



# MFC

MOHAMMED FAYEZ  
AL-ARIDHI MATERIAL  
TESTING LAB



# TABLE OF CONTENTS

About Us	03
Mission & Vision	04
Core Values and Objectives	05
Our Services	06
Why MFC	13
Contact Us	14

# About Us



IN SAUDI ARABIA, MFC CIVIL TESTING LAB IS A LEADING SUPPLIER OF THOROUGH CIVIL ENGINEERING TESTING AND QUALITY CONTROL SERVICES. WE WERE FOUNDED WITH A DEDICATION TO QUALITY, AND OUR AREA OF EXPERTISE IS PROVIDING ACCURATE, DEPENDABLE, AND PROMPT RESULTS TO ASSIST WITH INFRASTRUCTURE AND BUILDING PROJECTS AROUND THE KINGDOM. WITH CUTTING-EDGE MACHINERY AND KNOWLEDGEABLE STAFF, OUR CLIENTS CAN CONSTRUCT WITH CONFIDENCE AND ACCOMPLISH UNMATCHED PROJECT SUCCESSES. THANKS TO OUR STATE-OF-THE-ART FACILITIES AND HIGHLY QUALIFIED STAFF, WHICH GUARANTEE ADHERENCE TO INTERNATIONAL STANDARDS. FOR THE PHYSICAL, CHEMICAL, AND MECHANICAL TESTING OF BUILDING MATERIALS SUCH AS SOILS, CONCRETE, AGGREGATES, ASPHALTS, ROCKS, AND METALS, WE OFFER COMPLETE SOLUTIONS.



# Mission and Vision

## → Mission

**OUR GOAL IS TO PROVIDE CLIENTS WITH ACCURATE AND EFFICIENT TESTING SOLUTIONS USING LATEST TECHNOLOGIES AND QUALIFIED PROFESSIONALS TO ASSURE PROJECT SAFETY AND DURABILITY.**

## → Vision

**TO BE SAUDI ARABIA'S TOP CIVIL TESTING FACILITY, ESTABLISHING STANDARDS FOR EXCELLENCE, CREATIVITY, AND CLIENT SATISFACTION.**

# Core Values

## Precision

UNCOMPROMISING FOCUS ON ACCURACY AND DETAIL.

## Innovation

UPHOLDING THE HIGHEST ETHICAL STANDARDS.

## Integrity

EMBRACING CUTTING-EDGE TECHNOLOGY AND METHODOLOGIES.

## Customer

BUILDING LASTING RELATIONSHIPS THROUGH EXCEPTIONAL SERVICE.

## OUR OBJECTIVE

- PROVIDE A HAZARD-FREE ENVIRONMENT FOR EMPLOYEES BY USING THE BEST SAFETY PROCEDURES. TO ENSURE THAT THE ENVIRONMENT IS COMPLETELY CONTAMINATION-FREE.
- TO GUARANTEE COMPLETE CLIENT HAPPINESS AND TOP-NOTCH CUSTOMER SERVICE. ACHIEVE A LABORATORY WORKFORCE THAT IS 100% COMPETENT.
- TO FULLY ADHERE TO CLIENT AND LOCAL STANDARDS, TAKE INTO ACCOUNT ANY MODIFICATIONS TO PREVIOUS REQUIREMENTS, AND MAKE SURE THAT LEGAL REQUIREMENTS ARE ROUTINELY CHECKED

# Our Services

- **Material Testing**

**THOROUGH EXAMINATION OF STEEL, ASPHALT, AGGREGATES, CONCRETE, AND SOIL.**

- **Geotechnical Investigations**

**SOIL STABILITY, LOAD-BEARING ANALYSIS, AND FOUNDATION RECOMMENDATIONS.**

- **Non Destructive Testing (NDT)**

**STRUCTURAL EVALUATIONS WITHOUT COMPROMISING THE INTEGRITY OF MATERIALS.**

- **Environmental Testing**

**ASSESSMENT OF ENVIRONMENTAL IMPACTS AND COMPLIANCE.**

- **Calibration Services**

**ENSURING PRECISE MEASUREMENTS FOR YOUR TESTING EQUIPMENT.**



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MATERIAL  
TESTING  
SERVICES

GEOTECHNICAL  
SERVICES

INSPECTION  
SERVICES

STRUCTURAL  
CONCRETE  
INVESTIGATION

# Material Testing

## AGGREGATE AND SOIL.

SOIL AND AGGREGATE SAMPLE COLLECTION SAMPLE REDUCTION. TO TEST SIZE FINE AND COARSE AGGREGATE SIEVE ANALYSIS. MATERIAL WASHING THAT IS FINER THAN A SIEVE THE 200TH SOIL. SAMPLE PROCTOR TESTS, BOTH STANDARD AND MODIFIED. ATTERBERG LIMIT, SOIL PLASTICITY INDEX, LIQUID LIMIT, AND PLASTIC LIMIT.

SPECIFIC GRAVITY OF AGGREGATE AND FINE AND COARSE SOIL SAMPLES.

THE LOWEST AND MAXIMUM SOIL SAMPLE INDEX DRY DENSITIES. AGGREGATES OF FRIABLE GRANULES AND LUMPS OF CLAY. RESISTANCE TO IMPACT AND ABRASION-INDUCED COARSE. AGGREGATE DETERIORATION IN LOSS THE ANGELES MACHINE. AGGREGATE SOUNDNESS UTILIZING MAGNESIUM AND SODIUM SULFATES.

USING THE NUCLEAR APPROACH TO DETERMINE THE SOIL'S DENSITY AND MOISTURE CONTENT (SHALLOW DEPTH).

USING THE SAND CONE METHOD, DETERMINE THE SOIL'S DENSITY AND MOISTURE CONTENT IN SOIL.

CALIFORNIA BEARING RATIO (CBR).

STANDARD TEST METHOD FOR BULK DENSITY (UNIT WEIGHT) AND VOIDS IN AGGREGATE.

STANDARD TEST METHOD FOR LABORATORY DETERMINATION OF WATER (MOISTURE) CONTENT OF SOIL AND ROCK BY MASS.

STANDARD TEST METHOD FOR SAND EQUIVALENT VALUE OF SOILS AND FINE AGGREGATE.



## **ASPHALT.**

SAMPLING OF HOT MIX ASPHALT QUANTITATIVE EXTRACTION OF BITUMEN FROM BITUMINOUS PAVING MIXTURE.

MECHANICAL SIZE ANALYSIS OF EXTRACTED AGGREGATE BULK. SPECIFIC GRAVITY AND DENSITY OF COMPACTED BITUMINOUS PAVING MIXTURE.

STANDARD TEST METHODS FOR THEORETICAL MAXIMUM SPECIFIC GRAVITY AND DENSITY OF BITUMINOUS PAVING MIXTURES.

CUTTING OF ASPHALT CORES.

MARSHAL FLOW AND STABILITY DETERMINATION OF BITUMINOUS PAVING MIXTURE.

STANDARD TEST METHODS FOR ESTIMATING APPLICATION RATE AND RESIDUAL APPLICATION RATE OF BITUMINOUS DISTRIBUTORS.

STANDARD TEST METHODS FOR PREPARATION OF ASPHALT MIXTURE SPECIMENS USING MARSHALL APPARATUS.

STANDARD TEST METHODS FOR THICKNESS OR HEIGHT OF COMPACTED ASPHALT MIXTURE SPECIMEN.

## **CONCRETE.**

STANDARD PRACTICE FOR SAMPLING FRESHLY MIXED CONCRETE STANDARD PRACTICE FOR MAKING AND CURING CONCRETE TEST SPECIMENS IN THE FIELD.

STANDARD TEST METHOD FOR TEMPERATURE OF FRESHLY MIXED HYDRAULIC CEMENT CONCRETE.

STANDARD TEST METHOD FOR SLUMP OF HYDRAULIC CEMENT CONCRETE.

STANDARD TEST METHOD FOR AIR CONTENT OF FRESHLY MIXED CONCRETE BY THE PRESSURE METHOD.

STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF HYDRAULIC CEMENT MORTAR.

SPECIFICATIONS FOR MOIST CABINETS, MOIST ROOMS & WATER STORAGE TANKS FOR CONCRETE SPECIMENS.

STANDARD PRACTICE FOR SULPHUR CAPPING CYLINDRICAL CONCRETE SPECIMEN.

STANDARD PRACTICE FOR USE OF UNBONDED CAPPING OF CYLINDRICAL CONCRETE SPECIMEN'S.

STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMEN.

STANDARD TEST METHOD FOR OBTAINING AND TESTING DRILLED CONCRETE CORES AND SAWED BEAM OF CONCRETE.

STANDARD TEST METHOD FOR REBOUND NUMBER OF HARDENED CONCRETES.

STANDARD TEST METHODS FOR COMPRESSIVE STRENGTH OF CHEMICAL RESISTANT MORTARS, GROUT, MONOLITHIC SURFACING AND POLYMER CONCRETE.

## **CHEMICAL.**

STANDARD TEST METHODS FOR PH. OF WATER (METHOD A).

STANDARD TEST METHODS FOR FILTERABLE MATTER (TOTAL DISSOLVED SOLIDS TDS) & NON FILTERABLE MATTER.

(TOTAL SUSPENDED SOLIDS) IN WATER.

SULPHATE (METHOD OF TEST FOR SOIL FOR CIVIL ENG PURPOSE).

CHEMICAL & ELECTROCHEMICAL TESTS) CHLORIDE (METHOD OF TEST FOR SOIL FOR CIVIL ENG PURPOSE. CHEMICAL & ELECTROCHEMICAL TESTS).



# Soil Investigation

TO MANAGE PROJECT RISKS, ESPECIALLY FOR THOSE WHICH ARE PERFORMED IN DIFFICULT OR CHALLENGING AREAS, FMCEST HAS A WEALTH OF SPECIALIST RESOURCES. A COMBINATION OF PROFESSIONAL CAPABILITIES AND SPECIALIZED EQUIPMENT MEANS THAT WE CAN READILY SUPPORT PROJECTS IN AREAS OF SEISMIC ACTIVITY, OR WHERE SITE ACCESS IS DIFFICULT. WE FREQUENTLY WORK IN CLIMATIC EXTREMES, AREAS OF ENVIRONMENTAL SENSITIVITY OR URBAN OR INDUSTRIAL COMPLEXITY AND IN CHALLENGING CONDITIONS (REMOTE, SOFT, MARSHY, OVER-WATER, HAZARDOUS). WHETHER YOUR WORK SCOPE INCLUDES GEO-TECHNICAL INVESTIGATION, SITE EXPLORATION, MATERIAL TESTING OR INSPECTION SERVICES, WE PROVIDE SOUND SOLUTIONS. OUR EXTENSIVE FLEET OF DRILLING AND SUPPORT EQUIPMENT ENABLES US TO PROVIDE A COMPREHENSIVE RANGE OF FIELD SERVICES WHICH INCLUDE:

- 1. DRILLING, CORING, AND SAMPLING OF SOILS AND ROCK
- 2. IN SITU TESTING:- BOREHOLE LOGGING - DYNAMIC AND STATIC PLATE LOAD TEST - INFILTRATION TEST - CONSTANT HEAD PERMEABILITY TEST



# Drilling Services

WE HAVE A VARIETY OF DRILLING RIGS AT FMC EST, AND WE'RE ALWAYS WORKING TO FIND THE BEST DRILLING METHOD TO FIT THE GOALS OF A GIVEN PROJECT AND THE ENVIRONMENTAL CONDITIONS. SOME OF THE METHODS WE USE INCLUDE:-AUGER DRILLING -OPEN HOLE DRILLING -BOREHOLE EXAMINATION .

FMC EST CAN UTILIZE THE MAIN LABORATORY NETWORK TO AVOID ANY SCHEDULED DELAYS OR TO ACCOMMODATE ANY ADDITIONAL TESTING THAT MAY BE REQUIRED AFTER ACQUISITION OF THE SAMPLES. IF REQUIRED, WE CAN UNDERTAKE THE FULL RANGE OF ADVANCED LABORATORY TESTING THAT MAY BE REQUIRED. ALL SAMPLES ARE SUBSEQUENTLY TRANSPORTED TO OUR ACCREDITED LABORATORY IN DHARAN

FOR DETAILED LOGGING AND ADDITIONAL TESTING. REPRESENTATIVE SAMPLES ARE GENERALLY

SELECTED AS PER PROJECT REQUIREMENTS, FOR LABORATORY TESTING TO ASSIST WITH SAMPLE

DESCRIPTIONS AND DETERMINATION OF ENGINEERING MATERIAL PROPERTIES.

FMC EST IS THE MAIN LABORATORY IN DHARAN BY ISO 17025 AND THE LABORATORY

MANAGEMENT SYSTEM IS UNDER CERTIFICATION BY FOLLOWING THE GIVEN STANDARDS:

-BRITISH STANDARD 1377:1990.

-ISO 17025:2017

-ASTM STANDARDS

TEST TYPES:

-EXTRUSION AND PREPARATION OF UP TO 6-INCH DIAMETER UNDISTURBED SAMPLES

-CLASSIFICATION TESTS INCLUDING VISUAL CLASSIFICATION AND SOIL/ROCK TYPE

ANALYSIS, WATER CONTENT, ATTERBERG LIMITS, SPECIFIC GRAVITY, AND DENSITY.

-STATIC TESTING- TRIAXIAL STRESS PATH, RING SHEAR, CONSTANT RATE OF STRAIN CONSOLIDATION-SIEVES MECHANICAL GRAIN SIZE AND HYDROMETER ANALYSIS -DETERMINATION OF THE CALIFORNIA BEARING RATION (CBR) -ENVIRONMENTAL, CHEMICAL ANALYSIS FOR SOIL AND ROCK SAMPLES





# Why MFC ?

1. ACCREDITATION AND COMPLIANCE: CERTIFIED TO MEET LOCAL AND INTERNATIONAL STANDARDS.
2. ADVANCED TECHNOLOGY: CUTTING-EDGE TESTING EQUIPMENT AND METHODOLOGIES.
3. EXPERT TEAM: EXPERIENCED PROFESSIONALS DEDICATED TO DELIVERING EXCELLENCE.
4. CLIENT-FOCUSED: PERSONALIZED SOLUTIONS AND RESPONSIVE SERVICE.
5. TIMELY RESULTS: FAST AND ACCURATE REPORTING TO KEEP YOUR PROJECTS ON TRACK.



# Contact Us

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Partner with MFC Civil Testing Lab—where precision meets performance. Let us build a stronger, safer future together.