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PROJECTS



BRITISH STANDARDS INSTITUTION
HAS CERTIFIED THAT SOLIDBASE
LABORATORY LIMITED HAS ACHIEVED
WORLD CLASS QUALITY WITHIN OUR
ORGANISATION BY MEETING THE
REQUIREMENTS OF THE ISO
9001:2000 QUALITY MANAGEMENT
SYSTEM STANDARD.

directors' message

Solidbase Laboratory Ltd. started its operations in March 2005 in a small lab capable to conduct the essential tests required in the construction industry. From its early days, Solidbase Laboratory Ltd. ensured that the level of service being rendered was commensurate to the responsibility with which its clients were entrusting it with. Such a commitment was implemented by means of continuous investment in its systems, staff and equipment. Today, Solidbase Laboratory Ltd. is proud of its achievements whereby its systems are ISO 9001:2000 compliant and include a website where customers can download all the test results; its staff have successfully read various testing courses with renowned foreign universities and its new equipment is fully compliant to the relevant current EN standards. Solidbase Laboratory Ltd is capable of assisting its clients with unique expertise on construction materials, their usage and their method of application.

Solidbase Laboratory Ltd. also prides itself of providing its customers with a simple and effective approach to construction issues in time of doubt and stress. Throughout its history, Solidbase Laboratory Ltd. has enlightened its customers with what would have been otherwise unnecessary problems. Solutions have always been tackled with the utmost efficiency.

We would like to invite you to our laboratory in Qormi in order to show you the high quality standard to which the laboratory has been set. We would also like to show you the competence and dedication in conducting tests and serving our clients.

We thank you for dedicating time to review this document and we await your call.



services

CONCRETE SOILS AGGREGATES
CEMENT CERAMIC &
TERRAZZO TILES ROCK
PAVING BLOCKS BRICKS
KERBS & FLAGS STEEL
ASPHALT & BITUMEN
ENVIRONMENT MONITORING
QUALITY ASSURANCE

concrete

Various methods of concrete testing are carried out to ensure that it remains of adequate strength and durability.

- slump test
- determination of compressive strength of concrete cubes
- determination of compressive strength of concrete cylinders
- determination of beam flexural strength
- determination of air content in fresh concrete
- determination of density in water of hardened concrete
- determination of density of compacted fresh concrete
- concrete mix design
- schmidt hammer survey
- cover meter survey
- half cell potential testing
- determination of compressive strength of concrete cores
- temperature
- pull-off test
- depth of carbonation
- air content in fresh concrete
- petrographic analysis
- chloride content
- sulphate content



soils

The performance and properties of soil can have a significant influence on construction. Soil can affect both the structure and the materials of a building in both physical and chemical aspects.

- atterberg limits
- maximum dry density & optimum moisture content
- soaked cbr
- sand replacement density
- clegg hammer survey
- plate bearing
- california bearing ratio
- permeability test

aggregates

Aggregates testing is carried out to determine their suitability for inclusion in concrete. Chemical and mechanical testing is performed during the design of the concrete and on the finished products to see whether it will withstand various elements.

- particle size distribution
- moisture content
- aggregate impact value(aiv)
- aggregate crushing value(acv)
- ten percent fines(tpf)
- sedimentation
- flakiness index
- elongation index
- specific gravity & water absorption
- aggregate abrasion value(aav) by los angeles
- polished stone value(psv)
- compacted bulk density
- uncompacted bulk density
- soundness of aggregate
- sonnenbrand
- flakiness index without psd
- elongation index without psd



cement

Cement testing is performed to determine if there would be any alterations / loss of material when in its solid state. Methods of testing include the subsection to a high temperature to determine loss of material, compressive strength and fineness amongst many others to ensure they meet the requirements of relevant international standards.

ceramic & terrazzo tiles

Testing materials and products for raw material assessment, product development, quality control as well as product and material evaluation conformity. Determination of physical properties such as grading, density, porosity, strength, mechanical, electrical and thermal properties and microstructure to study product failure or defects, failure mechanisms, inclusions, grain size and bonding structures, surface analysis, degradation and contaminants.

- ceramic & terrazzo natural moisture content
- ceramic transverse strength
- ceramic trimming (if required)
- ceramic dimensions & appearance
- terrazzo water absorption (total)
- terrazzo water absorption (face)
- terrazzo transverse strength
- terrazzo dimensions & appearance
- ceramic water absorption
- mohs value



rock

Testing services for dimension building stone are designed to provide a comparative basis and classification system for various building stones. Quarries, masons, and general contractors all benefit from these services.

- core trimming & preparation
- core extraction (up to 200mm depth) 1/2 hr
- core extraction (over 200mm depth) 3/4 hr
- determination of compressive strength of cores
- determination of water absorption of cored specimens

paving blocks

Aggregates Concrete block paving offers outstanding strength and durability, and is resistant to most chemicals, making it suitable for a range of applications from ultra-heavy duty areas such as industrial units, container stacking yards and airport pavements to lightly trafficked residential areas and hard landscaping projects. The continuing conformance to the concrete block paving to the existing Standards is supported by tests assessing the compressive strength and water absorption.

- compressive strength & dimensions (set of 4)
- compressive strength & dimensions (set of 16)
- compressive strength & dimensions (set of 8)
- paving blocks trimming and preparation
- water absorption



bricks

Mechanical and physical testing on bricks includes looking at their water absorption, porosity and density, and their compressive strength.

kerbs & flags

Road authorities and other specifiers cannot afford to take risks and should demand consistent, predictable, trouble-free performance of kerbs and flags over the longer term. To give this confidence, kerbs and flags must comply with all aspects of test procedures stipulated in current Standards designed to replicate performance in use over time.

- dimensions
- water absorption
- transverse strength



steel

Testing of steel's properties often begins with checking hardness. This is measured by pressing a diamond pyramid or a hard steel ball into the steel at a specific load.

tensile and yield strength
weld shear strength

asphalt & bitumen

Asphalt cement can go from a liquid during mixing, transporting and placing to a plastic during compaction and service under traffic, and even to a solid at low service temperatures. Tests for measuring fundamental mechanical properties are binder content and grading, flow and stability, theoretical specific gravity and voids content, core density and percentage compaction and skid resistance test. The main characteristics that bitumen must have are consistency and safety.

binder content & grading
flow & stability
theoretical specific gravity & voids content
core density & % compaction
core trimming & preparation
core extraction
skid resistance test



environmental monitoring

Solidbase Laboratory is a leader in providing full-service analytical laboratory and field sampling services for clients striving to comply with the myriad of environmental regulations that impact their operations.

vibration monitoring
noise monitoring
dust monitoring

quality assurance

The aim of the guide is to encourage appropriate quality assurance principles to be followed, enabling works to be carried out to meet the requirements of the customer, whilst offering a fair return on the resources employed.

building works
trenching works
underground service laying





projects

AMERICAN EMBASSY HOUSING
AUTHORITY ARROWPHARM
FOSTERCLARKS SMART CITY
MALTA INDUSTRIAL PARKS
MINISTRY FOR RESOURCES &
RURAL AFFAIRS FOUNDATION
FOR TOMORROW'S SCHOOLS
HOUSING CONSTRUCTION &
MAINTENANCE A3TOWERS
MALTA INTERNATIONAL AIRPORT
LUFTHANSA TECHNIK



malta freeport terminals

Their professional approach has been of great assistance to the Terminal in its projects and thus ensuring its compliance with contractual obligations and quality performance. Regular attendance, timely notification of results, advice on control procedures and a very helpful attitude have characterised their contribution throughout.

Arch Joe Bugeja,
MALTA FREEPORT TERMINALS



lufthansa technik

Solidbase Laboratory have been the choice for Polidano Brothers since it's inception. As with all volume projects we rely on fast response and quality of work. Not only does the Solidbase team deliver this in every aspect of their service, but they add a very precious commodity, care!

I have found them to be approachable, knowledgeable, flexible and quick to respond which makes for an easy working relationship. I cannot recommend them highly enough.

Gilbert Darmanin
POLIDANO GROUP

“

Testing is our work...
...quality is our **belief**

”



housing authority

The technical staff at Solidbase Laboratory Ltd is very experienced in their line of work. They have manifested themselves to be efficient, accurate and methodical. The laboratory is well equipped while the management is particularly helpful and has proved amenable to provide the necessary services even at very short notice.

Arch Sandra Magro,
HOUSING AUTHORITY W



a3 towers

I regularly use the services of Solidbase in the testing of concrete works and have also used their extensive range of services for road testing, bitumen and asphalt works. In particular, I have successfully used Solidbase in very demanding projects - the A3 Towers in Paola and the Galaxy Complex in Sliema.

I have also commissioned Solidbase to carry out extensive standard penetration tests in loose saturated sands at Xlendi in Gozo which they carried out successfully.

Arch. James Farrugia,
FARRUGIA ASSOCIATES



- 01 Manuel Dimech Bridge
- 02 Arrowpharm
- 03 Oil Tanking
- 04 Pendergardens



05



06



07

- 05 Ergon
- 06 Foster Clarks
- 07 American Embassy

