



**WE DESIGN THE FUTURE
ON SOLID FOUNDATIONS**



 **ZEMİNAŞ®**
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ZETAŞ
ZEMİN TEKNOLOJİSİ A.Ş.



ZEMİNAŞ





The risk in geotechnical engineering is a prime factor for our involvement. We must remember that the need to achieve the difficulty is the essential where risk is dominant.

After all, we are dealing with a material of soil having surprises from the nature. We are occupied to design foundations of structures and earth retained structures considering various potential risk factors considering economy and safety simultaneously.

In geotechnical engineering, we are deeply face to 'achieve the difficulty' and 'create originality' as a result for achievement our knowledge and experience must reflect the state of the art."

Prof. Dr. H. Turan DURGUNOĞLU



35+ YEARS OF EXPERIENCE

Zemin Etüd ve Tasarım A.Ş. continues its activities as a pioneer in the sector with over 35 years of experience. In Türkiye and abroad, ZEMINAS is actively involved in top notch projects by providing engineering services for geotechnical design, modeling, quality control, consultancy, ground investigation (drilling, in - situ testing, geophysical measurements) and laboratory testing. In addition, for many important structures, ZEMINAS provides instrumentation and monitoring services for foundation monitoring before and during the construction phase and structural health monitoring during the service life of the structure.

We carry out our projects with experienced engineers and technicians. Our team, led by Prof. Dr. H. Turan Durgunoğlu (Ph.D, UC Berkeley, CA 1972), consists of more than 25 engineering geologist, geophysical engineers, geotechnical engineers with MSc and PhD and technicians working in our soil & rock mechanics laboratory and more than 40 operators, technical staff and field workers.





ZEMINAS are members of;

- Chamber of Geological Engineers (JMO)
- Chamber of Geophysical Engineers (JFMO)
- Chamber of Civil Engineers (IMO)
- Soil Mechanics and Geotechnical Engineering Association (ZMGM)
- Foundation Contractors Association (TMD)

Our company is IAS accredited on;

- 9.24.7877.10930. ISO 9001:2015 (Quality Management System)
- 14.24.7877.20462. ISO 14001:2015 (Environmental Management System)
- 45.24.7877.30441. ISO 45001:2018 (Occupational Health and Safety Management System)
- 27.24.7877.60157. ISO 27001:2022 (Information Security Management System)

ONSHORE AND OFFSHORE DRILLINGS

- Rotary Drilling with and without Core Sampling
- Engineering Geology
- Trial Pits / Trenches
- Water and Gas Sampling
- Advanced Soil Sampling (Denison, Pitcher, Piston Sampler, JGS)





FIELD TESTS

- Standard Penetration Test (SPT)
- SPT Analyser
- Cone Penetration Test (CPT, CPTu, SCPT)
- Marchetti Dilatometer Test (MDMT - SMDT)
- Pressuremeter Tests on Soil and Rock (Menard - Hyperpack (High Pressure Type))
- Dilatometer Test (OYO - Digital Pressuremeter)
- Permeability Test (Constant Head, Falling Head)
- Lugeon (PACKER) Water Pressure Test
- Dynamic Penetration Test - Super Heavy Type (DPSH)
- Sand Cone Test
- Field Vane Test (FVT)
- Plate Loading Test

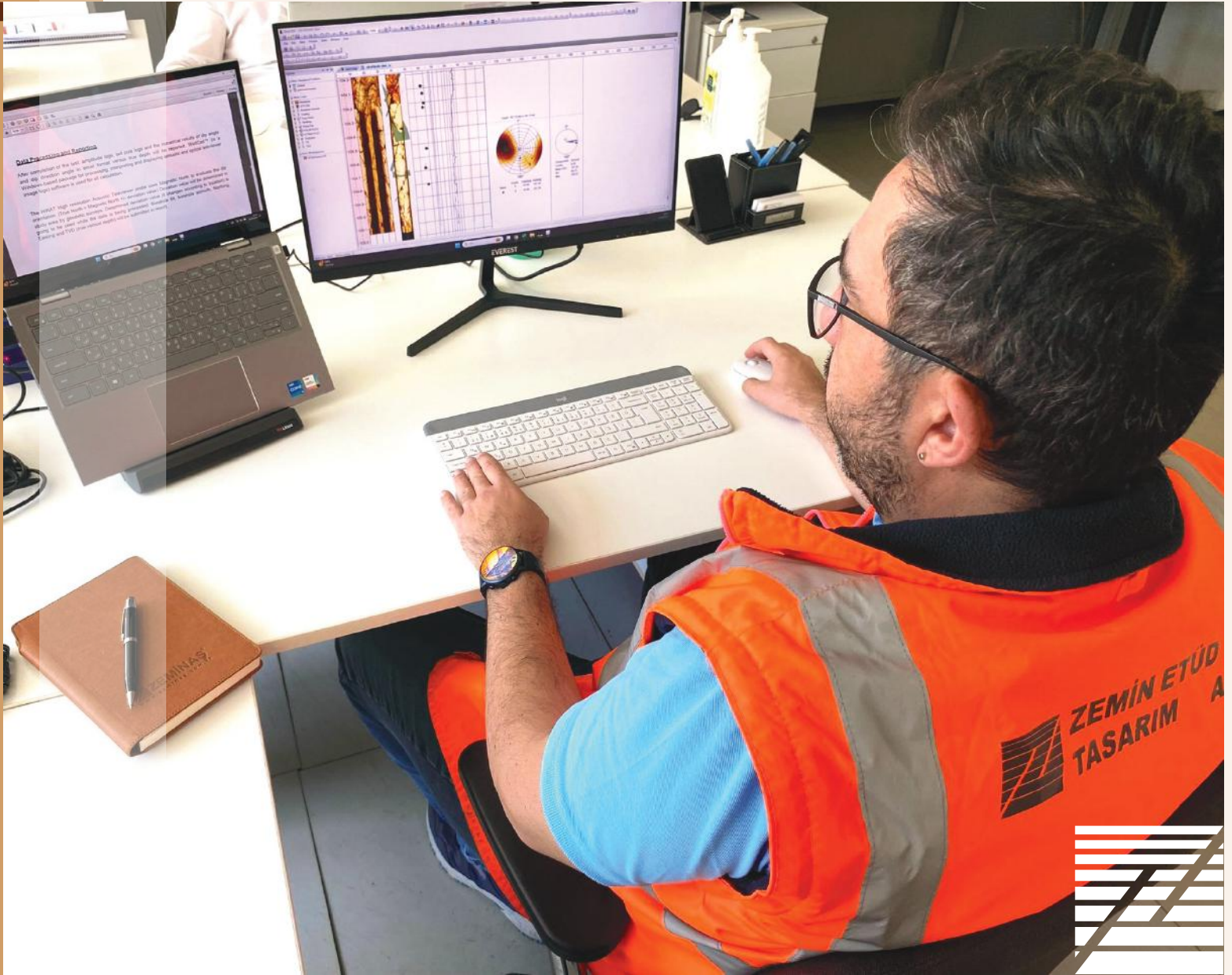




SURFACE GEOPHYSICS

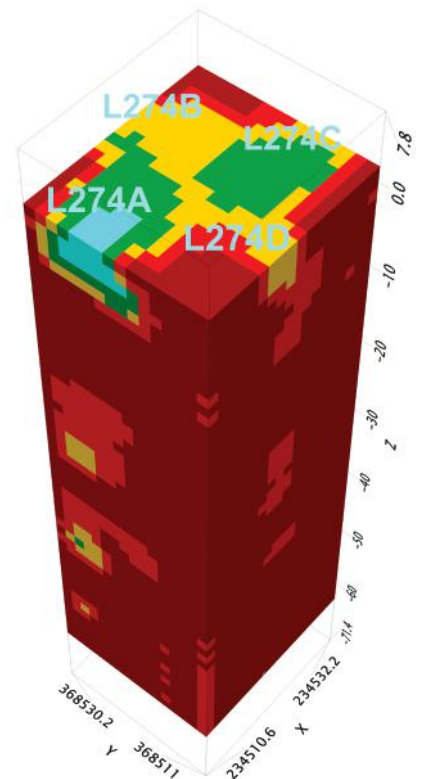
- MASW (Multi - Channel Analysis of Surface Wave) Seismic Survey
- Seismic Refraction & Seismic Reflection
- ReMi
- Microtremor
- Gravity Survey
- Electrical Resistivity Tomography (ERT) Survey
- Electrical Survey Methods (DES / SP / IP)
- Electromagnetic Method Ground Penetrating Radar (GPR) Measurements

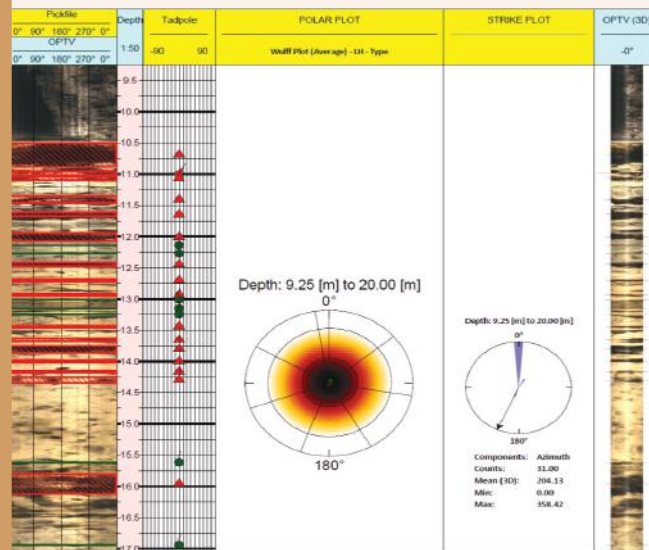




DOWNHOLE GEOPHYSICS / GEOPHYSICAL WELL LOGGING

- Downhole Seismic
- PS Logging
- Crosshole – Crosshole Tomography
- High Resolution Acoustic Televiewer (ATV)
- High Resolution Optical Televiewer (OTV)
- Flow Logging
- Natural Gamma Logging
- Geotracker - Multishot Borehole Deviation Measurements

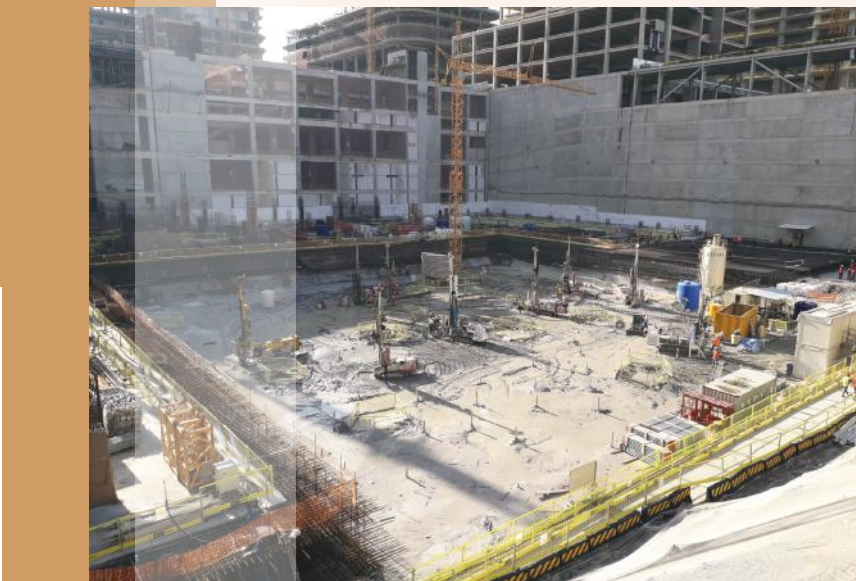
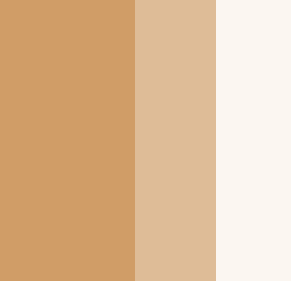




GEOTECHNICAL ENGINEERING EVALUATION AND DESIGN

- Earthquake Engineering
- Geotechnical Modelling
- Shallow Foundations
- Ground Improvement
- Deep Foundations
- Shoring and Retaining Structures for Excavations
- Embankment / Open Cut Slope Stability Analyses
- Landslide Investigation and Prevention Projects
- Drainage Systems
- Bridge and Viaduct Foundations
- Industrial Buildings
- Power Plants
- Earth and Rock Filled Dams
- Conducting Geotechnical Evaluations and Providing Consultancy Services in Irrigation Dams and Water Supply Projects.
- Tunnels and Shafts
- Shore Structures, Docks, Harbours, Breakwaters
- Conducting Geotechnical Evaluation and Providing Consultancy Services in Airport Projects (Apron, Runway, Terminal)
- Conducting Geotechnical Evaluation and Providing Consultancy Services in Highway and Railway Projects
- Preparation of Specifications and Determination of Quality Control Criteria for Geotechnical Applications





QUALITY CONTROL AND SUPERVISION

FOR SUBSTRUCTURE WORKS:

- Static and Dynamic Pile Loading / Pull - out Tests, (With Displacement Measurement)
- Osterberg Test (Bidirectional Pile Loading Test)
- Backfill Compaction Control
- Plate Loading Tests
- Continuous Core Sampling of Jet Grout and / or Piles, Various Downhole Measurements and Laboratory Testing, Evaluation of Test Results for Quality Control
- Pile Integrity Tests (PIT)





GEOTECHNICAL INSTRUMENTATION AND MONITORING

In Extensive Range Of:

- Structural Engineering,
- Foundation Engineering,
- Geotechnical Engineering,

In Various Instrumentation & Monitoring Projects Of:

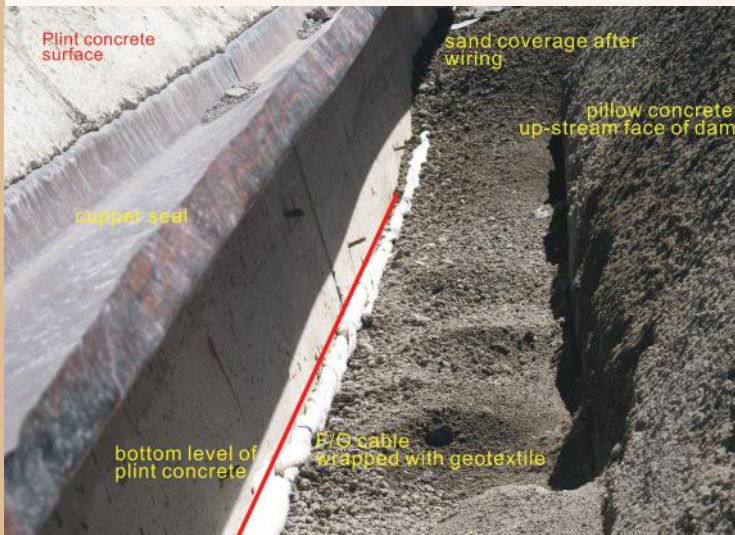
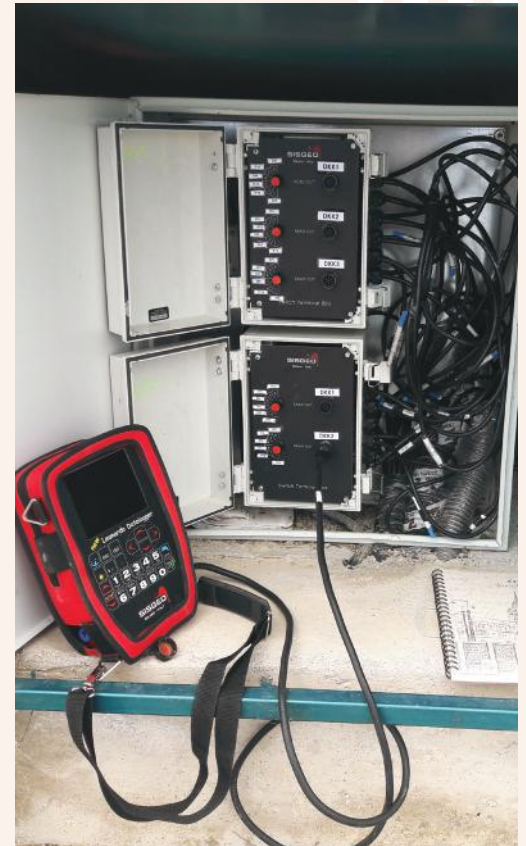
- Tunnels and Underground Structures,
- Foundations,
- Dams, Hydraulic Structures, Sea Embankments,
- Bridges / Viaducts,
- Railways,
- Deep Excavations and Retaining Structures,
- Buildings,
- Embankments,
- Mass Movements,
- Slope Displacement and Stability,
- Historical Buildings,

We Are Proposing Our Core Services On:

- Design,
- Instrument Supply,
- Monitoring System Installation,
- Monitoring Data Management, Validation, Reporting,
- Developing Management / Warning Software,
- System Supervision,
- System Maintenance / Repair / Technical Support Services.

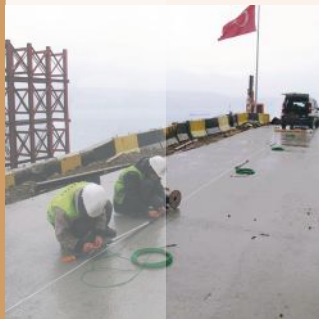


in DAMS



in BRIDGES



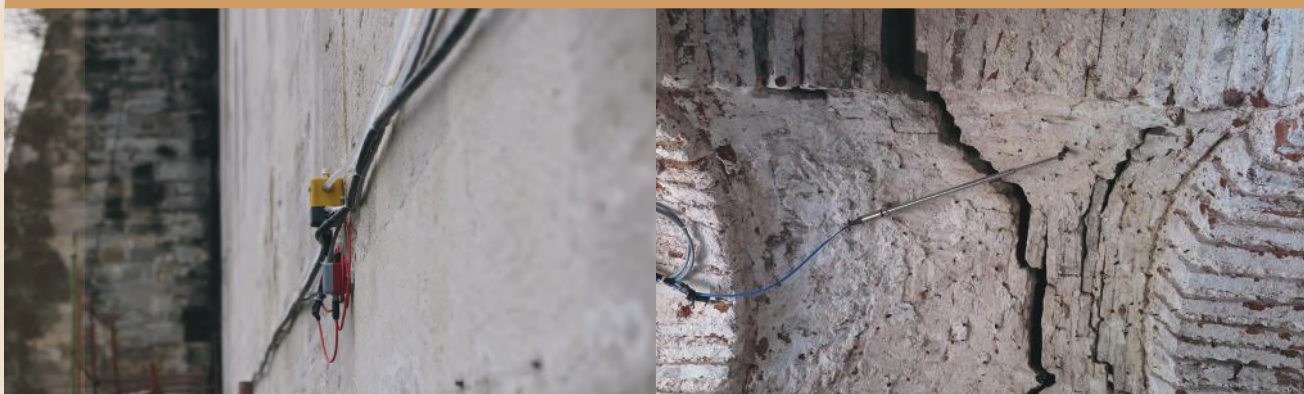


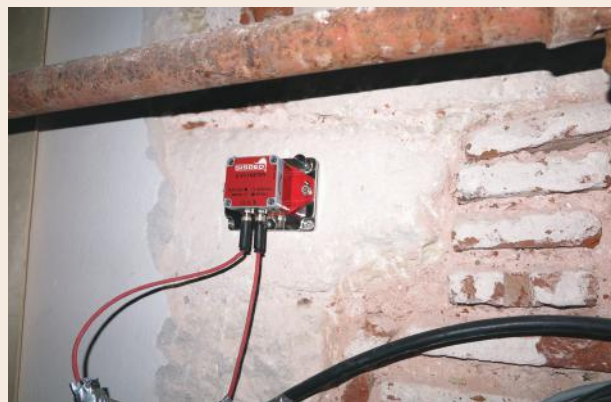
in TUNNELS AND DEEP EXCAVATIONS





in HISTORICAL BUILDINGS





WATER RESOURCES AND ENGINEERING GEO -ENVIRONMENTAL ENGINEERING

Design and Construction Services On:

- Sanitary Landfills,
- Earth and Rockfill Dams,
- Waste Water Treatment Plants,
- Water Distribution Pipelines,
- Sewer Lines,
- Caisson Water Wells,
- Shallow Water Wells
- Deep Water Wells,
- Piezometer Monitoring Wells,

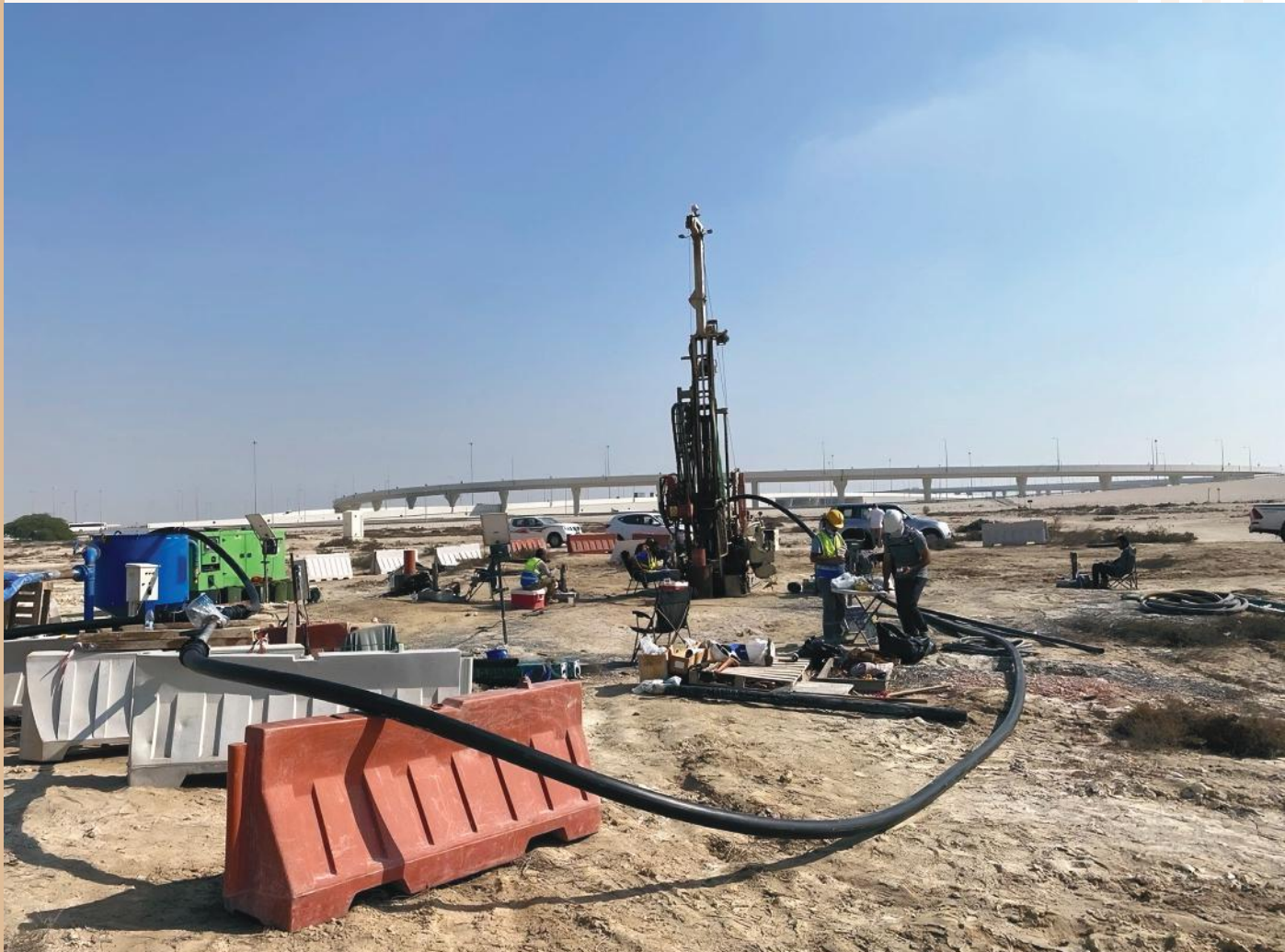
With Exclusive Works On:

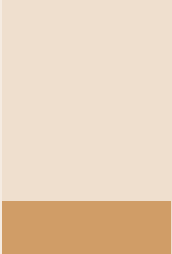
- Determination of Groundwater Potential
- Determination of Aquifer Hydraulic Parameters,
- Groundwater Pollution Analysis,
- Groundwater Well Rehabilitation,
- Detection of Infiltration and Buoyancy Problems

By Experienced Staff With Studies Of:

- Geological, Geophysical and Hydrogeological Surveys
- Pumping Tests,
- Downhole Flow Measurements,
- Tracer Tests,
- Groundwater Chemistry Tests,
- Insitu and Laboratory Tests on Groundwater Quality







SOIL AND ROCK MECHANICS LABORATORY TESTS

LABORATORY TESTING ON SOIL SAMPLES

- Visual Sample Examinations & Descriptions
- Determination of Water Content (Water Content)
- Determination of Liquid Limit, Plastic Limit and Plasticity Index
- Determination of Shrinkage Limit (Determination of Uniaxial Shrinkage)
- Determination of Unit Volume Weight
- Determination of Particle Density by Water Pycnometer
- Determination of Particle Size Distribution (Sieving Method)
- Determination of Particle Size Distribution (Hydrometer Method)
- Obtaining the Dry Unit Volume Weight - Water Content Relationship to Obtain with Standard Proctor Test
- Obtaining the Dry Unit Volume Weight - Water Content Relationship to Obtain With Modified Proctor Test
- Soil Control Tests in Place - Determination of Density and Unit Weight of Soil in Place by Sand - Cone Method
- California Bearing Ratio (CBR)
- Incremental Loading Oedometer Test (Consolidation)
- Unconfined Compression Test
- Unconsolidated Undrained Triaxial Test (UU)
- Consolidated Triaxial Compression Tests on Water Saturated Soils (CU)
- Consolidated - Drained Triaxial Compression Test (CD)
- Direct Shear Test
- Swelling Percentage Test
- Swelling Pressure Test
- Organic Matter Content Test

LABORATORY TESTING ON ROCK SAMPLES

- Natural Unit Weight Determination
- Determination of Uniaxial Compressive Strength
- Determination of Modulus of Elasticity and Poisson's Ratio by Uniaxial Compressive Strength Test
- Determination of the Point Load Strength Index of Rock
- Schmidt Hammer Test



Zemin Etüd ve Tasarım A.Ş. Soil Mechanics Laboratory has a Laboratory Permit - Certificate dated 04.07.2007 commission decision and file no. 152 issued by the Ministry of Environment, Urbanization

Zemin Etüd ve Tasarım A.Ş. Soil and Rock Mechanics Laboratory was accredited on 17.04.2019 according to TS EN ISO/IEC 17025:2017 standard as a result of the audit conducted by TÜRKAK.

**SOME OF OUR SUCCESSFUL
DOMESTIC AND INTERNATIONAL
REFERENCES**



KAZAKHSTAN

UZBEKISTAN

GEORGIA

TÜRKİYE

AZERBAIJAN

TURKMENISTAN

LEBANON

IRAQ

JORDAN

S. ARABIA

QATAR

DUBAI

ABU DABI

ISTANBUL / TÜRKİYE

PROJECT: Yavuz Sultan Selim (3. Bosphorus) Bridge Project, Istanbul / (2018 - ...)

EMPLOYER: IC - E OTOYOL İŞLETME VE BAKIM A.Ş.

JOB DESCRIPTION: Real Time Data Reading, Management and Reporting Services for Bridge Foundation Monitoring System.



KIRKLARELİ / TÜRKİYE

PROJECT: VERBENA Natural Gas Combined Cycle Power Plant Project, Kırklareli / 2022 - 2023

EMPLOYER: ENKA KIRKLARELİ ELEKTRİK ÜRETİM ANONİM ŞİRKETİ

JOB DESCRIPTION: VERBENA Natural Gas Combined Cycle Power Plant Soil Investigation, Preparation of Factual Report and Geotechnical Report



ISTANBUL / TÜRKİYE

PROJECT: MANNESMANN Soil Investigation Studies for the Pipe Factories Halkalı Facility Project, Istanbul / 2022

EMPLOYER: BORUSAN MANNESMANN BORUSAN VE TİC. A.Ş.

JOB DESCRIPTION: MANNESMANN Soil Investigation and Foundation Engineering Assessments for the Pipe Factories Halkalı Facility Project



SAKARYA / TÜRKİYE

PROJECT: ASAŞ Soil Investigation Studies for the Sakarya Factory Project, Sakarya / 2022

EMPLOYER: ASAŞ ALÜMİNYUM SANAYİ VE TİCARET A.Ş.

JOB DESCRIPTION: Geotechnical Drilling Studies for ASAŞ Aluminum Factory



MUGLA / TÜRKİYE

PROJECT: Investigation Drilling, Instrumentation and Monitoring System Installation Project for Coal Ash Storage Slopes in Yeniköy Kemerköy Thermal Energy Power Plant, Muğla / 2022

EMPLOYER: YENİKÖY - KEMERKÖY ELEKTRİK ÜRETİM VE TİCARET A.Ş.

JOB DESCRIPTION: Installation of in-Place Inclinometer (IPI) Columns, Commissioning of Real Time Lateral Displacement Monitoring, Reporting and Warning System for Coal Ash Storage Slopes



ISTANBUL / TÜRKİYE

PROJECT: Soil Investigation Studies for the ROTEM Edincik Facility Tank Site Project, Istanbul / 2022

EMPLOYER: ROTEM KİMYEVİ MADDELER SANAYİ VE TİCARET A.Ş.

JOB DESCRIPTION: Conducting Soil Investigation Studies for the ROTEM Edincik Facility Tank Site Area and Performing Soil Investigation and Foundation Engineering Assessment Studies Based on The Obtained Data



ISTANBUL / TÜRKİYE

PROJECT: Topkapı Palace Fatih Pavilion Restoration Project, Instrument Installation, Monitoring and Reporting Services, Istanbul / 2016 – 2022
EMPLOYER: ERİL MİMARLIK MÜHENDİSLİK İNŞAAT RESTORASYON SAN. VE TİC. LTD. ŞTİ.
JOB DESCRIPTION: Soil Investigations, Field and Laboratory Tests for Fatih Pavilion in Topkapı Palace, Instrumentation System Design, Supply, Installation, Data Monitoring and Reporting Services



RIZE / TÜRKİYE

PROJECT: Geotechnical Investigations, Instrumentation and Monitoring-Reporting Project for Çayeli Bakır İşletmeleri Site, Rize / 2021
EMPLOYER: ÇAYELİ BAKIR İŞLETMELERİ A.Ş.
JOB DESCRIPTION: Geotechnical Investigation Drilling Works, Inclinometer and Piezometer Installation Monitoring - Reporting Services



SINOP / TÜRKİYE

PROJECT: Marine Geophysical and Geotechnical Investigation Project for Site Characterization of Sinop NPP, Sinop / 2021

EMPLOYER: DENAR DENİZ ARAŞTIRMALARI A.Ş.

JOB DESCRIPTION: Conducting and Reporting Marine Drilling, Site Tests, and Marine Geophysics Studies for the Sinop NPP Site.



İSTANBUL / TÜRKİYE

PROJECT: Conducting Soil Investigation for ITO Buildings Reconstruction Project and Preparation of Soil Improvement Projects, Istanbul / 2021

EMPLOYER: HF MİMARLIK MÜH. İNŞ. SAN. VE TİC. LTD. ŞTİ

JOB DESCRIPTION: Conducting Soil Investigation Studies Within the Scope of the ITO Buildings Reconstruction Project, Preparation of Geotechnical Assessment Report and Design of Shoring and Improvement Projects.



ISTANBUL / TÜRKİYE

PROJECT: Soil Investigation for Şekerpinar - Gebze Factory Site, Istanbul / 2021

EMPLOYER: ANADOLU ISUZU OTOMOTİV SANAYİ VE TİCARET A.Ş.

JOB DESCRIPTION: Ground Surveys and Preparation of Geotechnical Assessment Reports for Şekerpinar - Gebze Factory Site



ISTANBUL / TÜRKİYE

PROJECT: V.K.V. Koç Private High School and Elementary School, AB Block Building Project
Soil Investigations, Istanbul / 2021

EMPLOYER: V.K.V. KOÇ ÖZEL LİSESİ VE İLKÖĞRETİM OKULU

JOB DESCRIPTION: V.K.V. Koç Private High School and Elementary School, AB Block Building
Soil Investigations and Preparation of Geotechnical Assessment Reports



CANAKKALE / TÜRKİYE

PROJECT: Çanakkale 1915 Bridge and Highway Project, Çanakkale / 2019 – 2021

EMPLOYER: DAELIM - LİMAK - SK ENGINEERING - YAPI MERKEZİ JV

JOB DESCRIPTION:

- Installation of Settlement Monitoring System for Caissons,
- Supply, Installation and Commissioning of Monitoring System for Wind Speed and Tower Block Temperature Data, as Part of Tower Constructions,
- Inclinator Monitoring and Reporting Service for Highway Constructions



BURSA / TÜRKİYE

PROJECT: NESTLE Karacabey Factory Soil Investigations, Bursa / 2019

EMPLOYER: NESTLE TÜRKİYE GIDA SANAYİ A.Ş.

JOB DESCRIPTION: Soil Investigations and Preparation of Geotechnical Assessment Reports for Nestle Karacabey Factory Site



KONYA / TÜRKİYE

PROJECT: Afşar Dam Project, Installation of Dam Measurement Instruments, Konya / 2014 – 2019

EMPLOYER: İLCİ İNŞAAT SAN. VE TİC. A.Ş.

JOB DESCRIPTION: Installation and Commissioning Service for Dam Measurement Instruments and Fiber Optic Leakage Detection System



CANAKKALE / TÜRKİYE

PROJECT: Çanakkale Bridge Viaduct Project Soil Investigations for Asian and European Sides, Çanakkale / 2019

EMPLOYER: FREYSAŞ FREYSSINET YAPI SİSTEMLERİ SAN. A.Ş.

JOB DESCRIPTION: Soil Investigations and Preparation of Geotechnical Assessment Reports



ISTANBUL / TÜRKİYE

PROJECT: Yavuz Sultan Selim Bridge Foundation Monitoring Project, Instrument Supply, Installation and Monitoring Project, İstanbul / 2013 – 2018

EMPLOYER: HYUNDAI & SK ENGINEERING JV

JOB DESCRIPTION: Instrument Supply and Installation of Long Term Automatic Data Monitoring - Reporting System for Bridge Foundations



IZMIR / TÜRKİYE

PROJECT: Ege Refinery Project, Izmir / (2012 - 2013)

EMPLOYER: STAR REFINERY

JOB DESCRIPTION: Quality Control and Consulting Services



BATUMI / GEORGIA

PROJECT: Drillings for Geotechnical Investigation and Laboratory Tests for Ambassadori Batumi Island Project / 2024

EMPLOYER: AMBASSADORI BATUMI ISLAND LLC

JOB DESCRIPTION: Geotechnical Drilling and Laboratory Testing



TEBUK / SAUDI ARABIA

PROJECT: Oxagon Industrial Zone Terminal Project, Marine Geotechnical Investigation / 2023

JOB DESCRIPTION: Marine Geotechnical Investigation for Oxagon Terminal Project



TEBUK / SAUDI ARABIA

PROJECT: Sindalah Island - Offshore Drilling Work / 2023

JOB DESCRIPTION: Geotechnical Drilling Works



TEBUK / SAUDI ARABIA

PROJECT: Sindalah Island Jetty Offshore Drilling Project / 2023

JOB DESCRIPTION: Laboratory Testing and Geotechnical Evaluations



DOHA / QATAR

PROJECT: Marine Geotechnical Investigation and Geophysical Survey for New District of Doha / Qatar 2022

EMPLOYER: PUBLIC WORKS AUTHORITY

JOB DESCRIPTION: Marine Geophysical Survey and Geotechnical Investigation, In-situ Tests, Laboratory Tests and Reporting



WAKRAH / QATAR

PROJECT: Onshore Geophysical and Geotechnical Investigations for South of Wakrah Pumping Station and Tunnels

EMPLOYER: PUBLIC WORKS AUTHORITY

JOB DESCRIPTION: Onshore Geophysical Survey and Geotechnical Investigation, Hydrogeological Assessment works, Geophysical Well Logging, Field Tests, Laboratory Tests and Reporting



BAKU / AZERBAIJAN

PROJECT: Geotechnical Design and Consulting Services for New Headquarters Building of the Central Bank of the Republic of Azerbaijan / 2021

EMPLOYER: TEKFEN İNŞAAT VE TESİSAT A.Ş.

JOB DESCRIPTION: Preparation of Soil Investigation and Geotechnical Assessment Reports, Provision of Geotechnical Design and Consulting Services



TURKMENBASI / TURKMENISTAN

PROJECT: Onshore and Offshore Geotechnical Investigations for Türkmenbaşy Port Project / 2014

EMPLOYER: GAP İNŞAAT A.Ş.

JOB DESCRIPTION: Onshore and Offshore Soil Investigations, Field and Laboratory Tests, Geotechnical Reporting Services



RIYADH / SAUDI ARABIA

PROJECT: Riyadh Metro Project, Package 2 (Line 3) - Package 3 (Line 4 – 5 - 6) / (2013 - 2014)

EMPLOYER: ARRIYADH NEW MOBILITY (ANM) - FAST KONSORSIYUMU

JOB DESCRIPTION: Soil Investigations, Field and Laboratory Tests and Geotechnical Reporting Services



KURA RIVER / GEORGIA

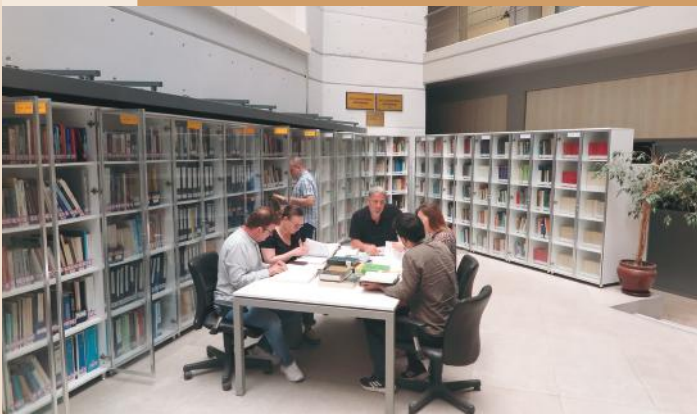
PROJECT: Geotechnical Investigation for BP West Road Export Pipeline (WREP) Project / (2011 - 2012)

EMPLOYER: URS LTD. ŞTİ.

JOB DESCRIPTION: Soil Investigations, Field and Laboratory Tests and Geotechnical Reporting Services



PROF. DR. H. TURAN DURGUNOĞLU AND PROF. DR. SEMİH S. TEZCAN LIBRARY



ZEMİNAŞ transfers its deep experience and knowledge gained in different projects and various geographies to future generations with a sense of professional responsibility.

INTEGRATED MANAGEMENT SYSTEMS POLICY

ZEMİN ETÜD VE TASARIM A.Ş., provides a wide range of customer - oriented quality services in geotechnical engineering survey project and design issues of the construction sector and aims to become a particularly demanded position in the international arena by continuously improving itself in the field of activity in which it is an expert and pioneer in the domestic centre.

This our endeavour, as well as our quality, considers the necessity of continuous improvement of the living and working areas, in terms of environmental and occupational health and safety systems, ensuring the security of information and adding value as a priority task.

In line with these objectives;

- To protect and observe the natural environment in the works it carries out within the scope of service scope and to keep its wastes under control, to make a name for itself in the sector with its exemplary works,
- To carry out the necessary work for the protection and reuse of existing natural resources,
- To in its entirety and continuously fulfil the current legal obligations concerning the company regarding Environment, Quality, Information Security and Occupational Health and Safety,
- To do what is necessary to prevent accidents and occupational diseases,
- To create awareness by carrying out continuous trainings in order to ensure that its employees are aware of environmental, occupational health and safety issues and to ensure the participation of employees in all issues defined within the scope of laws and standards, and to carry out consultancy activities when necessary,
- It aims to provide customer satisfaction and error - free service.
- To manage the processes correctly with the cooperation of the customers and the competent authorities in domestic and international works,
- To ensure the security of information and to carry out activities within this scope,
- To struct in a way to respond to emergencies,
- Define a framework for assessing the confidentiality, integrity and accessibility impacts of threats on assets,
- To reduce the impact of information security threats to service continuity and contribute to continuity,
- To continuously improve the integrated management system
- Identifying, evaluating, monitoring and taking action when necessary, according to the impact and probability of risk factors and opportunities that may affect the achievement of the Company's objectives within the scope of the corporate risk management approach,

It is committed and believes that there cannot be a future devoid of these principles.

Our company is committed to implement and continuously improve the requirements of ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 and ISO 27001:2022 standards with the participation of all our employees during the establishment and implementation of integrated management systems.

Zemin Etüd ve Tasarım A.Ş.

Alemdağ Merkez Mah.Reşadiye Cad.

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