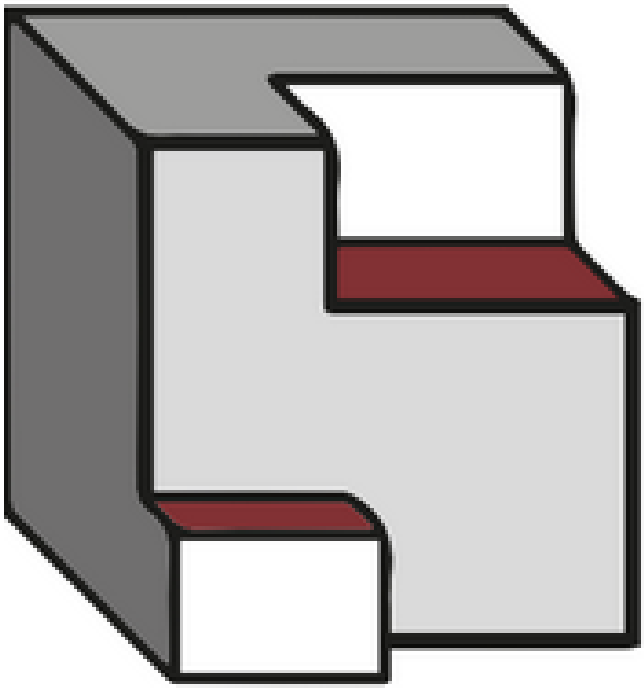
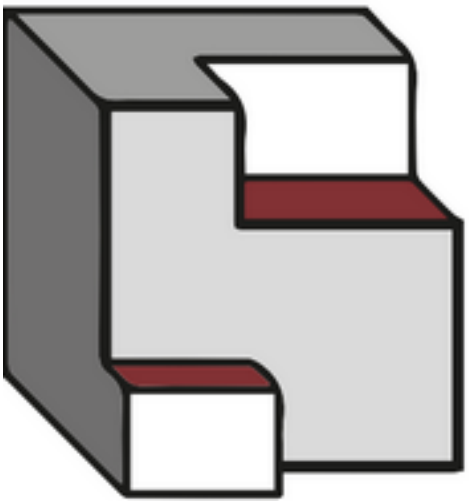
Profile



Engineering Materials Laboratory

Supervised by order of Syrian Engineering and architects



WE ARE DRAWING TOGETHER

THE SAFETY LINES

FOR YOUR PROJECTS

Engineering Materials Laboratory

ABOUT US

Since it is established, Engineering Materials Laboratory EML has become a pioneer in the building materials testing field, and in this context we are committed to improve the understanding and using of the construction materials .

Engineering Materials Laboratory EML is supervised by order of Syrian Engineering and Architects.

Our laboratories are equipped with the modern and sophisticated construction material testing equipment.

EML has become the trusted third-party provider for the professional construction materials engineers having a wide experience and understanding of construction materials, materials testing, and construction practices

OUR VISION

To be the leader in elevating the construction industry quality in our field work and to be the best trusted third- party and real partner in construction materials testing.

OUR MISSION

We bring peace of mind to our partner in construction industry by providing the required and qualified services and improving the understanding and using of construction materials

SERVICES

Our services ranges are based on large construction projects needs and built to assist and support our customers in the knowledge and usage the construction material to improve the quality of their projects.

In this regard, Engineering Materials Laboratory EML installs a core goal to rise the benchmarks of quality in the constructions sector by using the advanced methods and knowledge in the concrete technology. On this way EML provides the following items:

- ✓ Concrete quality control program is related to controlling, sampling and testing of concrete and providing the required reports to meet the projects specifications.
- ✓ Non Destructive testing, NDT is an effective and modern tool in testing process to output the properties of material for any existing structure without demolishing.
- ✓ consulting services in concrete.
- ✓ geotechnical investigations, consulting, supervision.
- ✓ foundation inspection and testing.
- ✓ soil and rock laboratory testing.
- ✓ steel testing.

LIST OF TESTS

- **CEMENT TESTS**

  - ✓ Particle Size and Fineness, Blaine [(ASTM C 204 (AASHTO T 153)]
  - ✓ Soundness, Autoclave-Expansion test [(ASTM C 151 (AASHTO T 107)]
  - ✓ Setting Time Vicat Apparatus [(ASTM C 191 (AASHTO T 131)]
  - ✓ Consistency, Vicat Plunger [(ASTM C 187 (AASHTO T 129)]
  - ✓ Compressive Strength of Cement [ASTM C 109 (AASHTO T106)]

- **AGGREGATE TESTS**

  - ✓ Organic Impurities [ASTM C 40 (AASHTO T 21)]
  - ✓ Grading of Aggregates [ASTM C 136 (AASHTO T 27] & [ASTM C 33 (AASHTO M 6/M80]
  - ✓ Moisture Content of Aggregates [ASTM C 566 (AASHTO T 255]
  - ✓ Bulk Density (Unit Weight) [ASTM C 29 (AASHTO T 19)]
  - ✓ Relative Density (Specific Gravity) [ASTM C 127 (AASHTO T 85) and ASTM C 128 (AASHTO T 84)]
  - ✓ Sand equivalent test for fine aggregate and soil [ASTM D 2419 (AASHTO T 176)]
  - ✓ Abrasion resistance test (Los Aneles) [ASTM C 131 & C 535 (AASHTO T 96)]

- **CONCRETE TESTS**

  - ✓ Consistency [ASTM C 143 (AASHTO T 119)]
    The slump test is the most generally accepted method used to measure the consistency of concrete.
  - ✓ Temperature Measurement [ASTM C 1064 (AASHTO T 309)].
  - ✓ Density and Yield [ASTM C 138 (AASHTO T 121]
    The density (unit weight) and yield of freshly mixed concrete.
  - ✓ Air Content [ASTM C 231(AASHTO T 152)].
  - ✓ Strength Specimens [ASTM C 31 or AASHTO T 23].
  - ✓ Time of Setting [ASTM C 403 (AASHTO T 197)] .
  - ✓ Bleeding of Concrete [ASTM C 232 (AASHTO T 158)]
  - ✓ Strength Tests of hardened concrete.

Strength tests of hardened concrete are performed on the following:

1. cured specimens molded in accordance with [ASTM C 31 or C 192 (AASHTO T 23 and T 126)] from samples of freshly mixed concrete.
2. in-situ specimens cored or sawed from hardened concrete in accordance with [ASTM C 42 (AASHTO T 24)]
3. specimens made from cast-in-place cylinder molds, [ASTM C 873]

- ✓ Air Content of hardened concrete [ASTM C 457]
- ✓ Density, Relative Density (Specific Gravity), Absorption, and Voids [ASTM C 642]
- ✓ NDT - Rebound Hammer Tests [(ASTM C 805)]

  The Schmidt rebound hammer essentially a surface-hardness tester that provides a quick, simple means of checking concrete uniformity
- ✓ Carbonation of hardened concrete [(ASTM C 856)]
- ✓ Volume and Length Change of hardened concrete [ASTM C157 (AASHTO T 160)]

- **SOIL TESTS**

  - ✓ Determination of Atterberg Limits [ASTM D 2216]
  - ✓ Standard Proctor Test [ASTM D 698]
  - ✓ Modified Proctor Test [ASTM D 1557]
  - ✓ California Bearing Ratio (CBR) [ASTM D 1883]
  - ✓ Sieve Analysis [ASTM C136]
  - ✓ Unite Weight (bulk density) [ASTM D 2937]
  - ✓ Relative Density [ASTM D 1557]
  - ✓ Specific Gravity [ASTM D 854]

- **STEEL TESTS**

  - ✓ Tensile test for reinforcing bar [ASTM A 370]
  - ✓ Bend test for reinforcing bar [ASTM A 370]

- **ADVANCED CONCRETE NON-DESTRUCTIVE TESTING**

  - ✓ Ultrasonic Pulse Velocity Testing

  - ✓ Ferroscan Test [Rebar Mapping Surveys]

TRAINING

Our training courses cover the following:

- ✓ correct understanding of specification
- ✓ Laboratory and field testing of construction materials
- ✓ Soils and rock testing
- ✓ Concrete mix design
- ✓ Ready-mix concrete technology
- ✓ Quality control, method of statement preparing for large pour
- ✓ Mass concrete solution, control and analysis heat of hydration
- ✓ handling and storing of raw material
- ✓ Concrete Batching, Mixing, Transporting, Handling, placing, pumping, finishing, curing
- ✓ Material storage, handling [cementitious materials, aggregates, admixture]

LIST OF PROJECTS - 2017

The Project of Organizing For East of AL Mazzeh [L66] – Infrastructure Damascus - Syria	Developing the usage of recycled – concrete materials of the demolished building, jointly with Engineering Materials Laboratory – Syrian Engineering - Damascus
The Southern and Northern Entrances of Tartous City Tatous- Syria	Concrete and steel quality control
Draykish Road Tatous- Syria	Concrete and steel quality control of complemented works
Assad & Rafoul Tower Tatous- Syria	Concrete quality control
Compound Of 260 Chalets For Pension Fund of Syrian Engineers Tatous- Syria	Concrete quality control

PHOTOS ALBUM

Under the auspices of Dr. Bashar Al Assad, the President of Syrian Arab Republic

The prime minister Engr. Emad Kames has launched Engineering Materials Laboratory

WE ARE DRAWING TOGETHER

THE SAFETY LINES

FOR YOUR PROJECTS

We are Looking for a fruitful Cooperation.