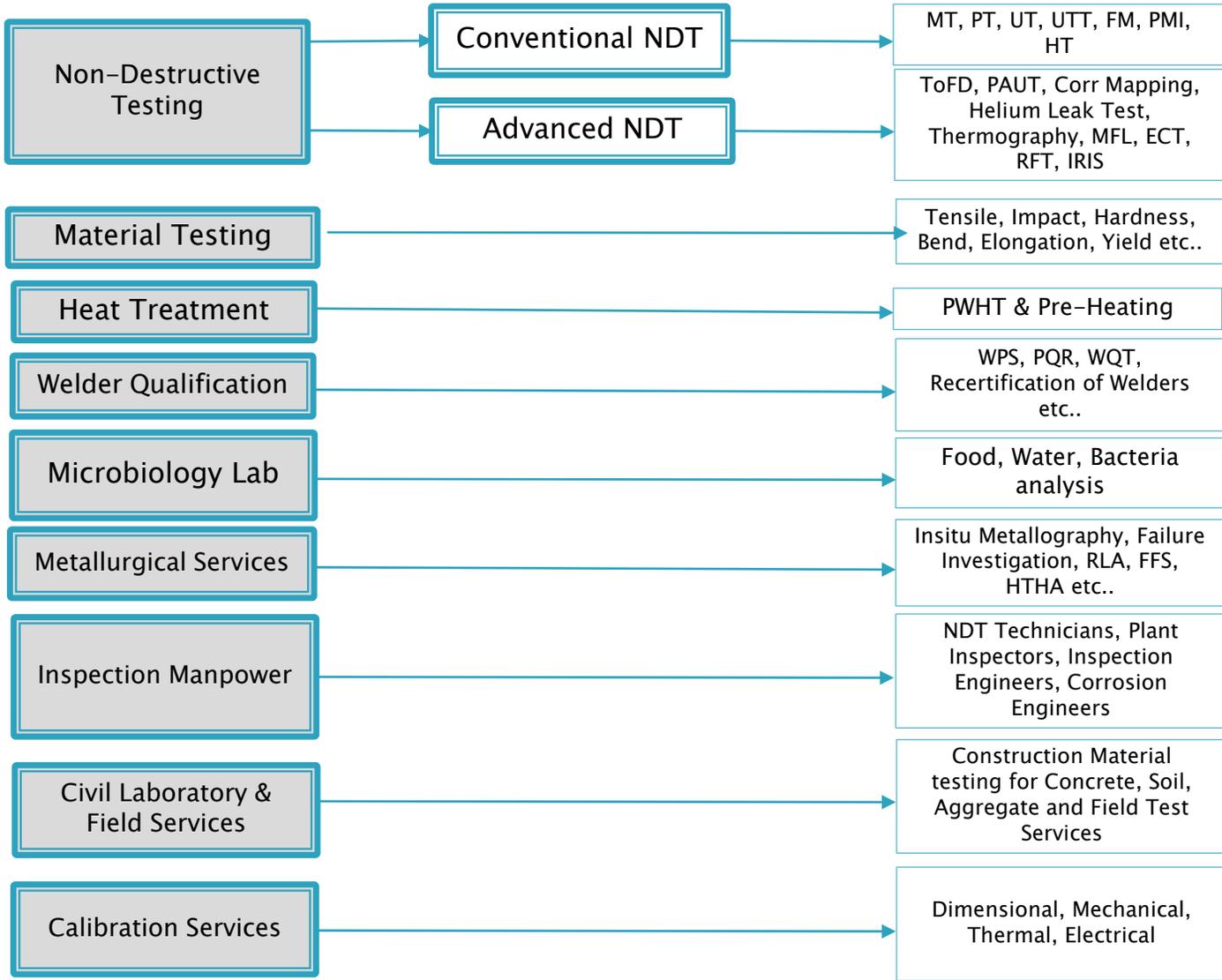
- Unconfined compression test apparatus
- Modulus of elasticity

Aggregate & Stone:

- Physical properties – grain size distribution, density, specific gravity, & water absorption.
- Shape – flakiness and elongation tests, partially crushed faces.
- Sand equivalent value.



Services Portfolio



Advance / High Temperature Inspection Techniques

Sl.	Service Description
01	Automated High Temperature Corrosion Mapping
02	Automated High Temperature Time of Flight Diffraction UT (ToFD)
03	Automated High Temperature Phase Array Ultrasonic Testing (PAUT)
04	Hydrogen induced Crack Examination (HIC)
05	Stepwise Crack Examination (SWC)

Advanced Metallurgical Services

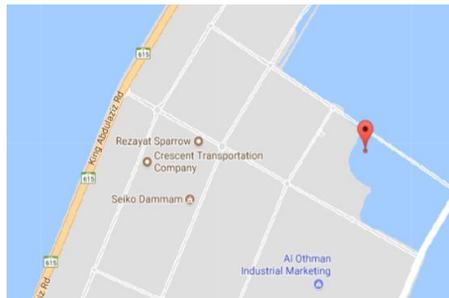
Sl.	Service Description
01	Root Cause / Failure Analysis
02	Remaining Life Assessment
03	Fitness for Service
04	Condition Assessment
05	Metallographic Replication / Insitu Replica

Events

TCR Arabia Head Office & Labs are now shifted to new location in Dammam



GPS Location: 26.450525, 50.193787



Events

TCR Arabia 10 year Anniversary and New Facility Inauguration – 26-12-2017



Events

2017 NAOO Innovation & Technology Forum and Exhibition
at Saudi ARAMCO Tanajib. December 5-6, 2017



Staff Skills Enhancement

Certifications achieved by TCR Arabia employees in the 4rd Qtr. 2017.

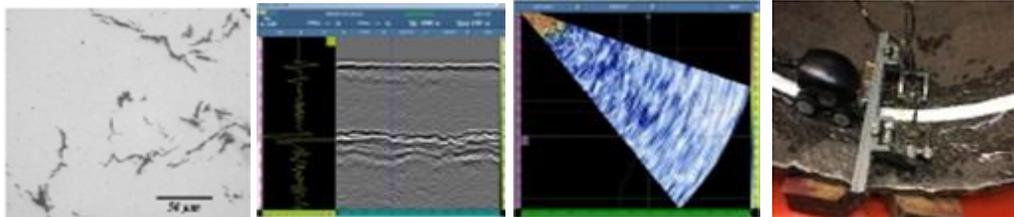
Name	Certification
Waqas Qasim	API 577
Mustafa Mohammed Al-Jaber	ASNT Level II, ECT
Hussain Al-Safwan	ASNT Level III, ECT

HTHA training of TCR Employees in U.S.A

TCR Arabia recently completed training of its chosen staff on HTHA Detection and Sizing (HTHA-40). The training was concluded at Houston, Texas, U.S.A. by Lavender International last May 1-5, 2017.



HTHA course is designed to educate advance UT inspectors on methodologies and techniques to more reliably detect HTHA. The course is founded on extensive work and experience gained during industrial trials as part of the E2G HTHA JIP. Lavender are custodians of the extensive E2G sample inventory and this will be used for HTHA training and certification purposes.



Client Appreciation Letters



New Staff

TCR welcomes its new team members and wishes them great success ahead



Mr. Ahmed Al-Malki – PRO Jubail Office – Administration

Mr. Ahmed Al-Malki has high experience when in terms for the field he has chosen, before joining TCR, his primary job was an merchandizer from Al-Safi Danone Co. Ltd, he was a marketing staff and providing quality service with customer that the company has to offer. After his first career, he decided to shift little bit to become an Internal Collector by working from TW Horizon, he develop his interpersonal skills by contacting customers, following up cases and arrange agreements with the bank. Then his recent job was a Government Relations Administrator from MIDCHEM that all PR and government related work is task to him. Joining TCR will enhance his skills and he is sure that he can contribute well.



Mr. Ahmed Abdullah Ali Yaseen – Microbiologist – Microbiology Department

Mr. Ahmed is a professional. He completed B.SC Food Science course and graduate from it. His first qualification was with Quality Control in the field he has chosen. After schooling he worked at Dates Company in Al-Hassa, Saudi Arabia as Quality Control Officer. His knowledge about laboratory and Food Science brings him to TCR Arabia where he landed a job as an Microbiologist. He believed that he can contribute all his skills, knowledge and hard work to attain the company and department goals.



Mr. Mahdi Al-Ghasham – Finance/Admin Asst. – Finance Department

Mr. Mahdi has vast experience when it comes to administering and finance. His previous experience was working with King Saud university from 2005-2009 as BK Accountant. His last work before joining TCR Arabia is from Mohammed Almojil Group MMG from 2010-2017 (Oct) as Administrator. Joining TCR will contribute his knowledge and expertise in his chosen field. He believe that he can share and contribute to the future of TCR to met its vision and mission.



Mr. Ali Hassan Al-Yaseen – Machinist – Mechanical Department

Mr. Ali Al-Yaseen is an experience individual. His past work was with Wheatherford as machine operator for 2 years. He joined TCR to develop and improved his profession in Mechanical field. Being hired as TCR machinist, he can easily adapt his skills for various machine and equipment TCR has to offer. He is positive that he can contribute well in the field that he is pursuing.



Mr. Adil Hameed – Billing Coordinator – Sales Department

Mr. Adil studied Bachelor of Business Administration is residing in Saudi Arabia for the past 2 decades. He have joined TCR with the aim of improving his potential and put his best to the growth of the company. He have worked in Al-Majdouie Co. under CPD team dealing with physical inventory and data entry. For the short period, He have excellent knowledge in MS Excel. Word, Visio, Photoshop, Corel Video Studio and Final cut pro. Under sales department he will support and share his experience to attain the department goals.