# LIST OF LABORATORY TESTS CARRIED OVER AT AL HOTY STANGER LTD CO.

## Aggregates

- Sieve Analysis including materials finer than 75microns
- Unit weight
- S.G. & Absorption
- L.A. Abrasion
- Clay lumps & Friable Particle
- Flakiness & Elongation Index
- Aggregate impact value
- Aggregate crushing value
- 10% Fines value
- Soundness
- Sulphate, Chloride, PH
- Potential alkali reactivity
- Carbonate content
- Organic impurities
- Light weight pieces
- Slake durability
- Alkali reactivity (Mortar Bar method)
- Shrinkage on Aggregate mix

## Soils

- Sieve analysis (wet) including passing #200 sieve
- Alterberg limits
- Linear Shrinkage
- Moisture density relation (All method)
- Laboratory CBR soaked & un-soaked
- Hydrometer analysis
- Moisture content
- Specific gravity
- Organic matter
- Maximum density determination on non cohesive material
- Minimum density determination on non cohesive material
- Sulphate, Chloride, PH
- Electrical resistivity
- Thermal resistivity

## Concrete

- Mix design
- Setting time (Mortar)
- Unit weight / yield
- Cylinder strength
- Cube strength
- Flexural strength
- Permeability test
- Schmidt hammer test

- Core strengths
- Potential alkali reactivity (Mortar bar method)
- Shrinkage test
- Rapid chloride permeability
- Sulphate, Choloride, PH
- Depth of carbonation
- Cement content & water cement ratio

**Masonry**

- Compressive strength
- Water absorption & moisture content
- Drying shrinkage
- Density

**Cement & Mortar**

- Full physical test
- Comp. strength
- Autoclave expansion
- Setting time
- Air content
- Heat of hydration
- False set
- Mortar / Grout trial mix
- Water retention & flow
- Fineness

**Asphalt & Bitumeo**

- Binder content & Grading
- Stability, Flow, Density
- Loss of stability
- Maximum theoretical specific gravity
- Care density & thickness
- Mix design
- Penetration
- Distillation
- Flash point
- Fire point
- Solubility
- Retained penetration
- Softening point
- Thin film oven test
- Coating & stripping

**Granite / Marble**

- Absorption

- Density
- Compressive strength
- Modules of rupture
- Abrasion resistance
- Flexural strength, etc…