

In 1981, Philippine GeoAnalytics, Inc. started as a 6-man Civil Engineering Laboratory engaged in Soils and Materials Testing and Consultancy. Today it has grown into a 200-man strong organization and is the most fully equipped Soils and Materials Testing Laboratory in the country, which includes two (2) satellite Laboratories in Cebu and Angeles City that handles routine testing of construction materials.

PGAI was the very first Foreign Laboratory accredited by the US Bureau of Commerce, National Bureau of Standards under the National Voluntary Accreditation Program (NVLAP), PGAI was even ahead of any Laboratory outside the Continental U.S.

In July 1994, PGAI was the very first Laboratory accredited in the Philippines under the ISO/IEC Guide 25 with BPS Accreditation Number 001. Now more than 12 years later, PGAI has maintained its very high standard of excellence and still holds the distinction as being the first Materials and Soils Testing Laboratory in the country under ISO 17025 and retained the BPS Accreditation Number 001.

This ISO 17025 Certification assures the Client that our Procedures and Quality Systems in testing of construction materials are in conformity with World Class Standards. Thus our Clients are assured of Quality result everytime.

Now on its 25th year, PGAI continues to provide Services and Consulting to the Construction Industry.

PGAI specializes in the investigation and solution of problems involving materials, structures and in-situ testing of soil properties, soil mechanics, water quality and failure analysis involving Civil Engineering Structures.

It has extensive experience and capabilities in Construction Quality Control (CQC) on-site and operates a fleet of drilling rigs for soil exploration and investigation.

Through the years PGAI has pioneered in the introduction of Innovative Engineering Technologies in support of Engineering and Construction.

A few of the Major Geotechnical Soil Investigation and Consultancy Projects we have undertaken include among others:

- *Subic Clark Tarlac Expressway*
- *NAIA IPT 3 Project*
- *Metro Manila Skyway Project - Stage I*
- *Proposed R-2 Project*
- *Proposed Sampaguita Interchange*
- *First Gas Pipeline Project*
- *Malampaya Onshore Gas Plant-Preliminary Investigation*
- *MWSI South Manila Area Project - Phase I*

We have also conducted the Geotechnical Soil Investigation Program for the following:

- *SMC Polo Beer Brewery Facility*
- *Ayala Triangle*
- *MWSS LBAQ4 Aquaduct Project*
- *Angat Water Supply Optimization Project (AWSOP)*

PGAI served as Audit Laboratory to the US Military Bases under OICC SOWESPAC and was the only Laboratory permitted by the OICC to perform Independent Quality Control for its Contractors while concurrently serving as its Audit Laboratory.

SUBSURFACE SOIL EXPLORATION TECHNOLOGIES

PGATECH boasts of the biggest and most up to date inventory of equipment for Soils Exploration and Sampling ranging from four (4) truck mounted Mobile Drills for Auger Drilling and several Skid Mounted Rigs to Electronic Cone Penetrometer Testing Equipment for detailed site characterization and economy in soil exploration.

The truck mounted Mobile Drills generate large torques to drive large-diameter Hollow Stem Augers for faster drilling and higher quality sampling without the use of flushing liquids that could disturb the samples.

Skid Mounted Rigs can be mobilized for use in difficult terrain or areas inaccessible to truck mounted rigs. These are compact and can be used in tight spaces.

Most of the said rigs are diesel driven and are provided with adequate safety features to make them compliant with Petroleum Refinery Safety Standards.

Our personnel have been extensively trained to comply with strict safety standards for operation in hazardous locations.



**MOBILE DRILL B-40 (TM 6-1)
2 UNITS**



**MOBILE DRILL B-61 (TM 10-2)
2 UNITS**



**SKID MOUNTED DRILL RIG
10 UNITS**



OFFSHORE SOIL EXPLORATION

SERVICES OFFERED: Subsurface Soil Exploration ● Installation of Horizontal Drain ● Monitoring Well Installation ● Well Point Installation ● Installation of Relief Well ● On and Offshore Drilling

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CIVIL ENGINEERING LABORATORY

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SOILS AND CONSTRUCTION MATERIALS TESTING

We have a complete equipment inventory in our Main Laboratory as well as in two satellite laboratories in Cebu and Angeles City to handle routine testing of construction materials.

Our FORNEY L-1000 Universal Testing Machine (UTM) is equipped with a digital extensometer for plotting stress and strain and at 300MT has the highest tensile capacity among the UTM's in the country. A 200MT UTM is available to back it up.

SOIL MECHANICS:



SOIL MECHANIC LABORATORY



BATTERY OF CONSOLIDATION TEST APPARATUS



**GRAIN SIZE ANALYSIS
(MECHANICAL/HYDROMETER METHOD)**



PERFORMING ATTERBERG LIMITS TEST

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MATERIALS TESTING & RESEARCH

PGATECH is the largest and most complete materials testing laboratory for testing and research on materials and products. We possess two Universal Testing Machines (200 MT and 300 MT Tensile Capacity) and stiff heavy framed compression testers for concrete compression tests. The use of heavy stiff frames ensures that elastic energy due to the machine is not transferred during failure as to cause lower failure load indications.

The two Universal Testing Machines are used for the testing of metals and metal products including HTS prestressing cables, wires and fasteners and ultra high strength concrete.

PGATECH has extensive testing and instrumentation capabilities for use in materials testing and research. Both destructive and non destructive testing procedures are within the capability of the group.

Failure analyses of metal and assemblies can be studied using Metallurgical, Destructive and Non-Destructive Techniques.

The FORNEY LT 1000 with 300 MT Tensile Capacity is equipped with a digital load indicator connected to a pressure transducer and an extensometer to yield accurate stress strain plots.

Modifications to the system can accommodate set up of special jigs and tools for flexural tests on beams and other steel or concrete products due to its large daylight clearance.

UNIVERSAL TESTING MACHINE:



REBAR AND STEEL TENSION TEST USING FORNEY LT 1000 LOAD FRAME 600,000 LBS. TENSION CAPACITY. EQUIPPED WITH EXTENSOMETER FOR PLOTTING OF STRESS/STRAIN CURVES



REBAR BEND TEST BEING PERFORMED IN DEDICATED UNIVERSAL TESTING MACHINE

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MATERIALS TESTING & RESEARCH

FIELD TESTING EQUIPMENT:



FIELD DENSITY TEST APPARATUS
(SAND CONE METHOD) & SPEEDY
MOISTURE TESTER

(NUCLEAR) DENSITY TESTING

PGAI operates two (2) units of TROXLER model nuclear density gage. Personnel and products are approved and certified by PNRI



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MATERIALS TESTING & RESEARCH

FIELD TESTING EQUIPMENT:



Field CBR test being performed for existing pavement evaluation NAIA IPT3 airport project

CPT Rig (Pagani)

The only one in the country, this cone Penetrometer tester is a self propelled self anchoring CPT/CPTU rig from PAGANI of Italy. CPT/CPTU equipment is an electric Cone Penetrometer that is fully computerized. Acquired from AP Van den Berg, this is the latest in CPT Technology.



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MATERIALS TESTING & RESEARCH

MATERIAL TESTING EQUIPMENT: (CONCRETE / CEMENT)



Coring of Asphalt Pavement. PGAI also has four (4) electric coring machines for coring of concrete structural elements in buildings and other structures.



Compression Machine for Concrete Cylinder & Concrete Hollow Blocks



Cement testing laboratory equipment. PGA performs audit tests for all cement manufactured and imported for the Philippine government.



Trial tests on Cement Treated Base (CTB) being performed in controlled strain equipment.

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MATERIALS TESTING & RESEARCH

MATERIAL TESTING EQUIPMENT: (CHEMICAL / ASPHALT)



Ductility Tester for Asphalt



Marshall Asphalt Stability Compaction Test

The new TROXLER Model 3440 can automatically monitor density and compaction of asphalt pavement. This can provide very efficient quality control of asphalt pavement.



Chemical Analysis Apparatus

Chemical Testing apparatus for testing paints.

Glassware & Muffler Furnace for Chemical Analysis

The chemical testing laboratory tests chemical properties of cement, asphalt, paints water and soil. We test paint for the Philippine Government

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TIRE TESTING



Tire testing equipment fully computerized tire testing equipment to include puncture test and bend test.

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GEOPHYSICAL EXPLORATION

PGA Geophysical offers top of the line technology for detailed stratification, characterization and mapping of the subsurface using non-invasive techniques. It specializes in extensive surveys and field reconnaissance work, the detection of geotechnical anomalies and fast site characterization.



Geometrics SMARTSEIS 12 Channel Seismograph

The Geometrics Seismograph can be used for both seismic refraction and reflection surveys for shallow engineering exploration usually to 30 meters.

This versatile 12 Channel Seismograph can also be used for the determination of geologic anomalies and cavities in the subsurface as well as determination of aquifers in conjunction with electrical resistivity equipment.



OYO McOhm Soil Resistivity Tester

Electrical resistivity is widely used in the conduct of corrosion potential of underlying soils and also for the determination of groundwater table as well as aquifers.

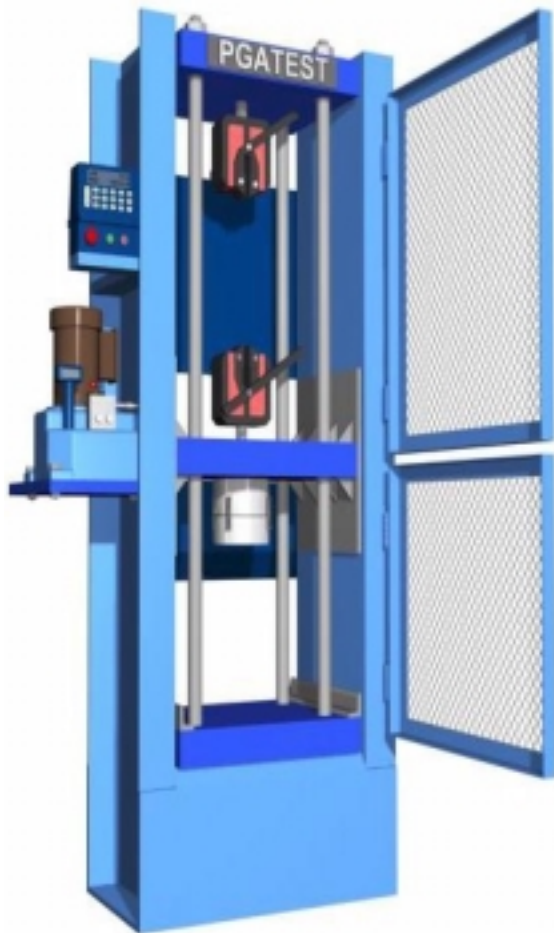
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PGATEST UTM

A TRULY VERSATILE UNIVERSAL TESTING MACHINE (UTM) AT A VERY AFFORDABLE PRICE FOR EDUCATIONAL INSTITUTIONS...



FEATURES

- Mechanical Grips 30,000 lbs to 60,000 lbs (optional) capacity
- US Manufactured Digital Control Panel & Pressure Transducer surpass ASTM E-4 requirements for accuracy for Tension & Compression.
- US Manufactured Hydraulic Powerpack delivers 10,000 psi (70 Mpa) of controlled pressure and used by leading US Testing Equipment Manufacturers.
- Control Valve delivers variable controlled rate of loading with micrometer valve control.
- Spherical Bearing Plate (Hardened Steel) for Concrete Compression Testing.
- Expanded Metal Swingout Door Protects Operators and observers from accident and injuries.
- Rear Plate Protective Cover for maximum safety for Tension and Compression Testing.
- Fully enclosed housing protects Hydraulic Jack from dust.
- Guide prevents jamming and scatter of Concrete Debris.
- Overtravel cutoff/limit switch.
- Key Operated Power on lock.

SERVICE SUPPORT

- Training of your Lab personnel during commissioning of equipment.
- Initial setup calibration and annual calibration can be performed by our calibration personnel.
- Service and repair can be done by our experienced technicians available on call.
- Operator safety training of laboratory personnel in the proper use of the equipment shall be done at site by our experienced Laboratory Engineers and Technicians.
- Stock spare parts are maintained to reduce your equipment downtime.
- Regular Calibration can be performed by PGA Calab, our Calibration and Metrology Laboratory.

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Under this contract, PGAI performed audit testing for the Navy at the following former US Military installations for a period of three (3) years:

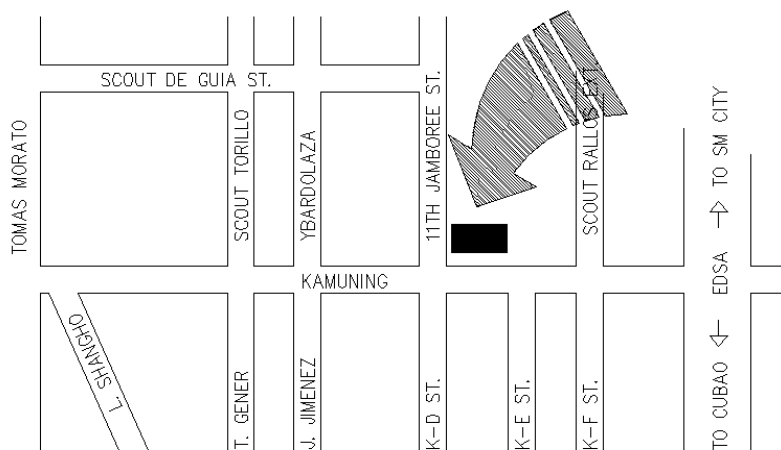
- Clark Air Base
- Camp John Hay
- Subic Naval Base
- Camp O'Donnell
- Wallace Air Station

PGAI is also the official Testing Laboratory of the Philippine Government under the BPS for testing of Portland Cement and Rubber Tire Products.

For the past twenty-five (25) years, PGAI has strived to maintain its leadership in Construction Quality Control (CQC), Testing Field and Materials Testing in general by regular in-house technical trainings and seminars, on the spot supervision by senior staff, random and regular internal audits of laboratory work and by maintaining standard office documentation as prescribed in our Quality Control Manual.

Hereunder is a representative list of Clients, which we have served for the past twenty-five (25) years:

- | | |
|---|--|
| <ul style="list-style-type: none"> • Pilipinas Shell Petroleum Corp. • Chevron Texaco Corporation • Nestle Philippines • Asian Development Bank • L W U A • Pacific Cement • Caltex (Phil.) Inc. • Philippine Refining Co. (Unilever) • San Miguel Corp. • Chicago Bridge and Iron • Morrison Knudsen International • Philippine National Oil Company • Magnolia Corporation | <ul style="list-style-type: none"> • Department of Public Works and Highways • Katahira Engineers, Asia • Petron Corporation • Maynilad Water Services Inc. • Fluor Daniel Pacific Inc. • US Navy Officer In Charge of Construction • Over Arup & Partmenrs, Philippine Branch • Takenaka Corporation • First Gas Pipeline Corporation • Raytheon Ebasco Overseas Ltd. • Parsons International Ltd. • Hanjin Heavy Industries & Construction Co. Ltd. • Hyundai Engineering & Construction Co. Ltd. |
|---|--|



So for more information visit us at No. 85 Kamuning Road, Quezon City or call us at Telephone Nos.+632 929 3352 up to 55 or visit our website at www.pgatech.com.ph and you will see why Sound Construction QC means better business for you.

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