# INDIA'S TOP GEOTECHNICAL ENGINEERING ORGANIZATION HAVING 300+ TESTS (FIELD & LABORATORY) UNDER NABL ACCREDITATION.















S & R Geotechniques Pvt Ltd













#### **NABL CERTIFICATE**







National Accreditation Board for Testing and Calibration Laboratories

NABL

#### CERTIFICATE OF ACCREDITATION

#### S & R GEOTECHNIQUES PVT LTD

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

UNIT NO. 0024 AND 0025, GROUND FLOOR, H WING, PHASE -1, AKSHAR BUSINESS PARK, PLOT NO-03, SECTOR-25, VASHI, NAVI MUMBAI, THANE, MAHARASHTRA, INDIA

in the field of

**TESTING** 

Certificate Number:

TC-12577

Issue Date:

15/11/2023

Valid Until:

14/11/2025

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: S & R GEOTECHNIQUES PVT LTD

Signed for and on behalf of NABL



herlitism

N. Venkateswaran Chief Executive Officer

ENGINEERS DON'T JUST BUILD STRUCTURES, THEY BUILD DREAMS.

-Sir M. Visvesvaraya

#### THE WIND BENEATH OUR WINGS!



















IF YOU WANT TO WALK FAST, WALK ALONE.
BUT IF YOU WANT TO WALK FAR, WALK TOGETHER.

-Sir Ratan Tata

#### **ABOUT US**

#### Anything & Everything in Geotech, On & Beneath the surface



Established in 2013, with the principle aim of providing geotechnical services to the bourgeoning construction and infrastructure industry of India.

SRGPL is focused on consultation, supervision, research and testing in civil engineering work, especially in geotechnical engineering, foundation engineering and underground construction. We believe that our experience and tradition stands us in good stead in providing economical and sound geotechnical and engineering solutions to the industry, at the same time upholding quality and integrity.

We are a professional company having an experienced team of 150+ seasoned technocrats (Geotechnical Engineers, Civil Engineers, Geologists, Geo-Physicist, Surveyors) & 200+ Supervisors, Operators & Labour workforce to support field activities. We are 11 years old organization holding a rich experience of 30+ years in geotechnical field by the virtue of our experts.

#### **MISSION**

To be one of the top 5 Geotechnical Engineering Firms Worldwide and cross the top-line revenue of Rs. 100 Crores by 2030.

#### VISION

To be a proven leader in cutting edge, cost efficient and highest quality foundation and ground engineering solutions across the entire spectrum of infrastructure applications in India.

#### **SERVICES**

- Geotechnical Investigation (On Shore & Off Shore)
- In Situ tests for Geotechnical Investigation (NABL Accredited)
- Laboratory Testing of Soil, Rock, Water, Building Material, Building Stone (NABL Accredited)
- Geophysical Tests (NABL Accredited)
- Pile Load Tests Static, Cyclic, Lateral, Pullout, Bi-Directional (NABL Accredited)
- Non Destructive Testing (NDT) (NABL Accredited)
- Plate Load Test on Soil & Rock (NABL Accredited)
- K-Value & EV2 Tests (NABL Accredited)
- Bridge & Slab Load Tests (NABL Accredited)
- Pavements Testing (NABL Accredited)
- Drilling and Grouting
- Rock Anchors & Soil-Nailing
- Anchor Pullout Tests (NABL Accredited)
- Slope Stability
- Geotechnical Instrumentation
- Ground Improvement
- Topography Survey
- Ground Penetration Radar (GPR)
- Hydraulic Jack Efficiency Testing / Calibration (NABL Accredited)
- Piling











#### **GEOTECHNICAL INVESTIGATION** (ON-SHORE & OFF-SHORE) & IN-SITU TESTS



- > Soil drilling with Auto-SPT and undisturbed sampling with borehole sizes of 75 mm, 100 mm, 125 mm and 150 mm diameter upto 300m depth.
- > Rock core drilling for Open and Underground Mining of Ex, Ax, Bx, Nx, Hx, Px, AQ, BQ, NQ, HQ, PQ size.
- Trial Pits
- Standard Penetration Test
- Energy Monitoring Tests for SPT
- ▶ In situ Soil & Rock Permeability Tests
- > Field Density Test
- Static Cone Penetration Test
- Dynamic Cone Penetration Test
- Electric Piezocone Penetration Test eCPT
- Pressure Meter Test-100 Bar Menard and 200 Bar OYO
- ► Field Vane Shear Test
- ► Field California Bearing Ratio Test
- **▶** Block Vibration Test
- Measurement of Pore Earth Water Pressure
- ➤ Measurement of Settlement & Heave
- ▶ In Situ Shear test on Rock
- In Situ Direct Shear test on Soil









IF YOU WANT TO SHINE LIKE A SUN. FIRST BURN LIKE A SUN.

-Dr. A P J Abdul Kalam



#### **GEOPHYSICAL TEST**



- Electrical Resistivity Tests and Imaging 1D 2D (ERT) (NABL Accredited)
- Seismic Refraction Test (SRT)(NABL Accredited)
- Soil Wave Propagation (NABL Accredited)
- > Seismic Cross Hole Test (NABL Accredited)
- Seismic Down Hole Test (NABL Accredited)
- > Acoustic Logging of Boreholes
- Density Logging of Boreholes
- Electrical Logging of Boreholes
- Multi channel Analysis of Surface Waves (MASW)
- Hydrofracture Test







#### **CREATIVITY IS JUST CONNECTING THINGS**

-Steve Jobs



#### **GEOTECHNICAL INSTRUMENTATION**







- Magnetic Settlement Marker
- Inclinometer
- Casa-Grande Piezometer (NABL Accredited)
- Vibrating Wire Piezometer (NABL Accredited)
- Tiltmeter
- Crackmeter
- Building Settlement Marker
- Vibration Monitoring Sensor
- Borehole Extensometer
- Magnetic Extensometer
- Strain Gauges
- Pressure Cells
- Stand Pipe Piezometer (NABL Accredited)







#### **HYDRAULIC JACKS AND LOAD CELLS**



SRGeo provides efficiency testing and deviation of hydraulic jacks and load cells upto 500 Tons (5000 kN).

Following types of Hydraulic Jacks can be tested for calculating efficiency of the Jacks:

- Flat Jacks
- Lifting Jacks
- > Solid Ram Jacks
- ► Hollow Ram Jacks

SRGeo complies with the requirements of ISO/IEC 17025 ensuring that testing and calibrations are carried out in accordance with strict quality and control initiatives and all relevant standards are adhered to.

#### **LOAD TESTS**



- Static Vertical Pile Load Test by Reaction Anchors upto 5000 tons (On-shore & Off-shore Piles) (NABL Accredited)
- Lateral Load Test upto 500 tons







- Footing Load Test (NABL Accredited)
- Bridge / Slab Load Test (NABL Accredited)
- Modulus of Sub Grade Reaction (k-Value) Test (NABL Accredited)
- In Situ Shear Test on Rock (NABL Accredited)
- Cyclic Lateral Load Test on Rock upto 500 tones
- Anchor Pull-Out Test (NABL Accredited)



- Bi Directional Static Pile Load Tests upto 12000 tones (NABL Accredited)
- Cyclic Pile Load Test upto 5000 tones (NABL Accredited)
- Pile Pull-out Test upto 500 tones (NABL Accredited)
- Lateral Dynamic Pile Load Test
- Plate Load Test (NABL Accredited)
- > Stone Column Load Test (NABL Accredited)







#### **GEOTECHNICAL ACTIVITIES**



- Pile Rectification
- Cross Hole Sonic Logging (CHSL)Tube Cleaning
- Proof Coring in Pile
- Consolidation Grouting using Inflatable Packers
- Drilling & Grouting
- Curtain Grouting
- Permeation Grouting
- Compaction Grouting
- Chemical Grouting









# SCIENTISTS INVESTIGATE THAT WHICH ALREADY IS. ENGINEERS CREATE THAT WHICH HAS NEVER BEEN.

-Albert Einstein

- Tube A Manchette (TAM) Grouting
- Percussion Drilling (Down the Hole & Top Head)
- Rotary Drilling
- Prestressed Rock Anchors (Vertical & Inclined)
- Passive Rock Anchors (Vertical & Inclined)
- Soil Nailing
- Micro Piling
- > Slope Protection

#### NON DESTRUCTIVE TESTS (NDT)











- Pile Integrity Test (NABL Accredited)
- High Strain Dynamic Load Test as per ASTM (NABL Accredited)
- Dynamic Pile Load Test as per IRC (NABL Accredited)
- Cross Hole Sonic Logging (CHSL) Test (NABL Accredited)
- Rebound Hammer Test (NABL Accredited)
- Ultrasonic Pulse Velocity Test (NABL Accredited)
- Underwater NDT: Rebound Hammer & Ultrasonic Pulse Velocity (NABL Accredited)
- Cover meter Test: Rebar Mapping, Bar Dimension
   Testing & Cover Spacing (NABL Accredited)
- Half-Cell Potential (NABL Accredited)
- Resistivity of Concrete (NABL Accredited)
- Carbonation Depth (NABL Accredited)
- Concrete Pull-Out Test (NABL Accredited)
- Deflection Measurement Test using Opto electric Sensor (NABL Accredited)
- Concrete Cut And Pull Out (CAPO) Test (NABL Accredited)
- Load Test on Flexural Member (NABL Accredited)
- Concrete Core Testing (NABL Accredited)







### THE ROAD TO SUCCESS IS ALWAYS UNDER CONSTRUCTION

-Lily Tomlin

#### **PAVEMENTS TESTING & TRAFFIC STUDIES**



- Light Weight Deflectometer (LWD)
- Deflection Measurement of Pavement using Benkelman Beam (NABL Accredited)
- Surface Roughness (Bump Integrator)(NABL Accredited)
- Skid Resistance (NABL Accredited)
- Network Survey Vehicle (NSV)(NABL Accredited)
- Reflectometer Survey for Sign Boards& Pavements (NABL Accredited)
- Falling Weight Deflectometer (FWD)
- > Traffic Survey
- Rodometer
- Road Safety Audit
- Resilient Modulus on Bituminous Mixtures (As per IRC, ASTM)
- Bridge Bearing Test (Elestomeric & POTPTFE)
- Bridge Vibration Analysis





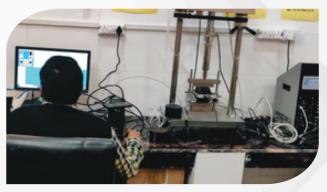












### LABORATORY TESTING (NABL ACCREDITED) SOIL, ROCK, WATER, BUILDING MATERIAL, BUILDING STONE



#### **Mechanical Testing**

#### > Soil

- Sieve Analysis
- Particle Size Analysis by Hydrometer
- Specific gravity
- Natural Moisture Content
- Liquid Limit
- Plastic Limit
- Shrinkage limit
- Free Swell Index
- Light Compaction Test (Maximum Dry Density & Optimum Moisture Content)
- Heavy Compaction Test (Maximum Dry Density & Optimum Moisture Content)



- Direct Shear Test-Unconsolidated Undrained (UU)
- Direct Shear Test-Consolidated Undrained (CU)
- Direct Shear Test-Consolidated Drained (CD)
- Consolidation Test
- Swelling Pressure Test
- Lab Vane Shear Test
- Silt Factor
- · Permeability by Constant head
- · Permeability by Falling head
- Soil & Sand Equivalent Test







- California Bearing Ratio (Lab CBR) Soak
   & Unsoak
- Unconfined Compressive Strength of Soil
- Triaxial Compression Test-Unconsolidated Undrained (UU)
- Triaxial Compression Test-Consolidated Undrained (CU) with Pore Pressure Measurement
- Triaxial Compression Test-Consolidated Drained (CD)





#### > Stabilised Soil

- Natural Moisture Content
- Light Compaction Test (Maximum Dry Density & Optimum Moisture Content)
- Heavy Compaction Test (Maximum Dry Density & Optimum Moisture Content)
- Unconfined Compressive Strength of Soil

#### **Bentonite**

- Natural Moisture Content
- Sand Content
- Liquid Limit

#### Rock & Building Stone

- Unconfined Compressive Strength
- Point Load Strength Index
- Brazilian Index
- Water Absorption
- Porosity
- Water Content



- Ultrasonic Wave Velocities in Rocks Vp
- Ultrasonic Wave Velocities in Rocks Vs
- Permeability Test of Rock Stones
- Dynamic modulus of Elasticity
- Longitudinal, Flexural and Torsional Resonance Testing
- Rock Hardness
- Rock Slake Durability Index
- Flexural Strength of Rock (Cylindrical Rock Specimen)
- Cerchar Abrasiveness Index







- Dry Density, Bulk Density, Relative density
- Specific Gravity
- · Modulus of Elasticity
- · Poisson's Ratio
- Triaxial Compression Test– Unconsolidated Undrained (UU) Internal Friction & Cohesion





#### <u>Building Stone</u>

- Compressive Strength of Natural Building Stones
- Tensile Strength of Natural Building Stones
- Transverse Strength of Natural Building Stones

#### Petrographic Analysis

- Rock & Natural Stone
- Fine Aggregates
- Coarse Aggregates
- Concrete

#### Fine Aggregates

- Sieve Analysis (Sieve Size 75 um to 4.75 mm)
- Sieve Analysis (Material Finer Than 75 um)
- Silt Content
- Specific Gravity
- Deleterious Materials
- Bulk Density
- Bulkage
- Organic Impurities for fine Aggregate
- Soil & Sand Equivalent Test
- Soundness by Na2SO4, MgSO4
- Water Absorption
- Petrographic Analysis

#### Coarse Aggregates

- Deleterious Materials
- Soundness by Na, SO, & MgSO,
- Petrographic Analysis

#### **Concrete**

- Compressive Strength of Cube
- Compressive Strength of Core
- Longitudinal, Flexural and Torsional Resonance Testing
- Pull Out Test-Reinforced Concrete
- Dynamic Modulus of Elasticity
- Petrographic Analysis













-John Lasseter

#### **Chemical Testing**









#### > Soil

- pH Value
- Chloride Content
- Determination of Total Soluble sulphate content (as So<sub>4</sub>)
- Determination of Total Soluble sulphate content (as So<sub>3</sub>)
- Organic Content (Mass Loss on Ignition)
   & Inorganic Content
- Organic Content & Inorganic Content
- Carbonate (as Co<sub>2</sub>)
- Carbonate (as CaCO<sub>3</sub>)
- Total Soluble Solids

#### Ground Water

- pH Value
- Chloride Content
- Sulphate Content
- Organic & Inorganic content
- Total Dissolved Solids
- Total Suspended Solids
- Acidity
- Alkalinity

#### **Construction Water**

- pH
- Chloride Content
- Sulphate Content
- Organic Content
- Inorganic Content
- Total Dissolved Solids
- Total Suspended Solid
- Acidity & Alkalinity



#### **GEOSYNTHETICS TESTING SERVICES**



#### Geotextile/Geogrid/Geocell/Geostrap tests:

- Mass per Unit Area
- Thickness
- Tensile Strength
- Elongation
- Tear Strength
- Puncture Resistance
- Permeability
- Apparent Opening Size (AOS)
- Local Overstressing test, Peeling test,
   Splitting test of Geocell







#### **RUBBER & METAL TESTING**

- Tensile Strength (Barbed Wire)
- Hardness (Rockwell HRC & HRB)
- Rubber Hardness (Shore A)
- Compression Set
- Wrapping Test







### INSTRUMENTATION & REMOTE MONITORING OF SLOPE PROTECTION







#### BM Wadia Site in Mumbai.

**Instruments:** Inclinometer, Extensometer, Piezometer, Crack meter, Tiltmeter, Building Settlement Marker, Data Logger.

**Monitoring Frequency:** 1 Year **Client:** SDC Township Pvt Ltd.

### East Bank East Coast Linkage Roadway in Guyana, South America.

**Instruments:** Vibrating Wire Piezometer, Plate settlement market, Inclinometer.

Monitoring Frequency: 1 Year Client: Ashoka Buildcon Limited.







#### Metro Project in Andheri, Mumbai.

**Instruments:** Piezometer, Inclinometer, Building Settlement Marker, Pavement Settlement Marker, Bireflex Target.

Monitoring Frequency: 6 Months

**Client:** M/s. Subhash Bhaginath Khakal.

### Jawaharlal Nehru Port Trust (JNPT) in Mumbai.

**Instruments:** Piezometer, Inclinometer,

Plate Settlement Marker.

**Monitoring Frequency:** 6 Months

Client: Man Infra.



Geotechnical Instrumentation on Slopes & Wireless Remote Monitoring for Prevention of Landslides.



#### PRESTIGIOUS PROJECTS



Mumbai-Ahmedabad High Speed Rail -C3, C4,C5,C6 Package

L & T Construction

Mumbai Trans Harbour Link (MTHL) India's Longest Sea Bridge

Tata Projects Ltd & L & T Construction

- Versova Bandra Sea Link Reliance - Astaldi JV
- **Mumbai Coastal Road Project** HCC, L & T Construction
- East bank-East Coast Road Linkage Project (Ogle to Haags Bosch, Eccles) Guyana, South America. Ashoka Buildcon Ltd



- Mumbai Metro Reliance - Astaldi JV
- **Pune Metro** Gulermark - TPL JV & T & T Infrastructure Ltd
- **Nagpur Metro** IL & FS
- **Kanpur Metro** AFCONS Infrastructure Ltd
- **Chennai Metro** Consulting Engineers Group (CEG) Ltd



- Navi Mumbai International Airport Navi Mumbai International Airport Pvt Ltd
- **JNPT** JM Mhatre & Bombay Port Trust
- **Passenger Water Terminal Nerul** Ajwani Infrastructure Pvt Ltd
- **Mumbai International Cruise Terminal** Belekar & Kale Associates





- Dhubri- Phulbari Bridge Project at Assam L & T Construction
- Semi High-Speed Train (Mumbai-Nashik) MRIDCL (Maharail) - Mumbai, Pune, Bhusaval Division
- Zuari Bridge, Goa Dilip Buildcon
- Mumbai Pune Expressway Missing Link AFCONS Infrastructure Ltd
- **WDFCC Railways SBU** Tata Projects Ltd & L & T Construction



- Vashi Creek Bridge L & T Construction
- BARC (Tarapur, Trombay & Vizag) BARC, Tata Projects Ltd & L & T Construction
- Samruddhi Highway AFCONS Infrastructure Ltd, Navayuga, Megha
- Bhariabi Sarang New BG Line, Mizoram MK Pushpak, Tribeni, Mahabala

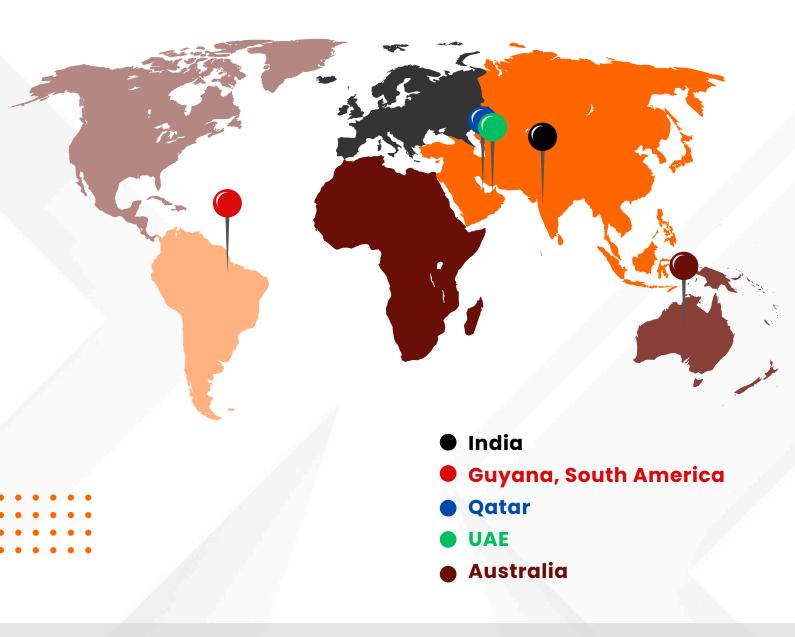


- Four Laning of Pune Nashik Highway T & T Infrastructure Ltd.
- Four Laning of Jagdishpur Faziabad Section & Aligarh - Kanpur Section - Uttar Pradesh (Hybrid Annuity Mode) PNĆ Infratech Ltd
- **National Capital Region Transport Corporation** (NCRTC): Regional Rapid Transit System (RRTS), Delhi

IGS (Indian Geotechnical Services) & Shree Balaji Test House

#### **INTERNATIONAL FOOTPRINT**





### SRGPL HAS MADE A SIGNIFICANT LEAP FORWARD BY EXPANDING ITS SERVICES GLOBALLY.



#### **CLIENTELE**























































































































































































#### **TEAM - TOGETHER EVERYONE ACHIEVES MORE!**





Kumar Salunkhe Managing Directo M.Tech (Geotechnical - iiT - R) MIE



Sameer Patil B.E. - Civil Engineering



Rahul Patil



**Kunal Mohite** Chief Executive Officer (CEO) M.B.A - Operations & Marketing



Dr. Sunil S. Basarkar chnology Officer (CTO) Ph.D. - Pile Foundations, IIT Bombay M.Tech - Geotechnical Engineering



Deepak Anandrao Gunjagi technical Engine M.Tech (Soil Dynamics - iiT-R)



Santosh Phalke B.E. - Civil Engineering



**Pradip Patil** B.E. - Civil Engineering



Anup Naik Investigation & Design M.E. - Geotechnical Engineering



Sanskruti Deshmukh ager - Geotechnical Investigation M.Tech - Geotechnical Engineering



Sohel Isak Shaikh M.Tech - Geotechnical Engineering



Payal Rathod M.Tech - Geotechnical Engineering



**Amol Chaudhary** Sr. Engineer B.E. - Civil Engineering



Shrishail Jotyappa Pujari M.Sc. - Geology



Amar Bari M.Sc. - Geology



Ratika Mhatre M.E. - Geotechnical Engineering



Shraddha Shimpi B.E. - Civil Engineering



Nilesh Ingavale B.E. - Civil Engineering



Dhairyashil Salunkhe Manager - Field Tests B.E. - Civil Engineering



Priti Wankhede B.E. - Civil Engineering



Atul Chaudhari Manager - Laboratory M.Sc. - Chemistry



Ukesh Supnar Diploma - Civil Engineering



Ganesh Gore B.Tech - Civil Engineering



Barkha Yadav M.B.A. - HR



Pooja Shinde Manager - Accounts



Dy. Manager - Accounts

Sanjay Dabhade



**Business Development Executive** 



Hitesh Rajpurohit **Digital Marketing Executive** 



GREAT THINGS IN BUSINESS ARE NEVER DONE BY ONE PERSON. THEY ARE DONE BY A TEAM. -Steve Jobs

#### **SRGPL ROADMAP**



- 1st International project Guyana, South at **America**
- Own Head office at Vashi, Navi Mumbai
- Single Largest Geotechnical Investigation Project of 700+ **Boreholes** MAHSR Package C3
- Crossed 10 Cr. Topline Revenue
- 1st Off-shore Geotechnical investigation project Versova Bandra Sea Link (VBSL), Mumbai

- In-house Geotechnical Laboratory setup
- In-house Pile load test setup for test up to **4000 Tons**





2019 &

2020

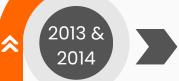
- Own High Strain Dynamic Load Test (HSDLT) setup for Test Load upto 2000 Tons
- Conducted vertical static load test with Highest test load at any routine pile at Mumbai Pune Expressway missing link project for Afcons -3240 Tons
- Reflectometer Retro testing equipment added in Arsenal
- Started Digital Laboratory for advance properties of soil & rock
- 1st Bi-directional Pile Load Test Setup



2015 &

2016

- 1st Metro project for Mumbai Metro Line 7 & 2B
- NABL Accreditation for all field & Lab Tests
- Inception of Non-Destructive **Tests Department**
- Conducted vertical static load test with Highest test load at any test pile at Zuari Bridge Goa -4500 Tons



- Started with 2 Projects Parallelly -Kakrapar Atomic Powerplant (KAPP) & BARC Tarapur
  - Drilling & Grouting
  - Rock Anchoring
  - Seismic Cross Hole Test
- Geotechnical Investigation Project at Mumbai for JM Mhatre
- 1st Pile load test Project at Baramati for Manoja Sthapatya

#### **GROUP COMPANIES**





### NABL Accredited Calibration Laboratory vide Certificate No. CC- 3673

**(** +91-74000 91415 / +91-7400 161 818

Services@calimasterlabs.com

www.calimasterlabs.com



Manufacturing of Drilling Rigs & Drilling Accessories, Geotechnical Lab & Field Testing Equipment & Ancillaries

+91-84088 08199

Mikhil@mechpride.com

#### S & R Business Group







## We are a Team of Passionate Designers, Ambitious Field Engineers & Intelligent Geologists.

### We are SRGians!

















#### S & R Geotechniques Pvt Ltd





www.srgeotech.com







