



# FUGRO-SUHAIMI CONSTRUCTION MATERIALS TESTING

**Fugro-Suhaimi Ltd (FSL) offers a range of field and laboratory-based testing, analysis and examination services. It covers a variety of construction materials, including concrete, aggregate, asphalt and soil. FSL complies with ASTM and BS standards along with other national and company standards.**

## **ON-SITE LABORATORIES**

FSL has provided on-site field and laboratory services to a range of clients including Aramco, Samsung, Royal Commission and Hyundai Engineering. We offer multiyear provision of services for a range of projects varying magnitudes. Our projects include supplying all aspects of on-site testing, including provisions for laboratory facilities, calibration of the testing equipment and accreditation of the facility and the staff.

## **THIRD-PARTY LABORATORY SERVICES**

FSL provides laboratory services for small and large projects via our well-distributed offices across Saudi Arabia. We have fully equipped laboratories accredited to ISO 17025 standards in Dammam, Jubail, Abqaiq, Riyadh, Jeddah, Yanbu, Makkah, Rabigh and Jazan. All our staff are well-trained and competent to perform a wide range of tests.

## **CONCRETE**

FSL tests a range of cementitious materials, including structural concrete, shotcrete and grout. Typical testing includes:

- Slump and temperature
- Casting cylinders
- Compressive strength
- Density
- Cement content
- Trial mix design
- Petrographic examination
- Rapid chloride permeability
- Rebound hammer survey
- Half-cell potential survey
- Ultrasonic pulse velocity survey
- Sampling cores

**AGGREGATE**

FSL conducts site and laboratory testing of aggregate samples, including:

- Acid soluble chloride and sulfate
- Aggregate potential alkali reactivity
- Los angeles abrasion
- Fineness modulus
- Flakiness and elongation index
- Sand equivalent test
- Particle size distribution
- Specific gravity and absorption
- Unit weight (loose and rodded)
- Petrographic examination

**SOIL**

FSL can conduct site and laboratory testing of soil samples, including:

- Field testing by nuclear method
- Modified proctor test
- Sieve analysis
- Soil classification
- Liquid limit, plastic limit and plasticity index
- Water soluble sulfate and chloride
- California bearing ratio
- Moisture content
- Hydrometer analysis

**STEEL**

FSL conducts laboratory testing of steel samples, including:

- Tensile strength
- Hardness
- Yield
- Elongation
- Chemical analysis
- Visual inspection of welded joints
- Radiographic testing
- Ultrasonic testing
- Dye penetrant
- Magnetic particle testing



*Determining the compressive strength of concrete cylinders.*

**ASPHALT**

FSL conducts site and laboratory testing of asphalt samples, including:

- Asphalt mix design
- Bulk specific gravity
- Coating and stripping
- Cutting cores
- Marshall test
- Rate of spray

**WATER**

FSL conducts laboratory testing of water samples, including:

- Bacteriological
- Conductivity
- pH
- Portability test
- Total dissolved solids (TDS)



*Laboratory analysis of soil samples.*



*Laboratory analysis of asphalt samples.*

**Fugro-Suhaimi Ltd.**

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