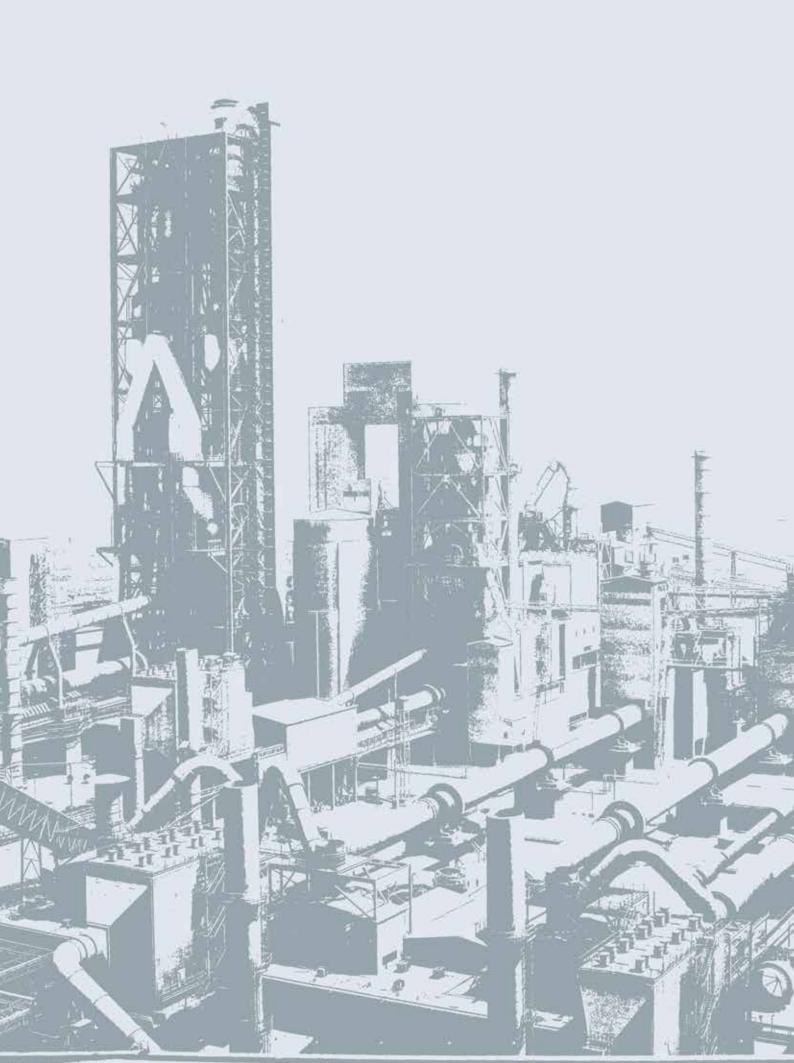




PROKON MÜHENDİSLİK VE MÜŞAVİRLİK A.Ş. PROKON ENGINEERING & CONSULTING INC.



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# since 74

Engineering, Procurement and Construction services since 1974







## PROKON MÜHENDİSLİK VE MÜŞAVİRLİK A.Ş.

Engineering and Consultancy Company providing

- Integrated Planning and Feasibility Studies,
- Engineering and Architectural Services,
- Construction Management and Supervision Services.

## EKON ENDÜSTRİ İNŞAAT VE TİCARET A.Ş.

Contracting Company providing integrated services on

- Infrastructure Works,
- Integrated Industrial Facilities,
- Superstructure Construction Works,
- Manufacturing and Installation Works.



KON

ROKON

## PROKON İMALAT VE MONTAJ A.Ş.

Manufacturing and Erection Company having a wide range of facilities in the fields of Infrastructure Works and Industrial Plants.



## PROYA YAZILIM VE TİCARET A.Ş.

Software Development Company specialized in the Construction Industry Related Softwares.



## PROEN ENERJİ VE MADENCİLİK SANAYİ VE TİCARET A.Ş. Energy Company giving services in Energy & Mining Sector.

## EKONUT PROJE İNŞAAT SANAYİ VE TİCARET A.Ş.

Construction Company specialized in Housing and Shopping Center Investments.



## SADAŞ SİGORTA ARACILIK HİZMETLERİ A.Ş.

Insurance Company providing Solutions for Insurance Services.



# introduction

PROKON Mühendislik ve Müşavirlik A.Ş. is an Engineering and Consultancy Company providing Integrated Planning and Feasibility Studies, Engineering and Architectural Services, Construction Management and Supervision Services throughout Turkey and abroad.

PROKON provides customers sustainable and tailor made solutions, appropriate to their needs. We achieve this through experienced, skilled and motivated personnel with proper management tools.

PROKON serves to a variety of sectors, helping public and private sectors customers to meet their business objectives. We work to create value by delivering integrated solutions on the most complex assignments.

In business partnership with customers, we are aiming to create a better tomorrow.





PROKON Mühendislik ve Müşavirlik A.Ş. was established in 1974 as a Limited Company by CE.MSc. Hasan ÖZDEMİR and CE.MSc İsmail SALICI. Both founder partners have graduated from İstanbul Technical University and started to work as structural engineers in the Project Engineering Office in Karabük Iron and Steel Production Complex before founding PROKON.

Main services provided by the company at the beginning were structural engineering and design services for industrial buildings. Personnel capacity of the company at the beginning was approximately 20.

Power Plants, Cement Production Plants, Iron and Steel Production Plants Engineering, Architectural and Design Services took place by the beginning of the 1980's. Gradually the core business of the company has become Engineering and Design Services for Industrial Type of Buildings. PROKON has worked in cooperation with many technology and process providing companies from Europe, Japan and USA. Personnel capacity of the company during this period was approximately 50.

Multi-Discipline Engineering and Architectural Services were started to be provided by in-house engineers at the beginning of the 1990's. PROKON have started to perform all Design and Engineering Services with computers and made progressive development both in usage of software and hardware.

This period is also starting point of Construction Supervision Services for World Bank Financed Projects, according to the FIDIC Regulations. Procurement Documents including Technical Specifications, Work Schedule, Commercial and Administrative Conditions have been prepared and followed up by skilled and experienced personnel of PROKON. Personnel capacity of the company was considerably increased to 200.

PROKON established and applied quality management system ISO 9001 in year 1998.

Networks of computers were established for internal and external communication and data transfer in 1999.

Large Scale Educational and Residential Buildings Projects Consultancy Services as well as Rail Transportation Projects had been assigned to PROKON in the early 2000s.

As a Policy of Company towards the Support of Research and Development Studies, a group of inhouse engineers have been dedicated to Structural Steel Design and Detailing Software. COMOSYS (Construction Modeling System) is the commercial name of the software as an output product of four years comprehensive studies of the group.

Management and Internal Organizational Relations within the Company were transformed from Hierarchic Organization to Matrix Management System in the year 2003.

Company transformed its Commercial Partnership from Limited to Incorporation in the year 2003.

ISO 14001 and OHSAS 18001 certificates were achieved in 2005.

# services

## A- PLANNING AND FEASIBILITY

## **B- ENGINEERING AND ARCHITECTURE**

## **CIVIL ENGINEERING**

- Plant Lay-Out
- Storm Water Drainage
- Dewatering
- Sewage
- Water Supply & Distribution
- Roads and Pavements
- Irrigation
- Tunnels
- Subways
- Waste Storage Dams

### **MECHANICAL**

- Bulk Handling Systems
  - Elevators
  - Conveyors
  - Chutes
  - Air Slides
- Duct Work
  - Gas Ducts (Waste Gas, Hot Gas)
  - Dust Collection Ducts
- Piping
  - Steam & Condensate
  - Natural Gas
  - Coke Gas
  - N2, O2 Gases
  - Water
  - Compressed Air
  - Lubrication
  - Hydraulic
  - Crude Oil
- HVAC
  - Equipment Design
  - Duct Work
- Sanitary
  - Fixtures
  - Piping

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## **STRUCTURAL ENGINEERING**

- Reinforced Concrete Buildings & Structures
  - Buildings
  - Highway Crossings
  - Highway Bridges
  - Stacks and Towers
  - Silos and Bunkers
  - Shallow and Piled Foundations
    Equipment Foundations (Rotating)
  - Retaining Walls
- Steel Structures
  - Industrial Buildings
  - High Rise Buildings
  - Aircraft Hangars
  - Steel Production Buildings
  - Towers
  - Bridges
  - Workhops
- Marine Structures
  - Water Intake Structures
  - Water Discharge Structures
  - Jetty
  - Harbour
- Rail Transport Structures
  - Stations
  - Operations and Maintenance Centers
  - Track Way
  - Over Pass and Under Pass
  - Tunnels
  - Viaducts
  - Cut & Cover

### ARCHITECTURAL

- Conceptual Design
- Functional Planning
- Preliminary Design
- Detail Design
  - Plants and Facilities
  - Industrial Buildings
  - Educational and Cultural
  - Buildings
  - Residential Buildings
  - Hospitals
  - Food and Beverage Facilities
  - Rail Stations
- Material Selection and Color Schedule
- 3D Presentation

## ELECTRICAL

- Power Supply & Distribution
  - MV Panels Design
  - LV Panels Design
  - TransformersDiesel Generators
  - Diesel Genera
  - UPS
  - Main Distribution Boards
- Cabling
  - Power and Data Cabling
  - Cable Trays
  - Cable Ladders

**Lightning Protection** 

Fire Detection and Alarm

- Conduits
- Junction Box

Telephone, Data

- Lighting
- Earthing

CCTV

Automation

Instrumentation

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## **C- CONSULTING AND SITE SUPERVISION**

#### **PROCUREMENT**

- Tender Document Preparation
  - Contract General Conditions
  - Contract Particular Conditions
  - Technical Specifications
  - Bill of Quantities
  - Drawings

#### Contractor Selection

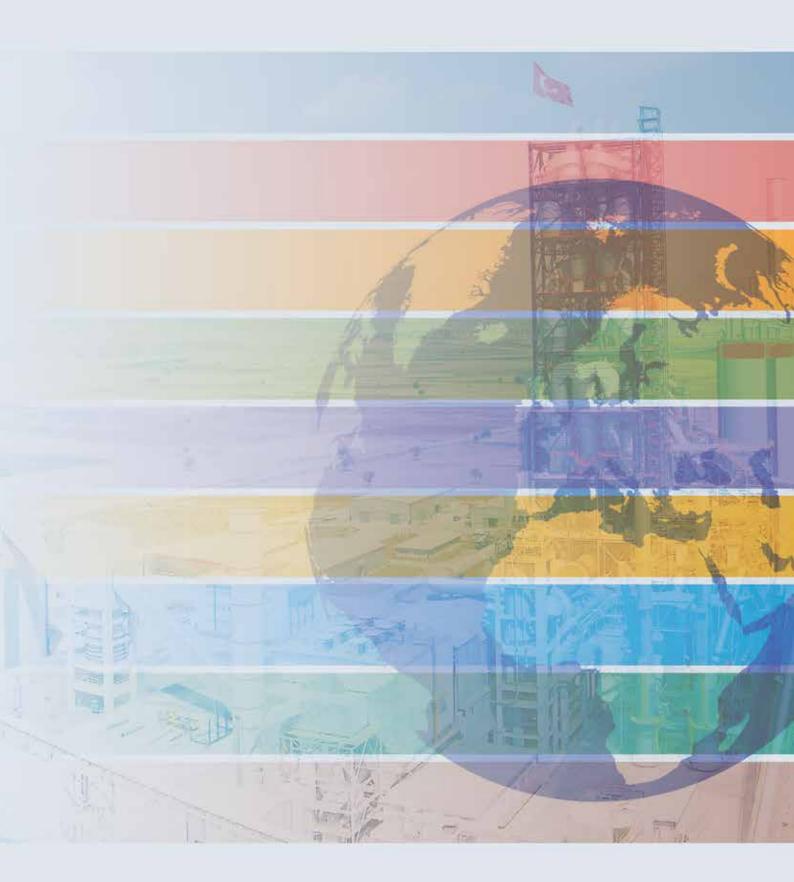
- Setting Selection CriteriasQualification Document
- Document Evaluation
- Proposal Evaluation
- Contract Negotiations
- Reporting

### **CONSULTANCY SERVICES**

- Technical Assistance
- Schedule Monitoring and Control
- Quality Assurance
- Equipment & Material Selection
- Cost Control
- Reporting

## **SITE SUPERVISION**

- Coordination
- Quality control
  - Equipment & Material
    - Implementation Control
  - Attendance to Tests
- Quantity Surveying
- Workers Health & Safety
- Reporting



# fields of activity

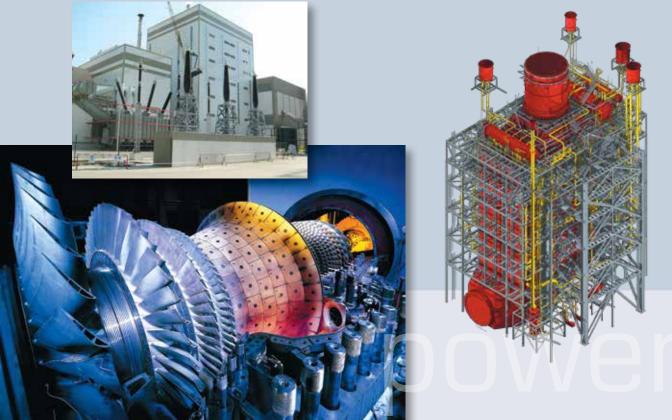




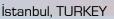
# **Power Plants**

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## REHABILITATION AND FULL REPOWERING OF AMBARLI FUEL-OIL POWERPLANT







Within the scope of the project; 2 Gas Turbines with capacities between 250 and 300 MW and 2 Heat Recovery Steam Generators (HRSG) that generate steam out of the exhaust heat of gas turbines were installed. Existing steam turbines were rehabilitated and redesigned to work with the new steam regime. As a result, the installed capacity was increased from 300 MW to 816 MW.

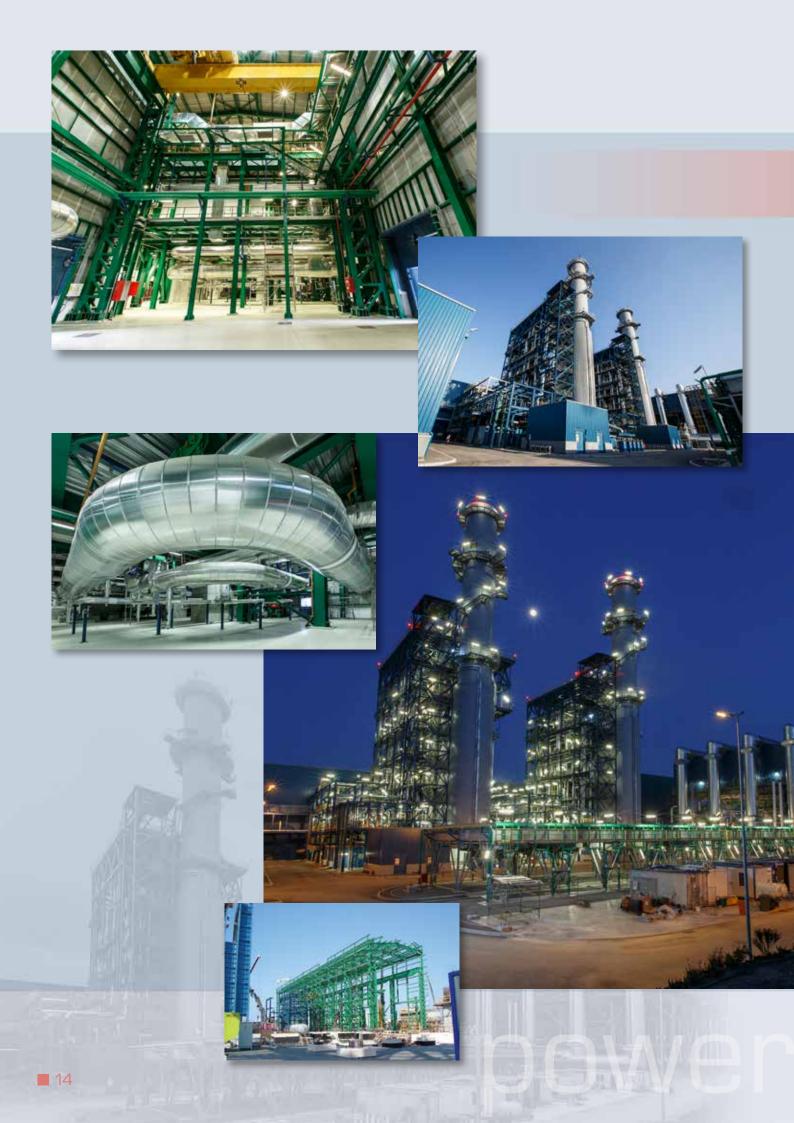
One other objective of the investment is modernization and renewal, therefore existing facilities were also completely overhauled. Existing Fuel-oil Boilers and 105m height Concrete Stack that were located in the area where the Gas Turbines and HRSGs were to be installed, are completely demolished. The Water Intake System was completely rehabilitated in order to provide easy maintenance and operation and to increase the quality of circulating of water. As the Turbines were dual fueled, existing tanks were rehabilitated and used for Main Fuel-oil Storage. Besides them daily Fuel-oil Tanks and Pump Stations were designed. Pressure Reducing Stations and Pipelines were also designed in order to bring natural gas to the site.

With the realization of this project, the life of the old plant located at Marmara Coast of İstanbul shall be extended by 25 years. The net thermodynamic efficiency shall be enhanced and the installed generation capacity within the existing site boundaries shall be tripled. Besides the emissions, heat rejection and water consumption per kW shall be reduced.

The project was held by PROKON-EKON Group of Companies on turnkey basis and PROKON provided multi-discipline engineering service.









## GEBZE 850 MWe COMBINED CYCLE POWER PLANT

Gebze, TURKEY

Client: EKON ENDÜSTRİ İNŞAAT VE TİCARET A.Ş.

850 MWE Gebze Combined Cycle Power Plant, which is owned by Yeni Elektrik Üretim A.Ş., located in VI. IMES Organized Industrial Zone in Gebze, Dilovası District.

The main Contractor of the Power Plant is Ansaldo Energia S.P.A. (AEN). EKON is participating as native manufacturing, procurement and assembly contractor in this project and PROKON provided structural, mechanical, electrical and piping design services and technical support at site under EKON's scope.

The facility has 2 pieces Gas Turbine and Generator Set, 2 Heat Recovery Steam Generators and their Chimneys and 1 Steam Turbine and its Generator Set. The Gas Turbines are placed on a Mass Concrete Foundation at ground level whereas the Steam Turbine and its Generator placed on a Bridge Floor at an elevation of 20 m which is supported by Reinforced Concrete Columns.

The Gas Turbine and Steam Turbine buildings are designed as Steel Structure. There exists a mobile crane with a 135-tons capacity in Gas Turbine building and one with 80-ton capacity in Steam Turbine Building. Also Separate Electrical Buildings for each unit are placed adjoining to those buildings. Moreover, there are Separate Electrical Buildings for every Heat Recovery Steam Generators.

One Air Cooling Condenser for Steam Turbine and one FIN FAN Cooler System is placed for Gas Turbines. Other than the units of Power Island, Pipe Bridges, Auxiliary Boiler Facility, Water Tanks and Facilities, Auxiliary Electrical Buildings, Natural Gas RMS-A Station, Social Facilities, Underground Galleries, Pump Houses, Pump Foundations, Transformer Foundations etc. are also present in this project.

Facility Roads, Building and Road Drainage Infrastructure Design and Structural, Architectural, Electrical, Mechanical and HVAC Design of the Buildings, Exterior Illumination Design, Underground Natural Gas and Underground Firewater Piping Design were also provided by PROKON.





## (1+1)x600 MW İSKENDERUN COAL-FIRED THERMAL POWER PLANT

Client: DILER HOLDING

İskenderun, TURKEY

The Diler Power Plant Project in Turkey includes two 600 MW units with two Supercritical Type Pulverized Coal-Fired Boilers, two Condensing Steam Turbine Generator Sets and Auxiliary Systems. The Plant was to be built in two Phases. The Phase I was to construct 1×600 MW and some common installations, and the Phase II was to construct the other 1×600 MW unit. When the project completed, each unit generates 4,260,000,000 kWh, annually.



The boiler plant is designed to burn imported coal as main fuel, and the natural gas is used as the ignition and assistant fuel. The project covered the following structures;

- The Boilers
- Steam Turbines
- Generators

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- Water Supply System
- Water Treatment SystemCooling Water System
- Electrical System
- I&C
- Firefighting
- Flue Gas Denitrification
  - & Desulphurization Systems
- Waste Water Treatment Plant
- Coal Handling System
- Ash Removal System
- Step-up/Start-up/Unit Auxiliary Transformers
- Auxiliary Boiler
- Diesel Generator
- Telecommunications, etc.



## The following services were provided by PROKON under the scope of this project:

Mapping Works,

- Engineering & Design Services of Water Intake & Discharge System,
- Preparation of Tender File / Tender Evaluation of Works under the scope of Owner,
- Design Review of Structural, Mechanical, Electrical, I&C & Process Drawings of Power Plant prepared by EPC Contractor,
- Supervision Services for Construction, Mechanical Equipment Installation & Plant Commissioning Works.



Client: GAMA – TEKFEN JOINT VENTURE

Sugözü-İskenderun, TURKEY

2x660 MW İskenderun Power Plant is the first power plant operating with imported coal contracted as "Build-Operate" system. The power plant was built by the consortium of Babcock Borsig Power (Germany), GT Gama-Tekfen Joint Venture (Turkey) and SİMKO (Turkey). PROKON has undertaken the local engineering and design services of the plant as part of the GT Joint Venture.

PROKON provided the design services including architectural, multi-discipline engineering services and site technical support within the scope of the project.

#### The following services were provided by PROKON under the scope of this project:

- Plant Lay-Out
- Topographical Survey & Set Out of Grid Lines
- Geotechnical Survey & Report
- Site Preparation
- Architectural and Engineering Design Services Including Structural, Mechanical, Piping, Electrical and I&C
- Technical Support During Implementation of the Work
- Overall Design Work Schedule Monitoring
- Coordination between Units and Engineering Disciplines

#### The following structures and units are designed by PROKON:

- Boiler House
- Turbine House
- Bunkers
- Electrical Control Building
- Secondary Boiler House
- Coal Storage System (Crusher House, Screening System, Coal Storage Area etc.)
- Ash Silos & Conveyor System
- Stacks
- Foundations of Electro Filters
- Waste Water Recovery Plant

- Desulphurization Systems
  - Limestone Crushing & Storage
  - Lime fluid Handling System &
  - Tanks
  - Gas Washing System
  - Service Building
  - Gypsum Dewatering System
- Raw Water Tanks
- Water Treatment Facility
- Gypsum Dewatering system
- Water Intake & Discharge Structures & Pump Station

Workshop & Depot

- Management Building
- Cafeteria
- Field Excavation, Access Roads, Bridges & Culverts
- Roads
- Rainwater Discharge - Sewer
  - Cable Channels
  - Pipe Galleries
  - Water Intake & Jetty Systems
  - 650 m Coal Loading Pier





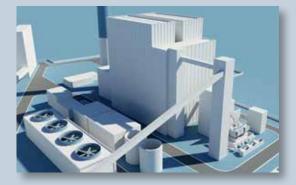
## DOSAB COGENARATION PLANT

#### Bursa, TURKEY

Client: DEMİRTAŞ ORGANİZE SANAYİ BÖLGESİ (DOSAB) PROKON has been awarded for the Owner's Engineering Services of Cogeneration (Combined Heat and Power) Plant by Bursa Demirtaş Organized Industrial Zone (DOSAB). The main purpose of the project is to provide the necessary process steam for industrial plants and to generate power.

PROKON has provided the following services for the Lignite-Fired Circulating Fluidized Bed Boiler (CFB) Power Plant, which will produce a total of 300 tons/h Process Steam and 49,9 MW electricity concurrently.

- Preparation of Feasibility Report to be submitted to International Financial Institutions
- Conceptual Design Services
- Preparation of Tender Documents for the Selection of Local and Foreign EPC Contractor
- Supervision Services During Construction, Tests and Commissioning Periods.



#### Details Related to the Plant are as follows

- Max. Installed Power: 49,9 MW
- Steam Capacity : 300 tons/h
- Combustion: Circulating Fluidized Bed Technology
- App. Boiler Capacity: 2 x 195 tons/h
- Fuel: Low Quality Local Lignite
- Fuel Calorific Value: 3.000 kcal (± 100)
- Fuel Size: 0-6 mm (Delivery at bunker)
- Plant water need: 10000 m³/day
- Closed Storage Area (20 days): 20000 m<sup>2</sup>



# power

## ALAȘEHİR 24 MWe GEOTHERMAL POWER PLANT PROJECT

Manisa, TURKEY

Client: TÜRKERLER JEOTERMAL ENERJİ ARAMA VE ÜRETİM A.Ş. Türkerler Jeotermal Enerji Arama ve Üretim A.Ş. made an investment for 24 MWe Geothermal Power Plant in Manisa Alaşehir. PROKON provided Multi-Discipline Engineering Services apart from the services provided by the main equipment supplier (Turbine, Generator, Pre-Heater, Recuperator) under the scope of the project.

24 MWe will be produced with the generator that is connected to two turbines, driven by the organic fluid "N-Pentane".

PROKON provided the following services under the scope of project;

- General Layout
- All Detail Design Services (Structural Steel, Reinforced Concrete, Electrical -Automation, Architectural, Piping, Infrastructure)
- All Basic Engineering Services apart from the Scope of Main Equipment Supplier.





## ANKARA 770 MW COMBINED CYCLE NATURAL GAS POWER PLANT

### Ankara, TURKEY

Client: BAYMİNA ENERJİ A.S.

Engineering and Design Services including Multi-Discipline Engineering, Architectural Services and Coordination, Site Technical Support were within the scope of the project. Also the detailed services are listed below:

- Plant Lay-Out
- Topographical Survey & Set Out of Grid Lines
- Geotechnical Survey & Report
- Site Preparation
- Architectural and Engineering Design Services Including Structural, Mechanical, Piping, Electrical and I&C
- Technical Support During Implementation of the Work
- Overall Design Work Schedule Monitoring
- Coordination between Units and Engineering Disciplines

## designed by PROKON:

- Machine Hall
- HRSG (Boiler) Reinforced Concrete Structures
- Workshop & Store
- Electrical Annex
- Cooling Tower Basin
- Cooling Water Pump House & Cooling, Water Return Structure
- Demineralization Plant



- Fire Fighting Pump House
- Pipe Rack & Cable Trenches
- Oil Pit & Wash Water Pit & Drain System Pits
- Owners Metering Station
- HVAC Room
- HVAC-Boiler House
- Cooling Water Pipes Foundations
- H2 Station
- Guard House
- Garbage Collection Area
- RMS-A Shelter Building
- Landscaping
- Roads
- Rainwater Drainage And Retaining Walls
- Sewerage
- Plant Waste Water And Potable Water System
- Plant Drainage System
- Pump Station
- Plant Fire Fighting System
- Biological Package & Treatment Plant
- Plant Process Water System
- Process Water Drain System
- Cable Pits And Conduits
- Piping Channel And Galleries
- Structures for Transport, Traffic, Fencing Etc.





## ÇAYIRHAN 2x150 MW COAL-FIRED POWER PLANT

Ankara, TURKEY

Client: TEAŞ

The scope of the project covered Engineering and Design Services including Multi-Discipline Engineering, Architectural Design and Site Technical Support of 2x150 MW Coal-Fired Power Plant in Ankara. The detailed services were:

- Plant Lay-Out
- Topographical Survey & Set Out of Grid Lines
- Geotechnical Survey & Report
- Site Preparation
- Architectural and Engineering Design Services Including Structural, Mechanical, Piping, Electrical and I&C
- Technical Support During Implementation of the Work
- Overall Design Work Schedule Monitoring
- Coordination between Units and Engineering Disciplines

- Boiler House Foundation and Steel Platform
- Electro Filter Area Foundations
- Turbine House
- Stack
- Intermediate Building
- Transformers & Switchyard Foundations
- Water Treatment Plant
- Raw Water Intake with Jetty
- Raw Water Basin
- Lime Milk Preparation Building
- Fire Fighting Pump House
- Compressor & Diesel Generator Building
- H2 Generating Plant
- Waste Water Recovery Plant
- Water and Absorbent Feed Tanks
- Flue Gas Desulphurization System ;
- Scrubber Structure
- Service Building
- Gypsum Pre-Dewatering Building
- Absorbent Preparation Building
- Foundations for Emergency Storage
- Cooling Water Towers
- Cooling Water Pump House
- Pipe Bridges
- Coal Handling System
- Ash Handling System
- Modifications of Existing Buildings
- HVAC
- Fire Fighting
- Domestic Water Installations
- Roads and Paved Areas
- Rainwater Collection and Disposal System

- Sewerage System
- Pipe Galleries and Cable Channels
- Coal Bunkers
- Ash Bunkers
- Flue Gas, Air and Cold Gas Ducts
- Tanks for FGD System
- Tanks for Steam Generating Units
- Fire Fighting Tank
- Raw Water
- Domestic Water
- Main Cooling Water
- Compressed Air
- Instrument Air
- Service Air
- Heating and Hot Water
- Auxiliary Steam
- Auxiliary Cooling Water
- Fire Fighting Water







## KANGAL 2x150 MW COAL-FIRED POWER PLANT

#### Sivas, TURKEY

Client: TEAŞ

The scope of the project covered Engineering and Design Services including Multi-Discipline Engineering, Architectural Design and Coordination and Site Technical Support. The detailed services were:

- Plant Lay-Out
- Topographical Survey & Set Out of Grid Lines
- Geotechnical Survey & Report
- Site Preparation
- Architectural and Engineering Design Services Including Structural, Mechanical, Piping, Electrical and I&C
- Technical Support During Implementation of the Work
- Overall Design Work Schedule Monitoring
- Coordination between Units and Engineering Disciplines

#### The following structures and units are designed by PROKON:

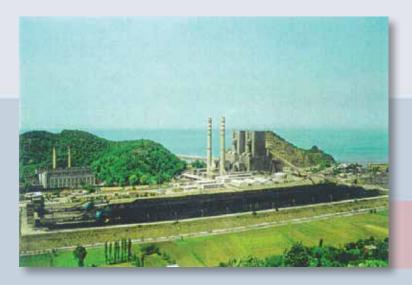
- Boiler House
- Turbine House
- Bunkers
- Electrical Control Building
- Water Treatment Plant
- Cooling Towers
- Auxiliary Boiler House
- Raw Water Tanks
- Coal Handling System including Crushing Plant, Screening Plant, Coal Yard, etc.
- Ash Handling System including Ash Bunkers, Conveyor Lines, Ash Deposits Area, Ash Dam, etc.
- Cooling Water Pipelines
- Compressed and Instrument Air Pipelines
- Auxiliary Steam Lines
- Fuel Lines
- Heating Lines
- 5000 m<sup>3</sup> Fuel-Oil Tank
- Fire Fighting Pump House and Lines
- Raw Water Supply
- Technological Wastewater Removal System (Pumps, Pipelines, etc.)
- Chimneys

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- Electro Filters
- Wastewater Treatment Plant

- Water Intake Structure
- Workshop and Warehouse
- Administration Building
- Cafeteria
- Roads
- Rainwater Drainage
- Sewage
- Cable Galleries
- Piping Channel & Galleries
- Waste Water Removal and Ash Water Storing Dam
- Rehabilitation of Electrofilter & Ash Transportation Lines





## ÇATALAĞZI 2x150 MW COAL-FIRED POWER PLANT

Ankara, TURKEY

Client: TEAŞ

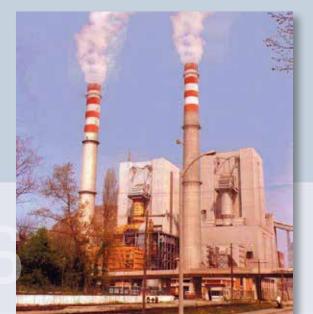
Engineering and Design Services including Multi-Discipline Engineering, Architectural Services and Site Technical Support were within the scope of the project. Also the detailed services are as follows:

- Plant Lay-Out
- Topographical Survey & Set Out of Grid Lines
- Geotechnical Survey & Report
- Site Preparation
- Architectural and Engineering Design Services Including Structural, Mechanical, Piping, Electrical and I&C
- Technical Support During Implementation of the Work
- Overall Design Work Schedule Monitoring
- Coordination between Units and Engineering Disciplines

- Boiler House
- Turbine House
- Bunkers
- Electrical Control Building
- Water Treatment Plant
- Cooling Towers
- Auxiliary Boiler House
- Raw Water Tanks
- Coal Handling System including Crushing & Screening Plant, Coal Yard, etc.
- Ash Handling System including Elutriation, Ash Channel, etc.
- Chimneys
- Electrostatic Precipitators
- Wastewater Treatment Plant
- Water Intake Structure
- Workshop & Warehouse
- Administration Building
- Ash & Slug Conveying Lines
- Cafeteria
- Housing Apartments
- Cooling Water Pipelines
- Compressed and Instrument Air Pipelines

- Auxiliary Steam Lines
- Heating Lines
- Fuel Lines
- 5000 m<sup>3</sup> Fuel-Oil Tank
- Fire Fighting Pump House and Lines
- Raw Water Supply Roads
- Rainwater Drainage
- Sewage
- Cable Galleries
- Piping Channel & Galleries
- 11 m<sup>3</sup>/sec Getting Water from Sea and Giving It Back to Sea Rotating Drum Grill Systems.







## 2x60 MW GIRNE POWER PLANTS

## Girne, TURKISH REPUBLIC OF NORTHERN CYPRUS (T.R.N.C.)

Client: GENERAL DIRECTORATE OF TURKISH ELECTRICITY AUTHORITY The scope of the project covered:

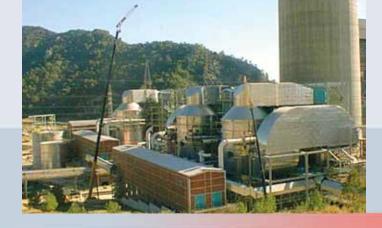
- Plant Lay-Out
- Topographical Survey & Set Out of Grid Lines
- Geotechnical Survey & Report
- Site Preparation
- Architectural and Engineering Design Services Including Structural, Mechanical, Piping, Electrical and I&C
- Technical Support During Implementation of the Work
- Overall Design Work Schedule Monitoring
- Coordination between Units and Engineering Disciplines

- Boiler House
- Turbine House
- Electrical Control Building
- Chimney
- Water Treatment Plant
- Auxiliary Boiler and Diesel Generator House
- Switchgear Buildings and Transformers
- Water Intake Structure
- Administration Building
- Workshop & Warehouse
- Fuel-Oil Handling System
- **3** x 20.000 m<sup>3</sup> Fuel Tank
- 800 m³ Fuel Tank
- Transfer Pump Station
- Fuel Pipe Lines

- Fuel Unloading Sea Station
- Steam and Condense Lines
- Cooling Water Pipelines
- Compressed & Instrument Air Piping
- Auxiliary Steam Piping
- Heating Lines
- Auxiliary Cooling Water Lines
- Insulation
- Compressor Station Roads
- Rainwater Drainage
- Sewage
- Cable Galleries
- Piping Channel & Galleries
- 6 m<sup>3</sup>/sec Cooling Water Intake and Discharge Structures and Lines Including Pump House







## KEMERKÖY THERMAL POWER FLUE GAS DESULPHURIZATION PLANT

Muğla, TURKEY

#### Client: GAMA INC.

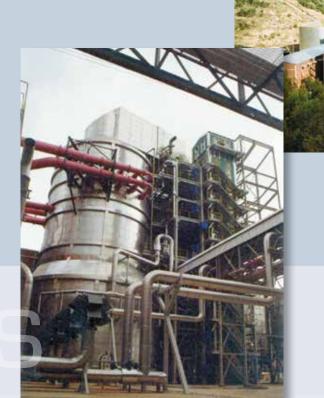
## The scope of the project covered:

- Plant Lay-Out
- Topographical Survey & Set Out of Grid Lines
- Geotechnical Survey & Report
- Site Preparation
- Architectural and Engineering Design Services Including Structural, Mechanical, Piping, Electrical and I&C
- Technical Support During Implementation of the Work
- Overall Design Work Schedule Monitoring
- Coordination between Units and Engineering Disciplines

- Truck Unloading
- Crusher Building
- Limestone Silo
- Limestone Milk Preparation Building
- Conveyors and Supporting Structures
- Scrubber Platforms and Foundations
- Drainage Pits
- Elevator Towers
- Compressor Building
- Gypsum Dewatering & Storage Structure
- Pipe and Cable Racks
- Pump Rooms
- Electrical Rooms
- I/O Rooms
- Battery Room
- Transformer Rooms
- Process Piping
- Earthing
- Cable Racks
- Power Distribution
- Building and Fields Lighting
- Communication and Alarm Systems



- Service Water
- Raw Water
- Fire Water
- Hot Water
- Service Compressed Air
- Instrument Air
- Cooling Water
- Plant Arrangement and Site Infrastructure Design
- Roads



## YEDİGÖZE SANİ BEY DAM & HYDROELECTRIC POWER PLANT

#### Adana, TURKEY

Client: SANKO YEDİGÖZE ELEKTRİK ÜRETİM VE TİCARET A.Ş. PROKON-EKON Group of Companies has undertaken the Design, Engineering, Manufacturing, Erection, Testing and Commissioning of all Hydromechanical Equipment, and Civil Works for Water Intake Structure, Spillway Structure and Penstock Supports for Yedigöze Sani Bey Dam and Hydroelectric Power Plant.

Yedigöze Sani Bey Dam is a rock fill dam and the upstream face is covered with reinforced concrete, thalweg elevation is 105 m and the crest elevation is 131 m.

The hydroelectric plant is composed of two units, which has 369,84 m<sup>3</sup>/s maximum project inflow 95,50 m gross head and 317 MW installed capacity.

PROKON provided the Design and Engineering Services for all Hydromechanical Equipment in this project.

The following equipment were designed under the scope of this project:

- Water Intake Structure Stoplog and Hoisting Beam
- Plant Building Inlet Pipe Gate and Hoisting Beam
- Spillway Stoplog and Hoisting Beam





## ORHANELI THERMAL POWER FLUE GAS DESULPHURIZATION PLANT

Bursa, TURKEY

Client: TEAŞ

In the scope of this project, Engineering and Design Services including Multi-Discipline Engineering, Architectural Services and Site Technical Support were covered.

#### Detailed services:

- Plant Lay-Out
- Topographical Survey & Set Out of Grid Lines
- Geotechnical Survey & Report
- Site Preparation
- Architectural and Engineering Design Services Including Structural, Mechanical, Piping, Electrical and I&C
- Technical Support During Implementation of the Work
- Overall Design Work Schedule Monitoring
- Coordination between Units and Engineering Disciplines

- Truck Unloading
- Crusher Building
- Limestone Silo
- Limestone Milk Preparation Building
- Conveyors and Supporting Structures
- Scrubber Platforms and Foundations
- Drainage Pits
- Elevator Towers
- Compressor Building
- Gypsum Dewatering and Storage
- Pipe and Cable Racks
- Pump Rooms
- Electrical Rooms
- I/O Rooms
- Battery Room
- Transformer Rooms
- Earthing
- Cable Racks
- Power Distribution
- Building and Field Lighting
- Communication and Alarm Systems
- Service Water
- Raw Water
- Fire Water

- Hot Water
- Service Compressed Air
- Instrument Air
- Cooling Water
- Roads
- Raw Water
- Fire Water
- Hot Water
- Service Water



## power plants references

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
841	Kolin Kal- Yon Joint Venture	AKKUYU NGPP ASSISTANCE TO THE CLIENT FOR TENDERING PHASE	Kolin Kal- Yon Joint Venture	MERSIN	TURKEY	Project covers technical support during construction period.
835	ÇAN KÖMÜR VE İNŞAAT A.Ş.	ÇAN 2 THERMAL POWER PLANT	ÇAN KÖMÜR VE İNŞAAT A.Ş.	ÇANAKKALE	TURKEY	The project covers multi discipline detail design services.
816	ENERJISA POWER GENERATION COMPANY	TUFANBEYLI THERMAL POWER PLANT, RAW WATER SUPPLY SYSTEM - EREC- TION & CONSTRUCTION	ENERJISA POWER GE- NERATION COMPANY	ADANA	TURKEY	Multi discipline basic design and detail design services are provided for the EPC project.
810	KROMAN STEEL IND. INC.	2x600 MW BANDIRMA THERMAL POWER PLANT - PREPARATION OF FEASIBILITY PROJECTS	AKDENIZ CONSUL- TANCY (AHMET ZORLU)	BALIKESIR	TURKEY	Project covers basic design services in process and piping, and mechanical equipment disciplines.
809	TASZE- MIN INS. MADENCILIK SANAYI	CIRPILAR THERMAL POWER PLANT - PREPARATION OF PROSESS DIAGRAMS	TASZEMIN INS. MA- DENCILIK SANAYI	EDREMIT	TURKEY	Project covers technical support during bidding period.F8:N8
797	TAQA	AFŞİN ELBİSTAN-B 2 BOILER UNIT BUILDING FIRE DAMAGE	TAQA	AFŞİN ELBİS- TAN	TURKEY	Project covers technical support during construction period.
795	ATLAS ENERJİ	ISKENDERUN T.S. DESALINATION PLANT ENGINEERING SERVICES	ATLAS ENERJİ	İSKENDERUN	TURKEY	Project covers multi discipline detail design services and technical support during construction period.
792	DOSAB DEMIRTAS OIZ	COGENERATION PLANT ENGINEERING, CONSULTING & SUPERVISION SERVICES	DOSAB	BURSA	TURKEY	The main purpose of the project is to provide the necessary process steam for industrial processes and power generation. The scope of the Project is preparing the tender files and construction supervision services.
790	TÜRKERLER	24 MWe GEOTHERMAL ELECTRICAL POWER PLANT	TÜRKERLER	ALAŞEHİR MANİSA	TURKEY	Project covers multi discipline detail design services, construction management and supervision services during construction period.
782		WATER SUPPLY PROJECT FROM DERE- BANI CREEK FOR ISKENDERUN OSB	İSKENDE- RUN OSB DEPART- MENT	ISKENDERUN	TURKEY	Project covers multi discipline detail design services.
770	ATLAS ENERJI	2x600 MW THERMAL POWER PLANT COAL UNLOADING AND HANDLING SYSTEM ENGINEERING SERVICES	ATLAS ENERJI	ISKENDERUN	TURKEY	The project covers multi discipline basic design, detail design services and technical support during construction period.
764	STF Sp.A	GEBZE 850 MW CCGT HRSG UNIT 11- 12 CASING WORKSHOP DRAWINGS	PROKON IMALAT VE MONTAJ A.S.	GEBZE	TURKEY	The project covers the detail design services in steel and mechanical equipment disciplines.
757	YENI AEN INSAAT A.S.	850 MW COMBINED CYCLE POWER PLANT IN GEBZE CONSULTANCY SERVICES FOR CIVIL, MECHANICAL & LIGHTING ENGINEERING DESIGN	EKON A.S.	GEBZE ISTANBUL	TURKEY	The Project covers multi discipline basic design, detail design services and technical support during construction period.
749	ATLAS ENERJI	ISKENDERUN THERMAL POWER PLANT ENGINEERING AND CONSULTANCY SERVICES	ATLAS ENERJI	ISKENDERUN	TURKEY	The Project covers multi discipline detail design services, construction manage- ment and site supervision services during construction period. The Iskenderun Power Plant Project in Turkey includes two 600 MW units with two supercritical type pulverized coal fired boilers, two condensing steam turbine generator sets and auxiliary systems.
748	ATLAS ENERJI	ISKENDERUN THERMAL POWER PLANT SEA WATER INTAKE AND DISCHARGE SYSTEM ENGINEERING SERVICES	ATLAS ENERJI	ISKENDERUN	TURKEY	The project covers multi discipline basic design services, construction manage- ment and site supervision services during construction period.
747	GALATA ENERJI	SIRNAK POWER PLANT CONSULTANCY SERVICES	RE-GMBH	SIRNAK URFA	TURKEY	The project covers technical support during construction period.
741	PARK TEKNIK ELEKTRIK MADEN TURIZM SAN. VE TIC. A.S.	AFSIN ELBISTAN B THERMAL POWER PLANT BELT DISTRIBUTION CENTER PROJECT	PARK TEKNIK ELEKTRIK MADEN TURIZM SAN. VE TIC. A.S.	K. MARAS	TURKEY	The project covers multi discipline basic design and detail design services.
735	SANKO YEDIGOZE ELEKTRIK URETIM VE TICARET A.S.	YEDIGOZE DAM AND HEPP HYDRO MECHANICAL EQUIPMENT PROJECT DESIGN SERVICES	EKON A.S.	ADANA	TURKEY	The project covers the detail design services in mechanical equipment discipline.
732	EUAS ELECTRICITY	REHABILITATION AND FULL REPOWE- RING OF AMBARLI FUEL-OIL POWERP- LANT UNITS 4 AND 5 CONVERSION TO DUAL FUEL COMBINED CYCLE POWER PLANT	EPP JOINT VENTURE	AMBARLI ISTANBUL	TURKEY	The Project covers multi discipline basic and detail design services and construc- tion management and site supervision services during construction period.
731	ATLAS ENERJI	HYDROLOGY REPORT OF ASH STORAGE AREA	ATLAS ENERJI	ISKENDERUN	TURKEY	The project covers technical support during construction period.

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
730	TERSANE VE ULASIM SANAYİ A.S.	RAW WATER SUPPLY PROJECT FROM THE SEA ENGINEERING SERVICES	ICDAŞ CE- LIK ENERJİ TERSANE VE ULASIM SANAYİ A.S.	CANAKKALE	TURKEY	The project covers multi discipline basic design and detail design services for raw water supply from the sea.
722	ENERJISA ENERJI URE- TIM A.S.	THERMAL POWER PLANT PROJECTS ENGINEERING, CONSULTANCY AND SUPERVISION SERVICES	ENERJISA ENERJI URE- TIM A.S.		TURKEY	The project covers infrastructural basic design and detail design services and site supervision during construction period.
719	PROEN ENERJI VE MADENCILIK SANAYI VE TICARET A.S.	HPP PROJECTS ENGINEERING SERVICES	PROEN ENERJI VE MADENCI- LIK SANAYI VE TICARET A.S.	GIRESUN, MUGLA	TURKEY	The project covers multi discipline basic design and detail design services.
697	ENERJISA ENERJI URE- TIM A.S.	TUFANBEYLI LIGNITE FIRED THERMAL POWER PLANT CONSULTANCY SERVICES	ENERJISA ENERJI URE- TIM A.S.	TUFANBEYLI ADANA	TURKEY	The project covers technical support during construction period.
684	TGO TEKFEN GAMA JOINT VENTURE	MARITSA POWER PLANT ENGINEERING	TGO TEK- FEN GAMA JOINT VENTURE	MARITSA		Coordination between units and engineering disciplines
672	GENERATION INC.	AFSIN ELBISTAN B THERMAL POWER PLANT RAW WATER SUPPLY SYSTEM ENGINEERING AND DESIGN SERVICES	ENER INC.	AFSIN ELBIS- TAN K.MARAS	TURKEY	The project covers multi discipline basic design and detail design services to supply necessary raw water from Battal Bridge downstream.
654	TURKISH COAL EN- TERPRISES	COAL WASHING PLANT	MAYDA MADENCİ- LİK İNŞ. TAŞ. SAN. VE TİC. A.Ş.	SOMA MANİSA	TURKEY	<ul> <li>Soma-A, Cooling Tower Rehabilitation Project</li> <li>Soma-B, Coal Handling Plant, Retaining Walls</li> </ul>
646	GAMA POWER SYS- TEMS INC.	COMBINED CYCLE NATURAL GAS POWER PLANT	GAMA POWER SYSTEMS INC.	SAMRA	JORDAN	Multi-Discipline engineering services, coordination and site technical support were within the scope of the project.
645		AFSIN - ELBISTAN A THERMAL POWER PLANT REHA- BILITATION WORKS CONSULTANCY SERVICES	TURKISH ELECT- RICITY GENERA- TION INC.	AFSIN -ELBİS- TAN K.MARAS	TURKEY	Multi-discipline engineering services, coordination and site technical support were within the scope of the project. The followings are the buildings and structures within scope of work provided by PROKON. • Domestic Waste Water Treatment Plant
632	ICDAŞ CELIK ENERJİ TERSANE VE ULASIM SANAYİ A.S.	ICDAS POWER PLANT WATER INTAKE FOR COOLING SYSTEM ENGINEERING SERVICES	ICDAŞ CE- LIK ENERJİ TERSANE VE ULASIM SANAYİ A.S.	BIGA CANAK- KALE	TURKEY	Wulti-Discipline engineering services, coordination and site technical support were within the scope of the project. The followings are the buildings and structures within scope of work provided by PROKON. Water intake under sea Piping Pump station Water pond Pressure dropping structure
616	MINISTRY OF ENERGY AND NATURAL RESOURCES GENERAL DIRECTORA- TE OF STATE HYDRAULIC WORKS	DERINER DAM AND POWER PLANT AGGREGATE CRUSHING - SCREENING - WASHING INSTALLATIONS BELT CONVEYORS	ERG İNŞAAT TİCARET VE SANAYİ A.Ş.		TURKEY	Multi-Discipline engineering services, coordination and site technical support were within the scope of the project. The followings are the buildings and structures within scope of work provided by PROKON. • Aggregate Crushing, Screening, Washing Plant • Conveyors
585	TURKISH ELECTRICITY GENERATION INC.	ÇAN THERMAL POWER PLANT MAIN COOLING SYSTEM ELECTRICAL PROJECT	MIMAG MAKINE VE INSAAT SAN. LTD. STI.	ÇAN ÇANAK- KALE	TURKEY	The project covers basic design and detail design services in electrical discipline and site supervision services during construction period.
584		KANGAL THERMAL POWER PLANT RE- HABILITATION OF 1.,2. UNITS ELECTRO FILTER AND ASH TRANSMISSION LINE	PROKON MANUFA- CTURING AND ERECTION INC.	KANGAL SİVAS	TURKEY	The project covers multi discipline basic design and detail design services.
569	FORTUM ENG. FIN- LAND	125MW THERMAL POWER PREPARA- TION OF PRE-BIDDING	GAMA ENDUSTRI TESISLERI IMALAT VE MONTAJ A.S.	SHANNONSB- RIDGE LANES- BOROUGH	IRELAND	The project covers basic design services in architecture, reinforced concrete and steel disciplines.

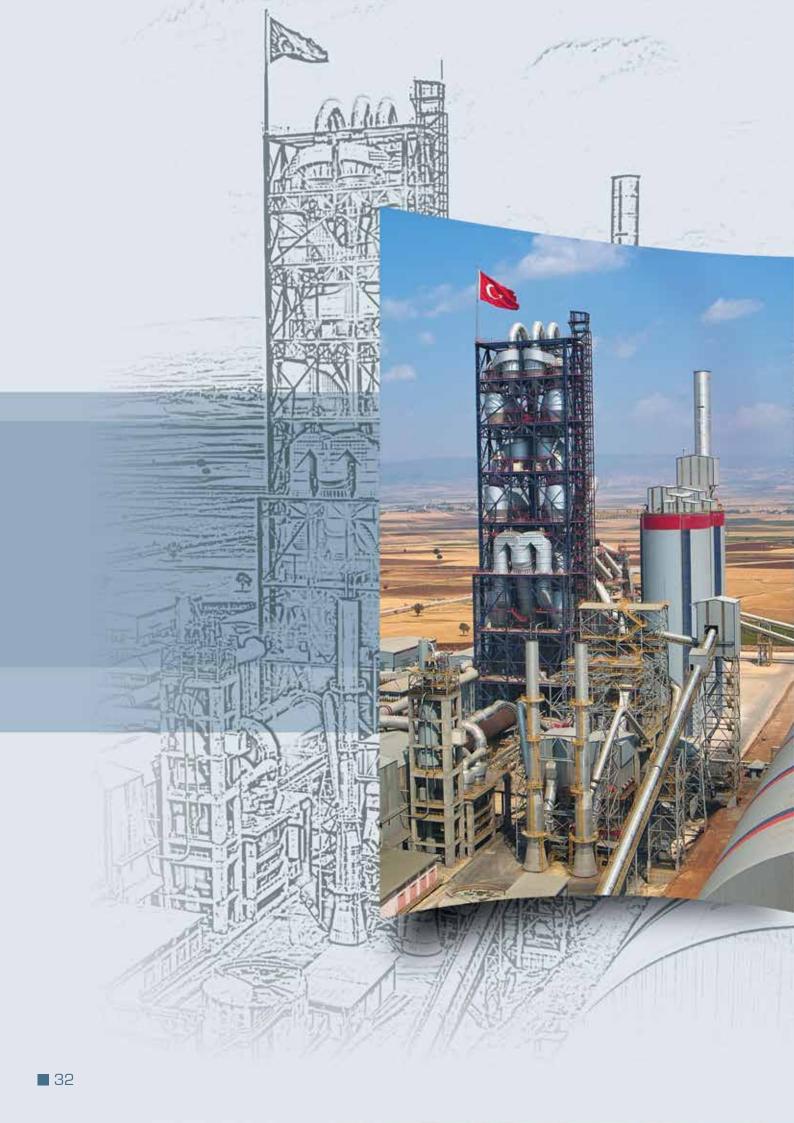
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## power plants references

PROJEC NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
561	SIEMENS GERMANY	HUNTSTOWN CCGT PLANT	GAMA ENDUSTRI TESISLERI IMALAT VE MONTAJ A.S.		IRELAND	The project covers basic design services in architectural, reinforced concrete and steel disciplines.
556		KANGAL THERMAL POWER PLANT REHABILITATION OF 1. & 2. UNITS ELECTRO FILTER AND ASH TRANSMIS- SION LINE	TEAŞ	KANGAL SİVAS	TURKEY	The project covers multi discipline basic design and detail design services.
550	GAMA - TEKFEN	ISKENDERUN POWER PLANT SITE FACILITIES	GAMA - TEKFEN	SUGOZU ISKENDERUN	TURKEY	The project covers basic design and detail design services in infrastructure and electrical disciplines.
549	TEAS GENERAL DIRECTO- RATE	AFSIN ELBISTAN B THERMAL POWER PLANT RAW WATER SUPPLY SYSTEM ENGINEERING AND DESIGN SERVICES	ENER INC.	AFSIN ELBIS- TAN K.MARAS	TURKEY	Multi-Discipline engineering services, coordination site technical support were within the scope of the project.
541	ISKENDERUN ENERJI URETIM VE TICARET A.S.	ISKENDERUN SUGOZU POWER PLANT	GAMA - TEKFEN	SUGOZU ISKENDERUN	TURKEY	Multi-Discipline engineering, coordination and site technical support were within the scope of the project.
534	TEAS GENERAL DIRECTO- RATE	POWER PLANTS ELIMINATION OF EARTHQUAKE DAMAGES AND RETRO- FITTING PROJECT	EKON A.S.	TEAS- KAYNASLI YALOVA, KARAMURSEL, DIL ISKELESI, BOLU, OS- MANCA AND CAYIRHAN TRANS- FORMER STATIONS	TURKEY	The project covers basic design and detail design services in architectural, reinforced concete and steel disciplines.
503	TURKISH ELECTRICITY GENERATION INC.	3X210 MW KEMERKOY POWER PLANT PROCESS PIPING DESIGN SERVICES	BABCOCK - WILCOX COMPANY & GAMA ENDUSTRI TESISLERI IMALAT & MONTAJ A.S.	MUGLA	TURKEY	The project covers basic design and detail design services in process and piping discipline.
500	TURKISH ELECTRICITY GENERATION INC.	VAN POWER FACILITIES	ENER INC.	VAN	TURKEY	Multi-Discipline engineering services, coordination and site technical support were within the scope of the project. The followings are the buildings and structures within scope of work provided by PROKON. • Foundation Design of the structures and buildings • Sewage network • Potable water network • Rain water network • Transformer foundations • Fuel-oil tank farm
493	GENERAL DIRECTORA- TE OF TEAS DEPART- MENT OF CONSTRUC- TION	3X210MW KEMERKÖYTHERMAL PLANT PURIFICATION OF CHIMNEY GAZ DETAIL ENGINEERING SERVICES	GAMA ENDUSTRI TESISLERI IMALAT VE MONTAJ A.S.	KEMERKÖY	TURKEY	The project covers multi discipline basic and detail design services and site supervision services during construction period.
491		WATER ROOF DAM AND HYDROELECT- RIC PLANT	ERE ENGI- NEERING	K. MARAŞ	TURKEY	The project covers basic and detail design and construction managemet and site supervision services during construction period.
482		WATER TAKE SYSTEM OF AL-ZARA THERMAL POWER PLANT	MITSUBISHI	AL-ZARA	SYRIA	Water intake structure     Pipe line
477	GENERAL DIRECTORA- TE OF TEAS DEPART- MENT OF CONSTRUC- TION	KEMERKOY THERMAL PLANT PURI- FICATION OF CHIMNEY GAS DETAIL ENGINEERING SERVICES	BABCOCK - WILCOX COMPANY & GAMA ENDUSTRI TESISLERI IMALAT & MONTAJ A.S.	KEMERKOY	TURKEY	The project covers multi discipline basic and detail design services and construc- tion management and site supervision services during construction period.

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
473	DIRECTORA-	ASH DAM AND ASH CONVEYING SYSTEM PROJECT	GENERAL DIRECTORA- TE OF TEAS DEPART- MENT OF CONSTRUC- TION	SEYITOMER KUTAHYA	TURKEY	<ul> <li>Unit no 2 Ash Disposal Conveyor,</li> <li>Unit no 2. Coal Transfer Conveyors and Structures,</li> <li>Unit no 3. Cooling Water Piping system,</li> <li>Unit no 1., 2., 3., 4. Alternative ash transport system</li> <li>Unit no 1., 2., 3., 4. Ash disposal area rehabilitation</li> <li>Ash dam and ash transport system to the dam.</li> </ul>
471	DIRECTORA-	FOR ASH AND SLACK		CATALAGZI ZONGULDAK	TURKEY	Multi-Discipline engineering services, coordination and site technical support were within the scope of the project.
380		ORHANELİ POWER PLANT F.G.D. RETROFIT	KRC NOELL		TURKEY	The project covers multi discipline basic and detail design services and site supervision services during construction period.
375	GENERAL	POWER PLANT EXTENTION UNITS 3	GURIS INSAAT VE MUHENDIS- LIK A.S.	CAYIRHAN ANKARA	TURKEY	The project covers multi discipline basic design and detail design services for 3rd and 4th extension units.
299	ELECTRICITY GENERATION	2X150 MW CATALAGZI THERMAL POWER RAW AND COOLING WATER SYSTEMS DESIGN AND ENGINEERING SERVICES	KUTLUTAS	CATALAGZI ZONGULDAK	TURKEY	The project covers multi discipline basic design and detail design services.
280	TEAS GENERAL DIRECTO-	2x60 MW KKTC GIRNE THERMAL POWER RAW AND COOLING WATER SYSTEMS DESIGN AND ENGINEERING SERVICES	KUTLUTAS	KYRENIA	N.C.T.R.	The project covers multi discipline basic design and detail design services. Multi-Discipline engineering services, coordination and site technical support were within the scope of the project.
220	TEAS GENERAL DIRECTO-	AMBARLI 1350 MW COMBINED CYCLE NATURAL GAS POWER PLANT COOLING WATER SYSTEMS DESIGN AND ENGINEERING SERVICES	KUTLUTAS	ISTANBUL	TURKEY	The project covers multi discipline basic design and detail design services for cooling water units of natural gas power plant.
130	GENERAL			KANGAL SİVAS	TURKEY	The project covers multi discipline basic and detail design services and construc- tion management and site supervision services during construction period. Multi-Discipline engineering services, coordination and site technical support were within the scope of the project.

# plants



# Cement Industry

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# cement

### ÇİMKO NARLI CEMENT PLANT (7500 TONS/DAY CLINKER CAPACITY)

#### Kahramanmaraş, TURKEY

Client: ÇİMKO ÇİMENTO VE BETON SANAYİ TİCARET A.Ş. The scope of the project is the turnkey design and construction works of cement plant having 7500 tons/day clinker production capacity in Narlı, Kahramanmaraş. PROKON-EKON Group of Companies has undertaken the services under an EPC Contract with ÇİMKO Çimento A.Ş., a subsidiary of SANKO Holding.

PROKON carried out the general and detail design of the whole plant including auxiliary units and infrastructure works as well. The scope covered the architectural, civil, structural steel, reinforced concrete, mechanical, electrical and infrastructure design of all units.

The plant became the longest cement production line of Turkey with its single kiln, stock hall and silo capacities. The plant has been completed and put into operation in a short period of time, 18 months, as the imported part of mechanical equipment were made ready by client before the award of the contract.

The following structures and units are designed by PROKON:

- Coal Crushing Plant
- Circular Coal Mixing Bed
- Shale Crushing Building
- Limestone Crushing Building
- Longitudinal Shale Blending Bed
- Limestone & Shale Storage Building
- Circular Limestone Blending Bed
- Raw Material Storage Bins
- Raw Mills & Bag Filters (3 nos. 280 tons/hour each)
- Hot Gas Ducts & Cooling Towers (3 nos.)
- 2 Raw Mill Silos (20.000 tons each)
- Coal Mills & Bag Filters (2 nos. 35 tons/hour each)
- Preheater Tower (130 m high)
- Rotary Kiln Tertiary Air Duct
- Clinker Cooler & ESP
- Clinker Silo (250.000 tons)
- Additive Storage Bins
- 3 Cement Mills having 180 tons/hour capacity
- 4 Cement Silos having 20.000 tons capacity
- Packing & Truck Heading (4 Lines)
- Fuel-Oil Storage & Treatment Plant
- Water Storage & Treatment Plant
- Main Substation, Unit Substations & Electrical Rooms
- Central Control & Management Building
- Workshops & Stores
- Raw Material & Product Truck Weighing Bridges

Amount of engineering services provided;



8110 A0 drawings including RC, structural steel & mechanical design



# CIMPOR-YIBITAŞ HASANOĞLAN CEMENT PLANT CLINKER PRODUCTION LINE (2500 TONS/DAY CAPACITY)

Ankara, TURKEY



#### Client: CİMPOR-YİBİTAŞ ÇİMENTO SANAYİ A.Ş.

The scope of the project was the turnkey design and construction works of clinker production line having 2500 tons/day capacity in existing clinker grinding facility in Ankara-Elmadağ, Hasanoğlan. PROKON-EKON Group of Companies has undertaken the services under an EPC Contract with CIMPOR-YİBİTAŞ Çimento Sanayi A.Ş.

PROKON has undertaken the general design, system balance, material flow diagrams and determination of the necessities about the process-mechanicalelectrical subjects of the units under the scope of the project. PROKON also provided the architectural, mechanical, electrical, steel and reinforced concrete structure and infrastructure design services.



The following structures and units are designed by PROKON:

- Raw Material Transport to Storage
- Clay Crusher
- Clay Transport to Storage
- Clay Storage (5.000 tons)
- Raw Material Storage (10.500 tons)
- Raw Material Reclaiming
- Raw Mill Hoppers & Raw Mill (185 tons/hour)
- Homogenization Silo Feeding
- Clay Reclaiming
- Homogenization Silo (4.000 tons)
- Preheater Feeding
- Preheater
- Raw Mill Dedusting

- Rotary Kiln
- Cooler
- Cooler Dedusting
- Cooler Discharge
- Secondary Crusher
- Cement Additive Storage (15.400 tons)
- Clinker Silo (70.000 tons)
- Clinker Silo Discharge
- Cement Additives Reclaiming
- Cement Mill Hoppers
- Coal Storage (8.000 tons)
- Coal Reclaiming
- Coal Mill (12 tons/hour)









# sement



## CARTHAGE DJEBEL RESSAS CEMENT PLANT (5800 TONS/DAY CLINKER CAPACITY)

#### Tunis, TUNISIA

Client: EKON ENDÜSTRİ İNŞAAT VE TİCARET A.Ş.

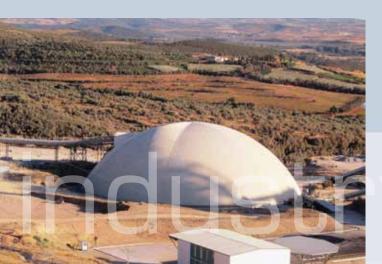


The contract was signed between Tunisian Investor-Carthage Cement and EKON Endüstri İnşaat ve Ticaret A.Ş.–PROKON İmalat ve Montaj A.Ş.–FLSmidth Consortium on February 24th, 2010. The content of the contract was the design, supply, construction and installation of a 5800 tons/day clinker production capacity cement plant at Djebel Ressas.

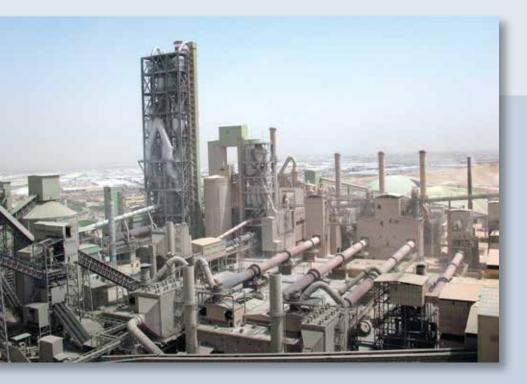
PROKON provided the engineering services for civil, structural steel, mechanical, electrical erection, automation and commissioning works of the plant.

#### The following units and structures are designed by PROKON:

- Raw Material Crushing, Conveying & Storage
- Coal Intake, Storage, Transport
- Additive Crushing, Intake, Storage, Transport
- Raw Mill
- Homogenization Silo
- Preheater, Kiln, Clinker Cooler
- By-Pass System
- Coal Mill
- Clinker Transport & Storage
- Cement Mill (1 & 2)
- Cement Silos (1, 2 & 3)
- 4 Packing Plant
- Bulk Dispatch to Trucks
- 4 Bag Dispatch to Trucks
- Palletizing Plant
- Alternative Liquid Fuel Storage
- Natural Gas Distribution
- Compressor Rooms
- Water Treatment & Distribution
- Potable Water Unit
- Weighbridges
- Electrical Substations
- Central Control Room & Laboratory
- Service Buildings (Workshop, Changing Room, Open/Closed Storage, Canteen, Administration Building, Guard House)









## YAMAMA CEMENT PLANT (10.000 TONS/DAY CLINKER PRODUCTION CAPACITY)



Riyadh, SAUDI ARABIA

Client: GAMA INDUSTRY ARABIA LTD.

The project covers the turnkey construction work of Cement Production Line No: 7 having 10.000 tons/day clinker production capacity. GAMA Industry Arabia Ltd. and German Polysius AG companies have undertaken turnkey construction work together for Yamama Cement Company's existing plant in Riyadh.

The architectural, steel structure, reinforced concrete and underground earthing design services of the below indicated structures and units were carried out within the scope of this project by PROKON;



- Compound System Structures
- Raw Meal Silos (R= 18m, h= 64m)
- Pre-Heater Tower (21m x 36m x 156 m)
- Foundations of Rotary Kiln
- By-Pass System Buildings (13m x 7m x 54m)
- Clinker Cooler Unit (48m x 28m x 24m)
- Clinker Carrier Systems
- Clinker Silos (R = 32m, h = 69m)
- Central Control Building (CCR) (12 m x 18 m & 16 m)
- Cable Galleries
- Electrical Underground Earthing Projects
- Roads & Coatings
- Various Structures: Electrical Transformer Buildings, Compressor Rooms, Pipe Supports Carriers, Tunnels in Various Amounts.





# BAZIAN CEMENT PLANT (7000 TONS/DAY CAPACITY)

#### Bazian, NORTHERN IRAQ

Client: ORASCOM (EGYPT) The construction and structural steel detail engineering services for Bazian Cement Plant were provided by PROKON. The plant has a clinker production capacity of 7000 tons/day. The technology is supplied by Polysius A.G. and the construction contractor of the project is Cementect Ltd.

#### The following structures and units are designed by PROKON:

- 2 Raw Material Crusher Buildings
- Raw Material & Clinker Carrier Conveyor Band Support Bridges & Reinforced Concrete Galleries
- Additive Storage (295 m x 55 m x 18.5 m)
- Pre Homogenization Hall (D=107 m , H=33 m)
- Raw Material & Cement Mills Supply Bunkers & Support Buildings
- Raw Meal Silo (D=20 m, H=96 m)
- Clinker Silo (D=47 m, H=22 m), Faulty Clinker Silo & building
- 3 Cement Silos (D=20 m, H=84 m)
- Raw Meal Mill, Cement Mill Buildings & Related Mill Foundations
- Rotary Kiln Foundation & Walkways
- Pre Heater Building (35 m x 26,5 m x 106 m)
- Clinker Cooler Building
- Packing Units
- Electrofilter Support Structures
- Various Gas Canal Support Steel Structures & Fan Foundations
- Electrical Buildings
- Cable & Pipe Bridges (approximately 1000 m)
- Fuel Oil Facilities

The project covers 99 units, and the BOQ's and engineering calculations have been calculated for each unit by PROKON Mühendislik ve Müşavirlik A.Ş.







## EPCC CEMENT PLANT (3500 TONS/DAY CAPACITY)

Damman, SAUDI ARABIA

Client:

EASTERN PROVINCE CEMENT COMPANY (SAUDI ARABIA)

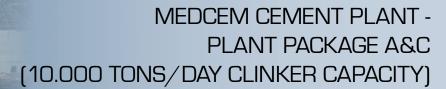
A new third line for the Eastern Province Cement Company (EPCC) Cement Plant, which was set up near Damman Region in Saudi Arabia, were decided additional to the existing two clinker lines. The construction and assembly works were made by GAMA Industry Arabia Ltd. (GIAL) and equipment were supplied by Polysius A.G.

The facility has been designed as having 3500 tons/day production capacity. The detail engineering services for the following structures have been provided by PROKON under the scope of this project:



- Raw Material Mill Foundation & Building: A reinforced concrete building having approximately 30 m height with concrete plate over steel floors including steel platforms & various gas canal supports.
- Raw Material Transportation Systems: Steel structures supporting air slide bands.
- Preheater Tower: A reinforced concrete structure having 110 m height, 8 floors & containing various steel platforms & steel chimneys & gas canal supports. Preheater tower also includes a stairway with 120 m height & elevator tower.
- Homogenization Silo: A reinforced concrete building with 85 m height & 16 m diameter. The silo has also a reinforced roof over steel structure, various steel platforms & raw material transport system support.
- Rotary Kiln Foundation: There are 3 separate foundations having approximately 12 m height. The foundations are connected to each other with steel walkways. Tertiary Air Line Footings were also supported on those foundations.





Mersin, TURKEY

Client: MEDCEM MADENCİLİK VE YAPI MALZEMELERİ SAN. VE TİC. A.Ş. PROKON provided the Multi-Discipline Engineering Services for Plant Package A & C of Cement Plant having 10.000 Tons/Day Clinker Capacity in Silifke/Mersin by MEDCEM Madencilik ve Yapı Malzemeleri San. ve Tic. A.Ş., a subsidiary of EREN Holding.

#### The following structures and units are designed by PROKON:

#### Package A

- 2 Raw Material Crushing & Transport Plant
- Prehomogenization
- Additive Storage & Transport
- Coal Preblending Plant
- Electrical Equipment
- Instrumentation
- Process Controls System
- Dispatch System

#### Package C

- Clinker Storage & Transport
- 3 Cement Grinding Plants
- 2 Cement Silos, Bulk Loading Stations
- Cement Packing Plants
- Big Bags Packing
- 6 Storage Plant
- Electrical Equipment
- Instrumentation
- Process Controls System
- Dispatch System







Erzurum, TURKEY

Client:

SANAYİ A.Ş.

The project covered the construction of a new clinker production line having 3500 tons/day production capacity on turnkey basis with an EPC contract was signed by EKON-PROKON Group of Companies.



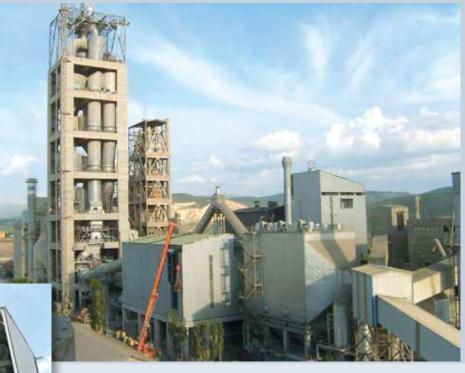
ERZURUM AŞKALE ÇİMENTO

#### The following structures and units are designed by PROKON:\_\_\_\_\_\_

- Preheater Tower
- Rotary Kiln Foundation
- Clinker Cooling Units
- Clinker Transportation System
- Cable Galleries
- Electrical Design
- Clinker Electro Filter Building
- Coal Mill Building
- Various Gas Canals
- Fan Foundations & Chimney

#### PROKON provided the following services within the scope of project:

- Architectural, Mechanical, Reinforced Concrete & Steel Structure Design of the units
- System Balance & Material Flow Schemes
- Determination of the needs in Process, Mechanical & Electrical Points & their Connections between Existing Systems







Client: AŞKALE ÇİMENTO SANAYİ T.A.Ş. Aşkale Çimento Sanayi T.A.Ş. has decided to set up a new cement grinding plant with 85 tons/hour capacity in Trabzon Facility.

EKON A.Ş. has undertaken the Engineering, Procurement, Construction (EPC) Commissioning and Start-Up Services of the New Cement Grinding Plant in Trabzon Facility on Turnkey Basis. The engineering services were provided by PROKON.

# The following structures and units are designed by PROKON;

- 3 Additive Bunkers
- Transport Systems
- Mill Building
- Cement Conveying Lines









# cement industry references

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
838	FLS	NYUBA PREHEATER TOWER ENGINEE- RING SERVICES	FLS	REPUBLIC OF DEMOCRATIC CONGO	DEMOC- RATIC CONGO	Project covers detail desing engineering services in steel discipline.
836		CEMENT REDUKTOR REHEBILITATION ENGINEERING DESIGN WORKS	VOTO- RANTIM ÇİMENTO SAMSUN	SAMSUN	TURKEY	Project covers detail desing engineering services in reinforced concrete and steel disciplines.
831	VOTORAN- TIM CEMENT	TEMARA CEMENT PLANT - REHABI- LITATION FOR CLINKER TRANSPORT SYSTEM	CIM- POR-YIBI- TAS (VOTO- RANTIM) CEMENT	RABAT	MOROC- CO	Project covers multi discipline basic design and detail design services and technical support.
807	VOTORAN- TIM CEMENT	CLOSED COAL STOCK AREAS ENGINEE- RING SERVICES	CIM- POR-YIBI- TAS (VOTO- RANTIM) CEMENT	CORUM SIVAS YOZGAT	TURKEY	Project covers multi discipline basic design and detail design services and technical support.
793	VOTORAN- TIM CEMENT	CLOSED CLINKER AREAS AND TRANSPORTATION SYSTEMS ENGINEE- RING DESIGN WORKS	CIM- POR-YIBI- TAS (VOTO- RANTIM) CEMENT	SİVAS YOZGAT ÇORUM NEVŞEHİR	TURKEY	Project covers multi discipline basic design and detail design services and technical support.
791	ÇİMKO ÇİMENTO VE BETON SAN. VE TİC. A.Ş.	MODIFICATION OF CEMENT TRANSPORTATION AND PREHEATER	ÇİMKO ÇİMENTO VE BETON SAN. VE TİC. A.Ş.	NARLI, KAHRAMAN- MARAŞ	TURKEY	Project covers multi disipline detail design services.
787	MEDCEM MADENCILIK VE YAPI MALZ.SAN. VE TIC. A.Ş.	ENGINEERING SERVICES FOR PLANT PACKAGE A & C FOR MEDCEM CEMENT PLANT WITH A CAPACITY OF 10.000 TPD CLINKER	MEDCEM MADENCI- LIK VE YAPI MALZ.SAN. VE TIC. A.Ş.	SİLİFKE, MERSİN	TURKEY	Project covers multi discipline detail design services.
776	CIMPOR YİBİTAŞ ÇİMENTO SANAYİ A.Ş.	CEMENT PLANT STACK PLATFORM ENGINEERING SERVICES	CIMPOR YİBİTAŞ ÇİMENTO SANAYİ A.Ş.	HASANOG- LAN, ANKARA	TURKEY	Project covers multi discipline basic design and detail design services in steel disciplines.
774	CIMPOR YİBİTAŞ ÇİMENTO SANAYİ A.Ş.	ENGINEERING AND DESIGN SERVICES FOR CEMENT FACTORIES CLINKER PRODUCTION CLOSED AREAS	CIMPOR YİBİTAŞ ÇİMENTO SANAYİ A.Ş.	YOZGAT, SI- VAS, CORUM, NEVSEHİR	TURKEY	Project covers multi discipline basic design and detail design services.
768	ÇİMKO ÇİMENTO VE BETON SAN. VE TİC. A.Ş.	NARLI CEMENT PLANT STAND BY COAL HANDLING SYSTEM ENGINEE- RING SERVICES	ÇİMKO ÇİMENTO VE BETON SAN. VE TİC. A.Ş.	NARLI KAHRAMAN MARAS	TURKEY	The project covers multi discipline basic design and detail design services.
763	LİMAK Çİ- MENTO SAN. VE TİC. A.Ş.	GAZIANTEP CEMENT FACTORY-PRE HE- ATER BUILDING- RESTRENGTHENING DESIGN WORKS	LİMAK ÇİMENTO SAN. VE TİC. A.Ş.	GAZIANTEP	TURKEY	The project covers the basic design and detail design services in reinforced concrete discipline.
761	ÇİMKO CIMENTO VE BETON SAN. VE TIC. A.S.	NARLI CEMENT PLANT NEW ADDITIVE FEED UNIT	ÇİMKO CIMENTO VE BETON SAN. VE TIC. A.S.	NARLI, KAHRAMAN- MARAŞ	TURKEY	The project covers basic design services in mechanical equipment discipline.
760	ÇİMKO ÇİMENTO VE BETON SAN. VE TİC. A.Ş.	NARLI CEMENT PLANT NEW CEMENT TRANSPORT SYSTEM	ÇİMKO ÇİMENTO VE BETON SAN. VE TİC. A.Ş.	NARLI, KAHRAMAN- MARAŞ	TURKEY	The project covers basic design services in mechanical equipment discipline.
759	LİMAK Çİ- MENTO SAN. VE TİC. A.Ş.	BALIKESIR CEMENT FACTORY COAL MILL UNIT	LİMAK ÇİMENTO SAN. VE TİC. A.Ş.	BALIKESIR	TURKEY	The project covers multi discipline detail design services and technical support.
756	LİMAK Çİ- MENTO SAN. VE TİC. A.Ş.	ŞANLIURFA CEMENT PLANT TERTIARY AIR DUCT SUPPORTS ENGINEERING SERVICES	LİMAK ÇİMENTO SAN. VE TİC. A.Ş.	ŞANLIURFA	TURKEY	The project covers basic design and detail design services in reinforced concrete and steel disciplines.
753	GOLTAS CE- MENT INC.	ROLL MILL STACK ENGINEERING SERVICES	GOLTAS CEMENT INC.	ISPARTA	TURKEY	The project covers basic design and detail design services in reinforced concrete and steel disciplines.

# cement industry references

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
750	CARTHAGE CEMENT	5800 TONS/DAY CEMENT PLANT AT DJEBEL RESSAS	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	TUNUSIA	TUNUSIA	The Engineering, Procurement and Construction Works of 5800 tons/day clinker production capacity cement plant project in Djebel Ressas which has been awar- ded by Tunisian Investor Carthage Cement to EKON Endüstri İnşaat ve Ticaret A.Ş.–PROKON İmalat ve Montaj A.Ş.–FLSmidth Consortium. PROKON Mühendislik ve Müşavirlik A.Ş. has provided multi discipline enginee- ring services covering civil works, structural steel, mechanical, electrical erection, automation and commissioning works of the plant.
711	CIMPOR YİBİTAŞ ÇİMENTO SANAYİ A.Ş.	CEMENT PLANT CLINKER PRODUC- TION LINE (2500 TONS/DAY CAPACITY) ENGINEERING AND DESIGN SERVICES	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	HASANOGLAN ANKARA	TURKEY	The Engineering, Procurement and Construction Works of Hasanoğlan 2500 tons/day New Clinker Line Project which has been awarded by CIMPOR YİBİTAŞ Cement Industry and Trade Co. to PROKON-EKON Group of CompaniES on turnkey basis. PROKON Mühendislik ve Müşavirlik A.Ş. has provided multi-discipline engi- neering services covering the general design, system balance, material flow diagrams and determination of the necessities about the process-mechanical-e- lectrical subjects of the units under the scope of the project.
702	BOLU CEMENT INDUSTRY INC.	SLAG - CEMENT MIXING HANDLING & STORAGE SYSTEM	BOLU CEMENT INDUSTRY INC.	BOLU	TURKEY	The project covers multi discipline basic design and detail design services.
700	NUH	28.000 TONS CAPACITY CEMENT SILO AND HANDLING SYSTEM	TERBAY INŞAAT MIMARLIK, MUHEN- DISLIK VE TICARET LTD.STI.	HEREKE, İZMİT	TURKEY	The project covers multi discipline basic design and detail design services.
694	ASKALE CIMENTO SANAYİ A.S.	TRABZON CEMENT PLANT 2 NO NEW CLINKER PRODUCTION LINE (85 TONS/HOUR CAPACITY)	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	TRABZON	TURKEY	The project covers basic design services in process and piping discipline. The facility includes the following structures; • J Additive Bunkers • Transport Systems • Mill Building • Cement Transport Lines
686	YIBITAS LAFARGE	HASANOGLAN PLANT NEW CEMENT MILL UNIT	YIBITAS LAFARGE	HASANOGLAN ANKARA	TURKEY	The project covers multi discipline basic design and detail design services.
678	ÇİMKO ÇİMENTO VE	7500 TONS/DAY CAPACITY CLINKER PRODUCTION LINE CEMENT PLANT DESIGN AND ENGINEERING SERVICES	ÇİMKO ÇİMENTO VE BETON SAN. VE TİC. A.Ş.	KAHRAMAN- MARAŞ	TURKEY	<ul> <li>Çimko Cement Plant Project (7500 Tons/Day Clinker Capacity) is realized by</li> <li>EKON-PROKON Group of Companies in a shortest time by comparing to other</li> <li>similar projects. PROKON Mühendislik ve Müşavirlik A.Ş. provided multi discipline</li> <li>basic and detail design services and technical support during construction period.</li> <li>The Project consist of mainly those R.C. and Steel Structure units and structures:</li> <li>130 m high Preheater Tower</li> <li>250.000 tons clinker capacity, clinker silo with 65 m diameter.</li> <li>2 110 m in diameter, 1 90 m in diameter circular blending beds</li> <li>1 55 m in diameter, 30 m high, 300 m in length Additive storage bins.</li> <li>3 280 ton/hour raw mills and technological connections</li> <li>3 180 ton/hour cement mills and technological connections</li> </ul>
675	AŞKALE ÇİMENTO SANAYİ A.S.	ASKALE CEMENT PLANT 3500 TONS/ DAY CLINKER PRODUCTION LINE	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	ERZURUM	TURKEY	The project covers multi discipline basic design and detail design services.
673	UCH UNITED CEMENT HOLDING IRAK	BAZIFA CEMENT PLANT STEEL CONS- TRUCTION FABRICATION DRAWING SERVICES	UCH UNITED CEMENT HOLDING IRAK	SULEYMANIYE	NORT- HERN IRAK	The project covers detail design services in steel discipline.
669	BOLU CEMENT INDUSTRY INC.	ROLLER PRESS UNIT	OYAK CONSTRUC- TION INC.	BOLU	TURKEY	The project covers the detail design services in reinforced concrete, steel and mechanical equipment disciplines.
666		BAZIFA CEMENT PLANT	KRUPP POLYSIUS ALMANYA	SULEYMANIYE	NORTH IRAK	The project covers detail design services in architectural, reinforced concrete and steel disciplines.
659	BOLU CEMENT INDUSTRY INC.	COAL HOMOGENIZING SYSTEM DESIGN SERVICES	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	BOLU	TURKEY	The project covers multi discipline detail design services.
650	NUH CEMENT IND. INC.	3.CLINKER PRODUCTION LINE DESIGN AND ENGINEERING SERVICES		HEREKE, İZMİT	TURKEY	The project covers multi discipline detail design services.

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
649	AKÇANSA CEMENT IND. INC.	AKÇANSA AIR SLIDE SYSTEM	eta Machi- Nery Inc.	ÇANAKKALE	TURKEY	The project covers basic design and detail design services in mechanical equip- ment discipline.
648	ADANA CE- MENT INC.	1., 2., 3. PLANT STOCK ROOFING AND WALL CLADDING DESIGN SERVICES	ADANA CEMENT INC.	ADANA	TURKEY	The project covers basic and detail design services in architecture and steel disciplines.
641	DENIZLI CE- MENT INC.	80.000 TONS CLINKER STORAGE & HANDLING SYSTEM DESIGN AND ENGINEERING SERVICES	DENIZLI CEMENT INC.	DENİZLİ	TURKEY	The project covers multi discipline basic design services.
640	ADANA CE- MENT INC.	ADDITIVE MATERIAL BUNKERS AND HANDLING SYSTEM	ADANA CEMENT INC.	ADANA	TURKEY	The project covers multi discipline basic design and detail design services.
639	ADANA CE- MENT INC.	4. PLANT STOCK ROOFING AND WALL CLADDING DESIGN SERVICES	ADANA CEMENT INC.	ADANA	TURKEY	The project covers basic and detail design services in architecture and steel disciplines.
626	YAMAMA CEMENT COMPANY	YAMAMA 10.000 TONS/PEAR YEAR CAPACITY CEMENT PRODUCTION LINE	GAMA INDUSTRIE ARABIA LTD.	YAMAMA, RIYADH	SAUDI ARABIA	The architectural, steel structure, reinforced concrete and underground earthing design works of the below indicated structures are carried out in scope of this project by PROKON Mühendislik ve Müşavirlik A.Ş.; • Compound System Structures • Raw Meal Silos (R= 18m, h= 64m) • Pre-Heater Tower (21m x 36m x 156 m) • Foundations of Rotary Kiln • By-pass System buildings (13m x 7m x 54m) • Clinker Cooler Unit (48m x 28m x 24m) • Clinker Cooler Unit (48m x 28m x 24m) • Clinker Carrier systems • Clinker Silos (R = 32m, h = 69m) • Central Control Building (CCR) (12 m x 18 m and 16 m) • Cable Galleries • Electrical Underground earthing projects • Roads and Coatings
623	TEMSAN YAPI VE MAKİNA ENDÜSTRİ A.Ş.	2 X 7500 TONS CEMENT SILOS DESIGN AND ENGINEE- RING SERVICES	TEMSAN YAPI VE MAKİNA ENDÜSTRİ A.Ş.	NIGERIA	NIGERIA	The project covers detail design services in reinforced concrete and steel disciplines.
610	EASTERN PROVINCE CEMENT COMPANY	3500 TONS/DAY CAPACITY NEW CLIN- KER PRODUCTION LINE PROJECT	GAMA INDUSTRY ARABIA LTD.	DAMMAN	SAUDI ARABIA	The project covers multi discipline basic design and detail design services. The facility is designed as having 3500 ton/day capacity and following structur were in the scope of PROKON Mühendislik ve Müşavirlik A.Ş. • Raw Material Mill foundation and building • Raw Material transportation systems • Pre Heater Tower • Homogenization Silo • Rotary Kiln foundation
590	ADANA CE- MENT INC.	FLASH ASH HANDLING SYSTEM	ADANA CEMENT INC.	ADANA	TURKEY	The project covers basic design services in mechanical equipment discipline.
557	BATI CE- MENT	BATI CEMENT NEW CLINKER PRODU- CTION LINE	GIMAS A.Ş.	İZMİR	TURKEY	The project covers basic design and detail design services in steel and mechani cal equipment disciplines.
527	BURSA CEMENT		BİLİM MAKİNA	BURSA	TURKEY	The project covers the detail design services in reinforced concrete, steel and mechanical equipment disciplines.
520	TURKME- NISTAN MINISTRY OF PUBLIC WORKS	TURKMENISTAN CEMENT PLANT	TEMON MAKINA TESISAT MONTAJ SAN. VE TICARET A.S.	TURMENIS- TAN	TURME- NISTAN	The project covers multi discipline basic design services.
496	NUH CEMENT IND. INC.	CABLE AND PIPING BRIDGE PROJECT	NUH CE- MENT INC.	HEREKE İZMİT	TURKEY	The project covers the detail design services in reinforced concrete, steel and mechanical equipment disciplines.
485	DENIZLI CE- MENT INC.	DENIZLI CEMENT FIRST AND SECOND CLINKER PRODUCTION LINE EXTEN-	GIMAS A.Ş.	DENİZLİ	TURKEY	The project covers multi discipline basic design and detail design services.
470	DENİZLİ CE- MENT INC.	SION PROJECT DENIZLI CEMENT PLANT 13 MW DIE- SEL ELECTRICAL POWER STATION	DENİZLİ CEMENT	DENİZLİ	TURKEY	The project covers multi discipline basic and detail design services and site supervision services during construction period.
469	BURSA	TRASS CRUSHING AND DRYING	INC. BURSA	BURSA	TURKEY	The project covers multi discipline detail design services.
463	CEMENT GOLTAS CE- MENT INC.	FACILITIES GOLTAŞ CEMENT 3. RAW MILL EXTENTION	GOLTAS CEMENT	ISPARTA	TURKEY	The project covers multi discipline basic design and detail design services.
	NUH CE-	STEEL STRUCTURE OF 174 M3 CEMENT	INC. NUH CE- MENT INC.	İZMİT HEREKE	TURKEY	The project covers multi discipline basic design and detail design services for cement silo.



# Iron & Steel Industry





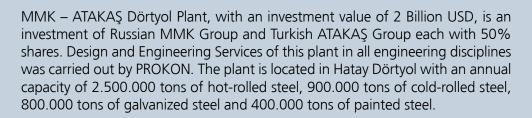




Hatay, TURKEY

Client: MMK ATAKAŞ METALURJİ SAN. TİC. VE LİMAN İŞLETMECİLİĞİ A.Ş.





The plant is considered to be the largest single lot investment in Iron and Steel Sector in the history of Turkey. The investment has attracted worldwide attention and was awarded the top prize by the Euromoney Magazine, in investment and finance category within Europe and Middle East. The facility will provide 2500 direct and 4000 indirect employment and enable a saving in national economy of around 1.5 Billion USD, annually.

#### Some of the structures within the plant;

- Steel Service Building
- Cold Rolled Mill
- Hot Rolled Mill
- Scrap Yard
- Melt Shop
- Air Separation Unit
- Switch Yard
- Cooling Water & Water Treatment Plant
- Auxiliary Facilities
- Office Buildings
- Harbor
- 3000+8000 = 11.000 Tons Concrete Water Tank

More than 23.000 A0 drawings were produced within the scope of Engineering Services.

Special Structures: The Emergency Water Tank of the plant is made of concrete with a height of 43,7m. The tank has a diameter of 20,8 meters between the heights of 29,2m and 43,7m and 3000 tons of demineralized water is stored in this section. The diameter of the tank between 0,00m and 29,7m is 11 meters and 8000 tons of water is stored in this part for firefighting. This structure is the first and only water tank built in Turkey with these dimensions.





# MMK - ATAKAȘ DİLOVASI IRON AND STEEL PLANT

#### Kocaeli, TURKEY

Client: MMK ATAKAŞ METALURJİ SAN. TİC. VE LİMAN İŞLETMECİLİĞİ A.Ş. The plant is located within the New Industrial Zone in Dilovasi, İzmit. Design and Engineering Services of this plant in all engineering disciplines were carried out by PROKON. The plant has an annual capacity of correcting and cutting 400.000 tons of rolled steel according to customer needs and a capacity of producing 750.000 tons of galvanized and painted steel annually.



#### The plant consists of the following structures and units:

- Steel Service Building
- Colled Mill Galvanizing Line
- Cold Mill Painting Line
- Air Separation Unit
- Water Treatment Facility
- Auxiliary Facilities
- Office Buildings
- 1500+1500 = 3000 Tons of Concrete Water Tank.

More than 7000 A0 drawings were produced within the scope of engineering Services.

Special Structure: The Emergency Water Tank in the facility was made of concrete with a diameter of 13 m and a height of 28 m. The tank can store 1500 tons of demineralized and 1500 tons of domestic water.





## ASIL ÇELİK QUALITY PRODUCTS UNITS

#### Bursa, TURKEY

Client: ASİL ÇELİK SANAYİ VE TİCARET A.Ş. PROKON provided Engineering and Design Services for this project.

#### The following structures and units are designed by PROKON:

#### ROLLING MILL:

The structure covers an area of approximately 30.000m<sup>2</sup> with 3 sections of 30m spacing each. The ridge height is 18,5 meter & the crane height is 8 m. There exists many equipment foundations, engine & generator buildings, tunnels & channels within the sections of the structure & these parts go as low as -8,00 m.

a. Shipping Section	: Structure Cranes	256m x 30m x 18,5m 2x10 Tons	Steel Construction
b. Rolling Section	: Structure Cranes	432m x 30 m x 18,5m 1x35/10 Tons + 1x10 To	
c. Billet Finishing	: Structure Cranes	280m x 30m x 18,5m 2x10 Tons	

#### MELT SHOP:

The structure covers an area of approximately 10.200m<sup>2</sup> with 4 sections.

a. Melting Section	: Structure Cranes	120m x 23m x 33m 19m High 2x40/15/5	
b Casting Section	: Structure Cranes	120m x 23m x 33m 2x100/40 Tons	Steel Construction
c. Striping Fine	: Structure Cranes	105m x 22m x 22,5m 2x8 Tons	Steel Construction
d. Scale Pit Section	: Structure Cranes	105m x 22m x 22,5m 2x16 Tons	Steel Construction

#### OTHER STRUCTURES:

Other structures of the quality products units ;

- a. Junkyard Steel Construction, R/C foundations,
- b. Workshop Steel Construction, R/C foundations,
- c. Pipe Routes Steel Construction, R/C foundations.





## ASIL ÇELİK CONTINUOUS CASTING FACILITY

#### Bursa, TURKEY

Client: ASİL ÇELİK SANAYİ VE TİCARET A.Ş. ASIL ÇELIK is a world-renowned producer of quality steel and the largest company of its kind in Turkey accounting for 60 percent of Turkey's total quality steel production and exporting approximately 40 percent of its products.

The continuous caster will produce round blooms at a diameter of 300 to 600 millimeters with a production capacity of 600,000 tons per year.

PROKON has provided Owner's Engineering Services for the Continuous Casting Plant and other auxiliary buildings which are constructed next to the main existing facility.

The following services were provided by PROKON under the scope of this project;

- Detail Engineering Services including Architectural, Reinforced Concrete, Structural Steel, Electrical, Plumbing, HVAC, Piping & Civil Drawings of the Continuous Casting Plant.
- Preparation of the Tender Documents for selection of the Local Contractors.
- Assistance to the Client for selection of Supplier, besides the Main Process Equipment Supplier & Local Contractors.
- The Coordination of the Supervision services for the Construction & Start-Up Phase.



# ron & ste



### ERDEMIR STEEL PLANT MODERNIZATION PROJECT

Zonguldak, TURKEY

Client: ERDEMİR EREĞLİ IRON AND STEEK WORKS Co. Ereğli Iron and Steel Works Co. (ERDEMİR) is the largest flat steel manufacturer of Turkey, located in Karadeniz Ereğli. As being one of the biggest investments of Turkey, Capacity Increase and Modernization Project in Erdemir provided a significant capacity increase in flat steel production of Company from 1.500.000 tons/year to 3.300.000 tons/year.

Within the content of the project, Multi-Discipline Engineering Services and Site Technical Support was provided by PROKON.

#### The following structures and units are designed by PROKON:

- Steel Mill Capacity Improvement
- Continuous Casting Plant No. 3 & 4
- Vacuum Degassing Supporting Building & Equipment Foundations
- 2. Cold Mill Supporting Structure
- 2. Cold Mill Structure & Equipment Foundations
- Cold Roll Mill, Roll Storage & Dispatch Building Extension
- Hot Strip Mill Modernization
- Natural Gas Conversion Piping
- Reinforcement of Damaged Coke Stack
- ETL/TFSL Facilities
- Galvanizing Facilities
- Gas Holders for Blast Furnace & Converter Gases, Gas Conveying & Mixing System
- Sport Facility (5000 people capacity)
- Head Office & EBIM Building
- Tandem & Temper Mill Revamp





# ISDEMIR BLAST FURNACE & OG-GAS STORAGE FACILITY

İskenderun, TURKEY



Client: İSKENDERUN DEMİR ÇELİK A.Ş.



PROKON provided the Multi-Discipline Detail Engineering Services of İSDEMİR Gas Storage Facility within the scope of project.

The project has been realized as an EPC Contract in turnkey basis for İSDEMİR İskenderun Iron and Steel Company in Turkey. The project consisting of Floating Piston Type two Gas Holders and Piping System, Excess Gas Flare Stack, Converter Gas Recovery Station, Boosting, Wet Type ESP and Mixing Stations. The Gas Holders were constructed to Store Blast Furnace and Converter Gases of ISDEMIR Steel Plant. The main technology sub-contractors were MB Engineering Services Ltd., Clayton Walker Gas Holder Division (England) and SMS Demag AG (Germany).





# KROMAN STEEL NEW ROLLING MILL PROJECT

Kocaeli, TURKEY

Client: KROMAN ÇELİK SAN. A.Ş.

The plant is located in Gebze, İzmit with a capacity of rolling 800.000 tons of reinforcing steel bars per year. PROKON completed the Design and Engineering Services of the plant in the disciplines of Steel Construction, Reinforced Concrete, Architectural, and Earthing. The first line was completed in 2004 and the second in 2007.

The following structures and units are designed by PROKON:

- Main Steel Building & Reinforced Concrete Foundations 120m x 550m x 30m
- Foundations of Reheating Furnace
- All the Equipment Foundations of the Rolling Mill
- Scale Pit
- Water Facilities
- 3 Electrical Buildings
- Administrative Buildings

an and a state

Various Steel Construction Structures

1750 A0 drawings were produced within the scope of engineering Services. The plant is in operation since 2006.



## KROMAN STEEL - MODERNIZATION OF MELT SHOP

Kocaeli, TURKEY



Client: KROMAN ÇELİK SAN. A.Ş. PROKON completed Structural Steel and Reinforced Concrete Engineering Services within the scope of Modernization and Extension Project of 110.000 tons/year capacity melt shop of Kroman Çelik A.Ş. which is located in Gebze, İzmit. The existing melt shop and scrap yard buildings were analyzed for increase in Crane Capacity and Earthquake Resistance and Retrofitting Drawings were prepared as a result (160m x 145m = 23.200 m<sup>2</sup>).

#### The following structures and units are designed by PROKON:

- Extension of Main Steel Construction Building & R/C foundations (Melt Shop & Scrap Yard) 64m x 145m = 9280 m<sup>2</sup> (h = 29m)
- New Canopy Hood Steel Construction Drawings (22,25m x 37,0m x 20m)
- Ladle Furnace Foundations
- Electrical Arc Furnace Foundations
- Rail Foundations

900 A0 drawings were produced within the scope of engineering services.







# iron & steel industry references

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
842	ERDEMİR A.Ş.	ERDEMIR RESEARCH AND DEVELOP- MENT FACILITY	ERDEMİR A.Ş.	EREĞLİ ZONGULDAK	TURKEY	The project covers multi discipline basic design and detail design services.
839	DİLER DEMİR CELİK	STEEL STRUCTURAL ANALYSIS	DİLER DEMİR CELİK	GEBZE	TURKEY	The porject covers detail design engineering services in steel discipline.
834	ATAKAŞ ÇELİK SAN.ve TİC. A.Ş.	COLDMILL COMPLEX	ATAKAŞ ÇELİK SANAYİ ve TİCARET A.Ş.	İSKENDERUN	TURKEY	The project covers multi discipline detail design and technical support services
833	MMK META-	HDGL AIR KNIFE MODERNISATION	MMK META- LURJI	İSKENDERUN	TURKEY	The project cover detail design engineering service in mechanical installation discipline and technical support service.
802	ASİL ÇELİK	CONTINOUS CASTING PLANT ENGINEERING SERVICES	ASİL ÇELİK	ORHANGAZİ BURSA	TURKEY	The project covers multi discipline basic design and detail design and constructi- on management services in construction period.
786	KARDEMIR	NEW DOGHOUSE DESIGN SERVICES	SMS SIEMAG	KARABUK	TURKEY	The project covers the basic design and detail design services in machine equipment and steel disciplines.
778		KARDEMİR BOF ACAD DRAWINGS	SMS SIEMAG	KARABUK	TURKEY	The project covers technical support during construction period.
775	KROMAN CELIK SAN. A.S.	SCRAP YARD ENGINEERING SERVICES	KROMAN CELIK SAN. A.S.	DILOVASI KOCAELI	TURKEY	The project covers the basic design and detail design services in architecture, reinforced concrete and steel disciplines.
773	YESILYURT DEMIR CEKME SAN. VE TIC. LTD. STI.	CAPACITY INCREASE OF SERVICE AND CONTIONUOUS CASTING HALLS AND REINFORCEMENT OF THE CONVEYOR SYSTEM	YESILYURT DEMIR CEK- ME SAN. VE TIC. LTD. STI.	SAMSUN	TURKEY	The project covers the basic design and detail design services in reinforced concrete and steel disciplines.
765	ATAKAS STE- EL INDUSTRY AND TRADE INC.	ATAKAS PAYAS STORAGE FACILITIES PROJECT ENGINEERING SERVICES	ATAKAS STE- EL INDUSTRY AND TRADE INC.	ISKENDERUN	TURKEY	The project covers multi discipline detail design services.
718	KROMAN CELIK SAN. A.S.	2. MELT SHOP ENGINEERING SERVICES	KROMAN CELIK SAN. A.S.	IZMIT	TURKEY	The project covers multi discipline detail design services.
716		IRON AND STEEL PLANT ENGINEERING AND DESIGN SERVICES	MMK ATAKAS METALURJI SAN. TIC. VE LIMAN ISLET. A.S.	DILOVASI GEBZE IZMIT	TURKEY	The project covers multi discipline basic design and detail design services. The plant has a capacity of correcting and cutting 400.000 tons of rolled steel and a capacity of producing 750.000 tons of galvanized and painted steel annually.
715	ETI GUMUS A.S.	MERRILL - CROWE 2400 m3/h BORUHANE	CH MAKINE LTD. STI.		TURKEY	The project covers architectural detail design services.
714	DETAL ALUMINIUM VE POLAD ZAVADU	DETAL ALUMINIUM IRON AND STEEL PLANT ENGINEERING AND DESIGN SERVICES	DETAL ALUMINIUM AND POLAD ZAVADU	GENCE	AZERBAI- JAN	The project covers multi discipline basic design and detail design services.
713	ALCOMET BULGARIA	STEEL PLANT GRINDEL ROOM FOUNDATIONS	FIKRET KUZUCU	BULGARIA	BULGARIA	The project covers detail design services in reinforced concrete discipline.
712	MMK ATAKAS METALURJI SAN. TIC. VE LIMAN ISLETMECILI- GI A.S.	IRON AND STEEL PLANT ENGINEERING AND DESIGN SERVICES		DÖRTYOL ISKENDERUN	TURKEY	The project covers multi discipline basic design and detail design services for 217.500 m <sup>2</sup> steel and reinforced concrete strucutres, 4.700 m long underground galleries, 2.200 m long pipe bridges and roads, infrastructure lines. The plant is located in Hatay Dörtyol with an annual capacity of 2.500.000 tons of hot rolled steel, 900.000 tons of cold rolled steel, 800.000 tons of galvanized steel and 400.000 tons of painted steel. The plant is considered to be the largest single lot investment in iron and steel sector in the history of Turkey.
708	ISDEMIR ISKENDERUN DEMIR VE CELIK FABRI- KALARI A.S.	ENGINEERING SERVICES FOR ISDEMIR MODERNIZATION OF IRON ORE PREPA- RATION UNIT	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	ISKENDERUN	TURKEY	The project covers multi discipline basic design and detail design services.
703	ISDEMIR	HOT STRIP MILL MODERNIZATION AND TRANSFORMATION INVESTMENT DETAILING DESIGN SERVICES	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	ISKENDERUN	TURKEY	The project covers the detail design services in architecture and steel disciplines.
693	KROMAN CELIK SAN. A.S.	ENLARGEMENT OF THE EXISTING STRIP	KROMAN CELIK SAN. A.S.	DILOVASI GEBZE IZMIT	TURKEY	The project covers multi discipline detail design services.
692	YESILYURT DEMIR CEKME SAN. VE TIC. LTD. STI.	ENLARGEMENT OF THE MILL BUILDING CAPACITY		SAMSUN	TURKEY	The project covers detail design services in architectural, reinforced concrete and steel disciplines.
685	SMS DEMAG	KARDEMIR GAS HOLDER ENGINEERING SERVICES	SMS DEMAG	KARABUK	TURKEY	The project covers multi discipline detail design services.
679	ISDEMIR ISKENDERUN DEMIR VE CELIK FABRI- KALARI A.S.	ISDEMIR OG GAS HOLDER	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	ISKENDERUN	TURKEY	The project covers the engineering, production and procurement of the equipment, electrical-automation works and commissioning of one Gas Holder with floating piston having a capacity of 60.000 m <sup>3</sup> , 3 wet type electro filter, 3 booster fan, 3 gas collecting station, U type gas holders in various sizes and various valves and instruments.

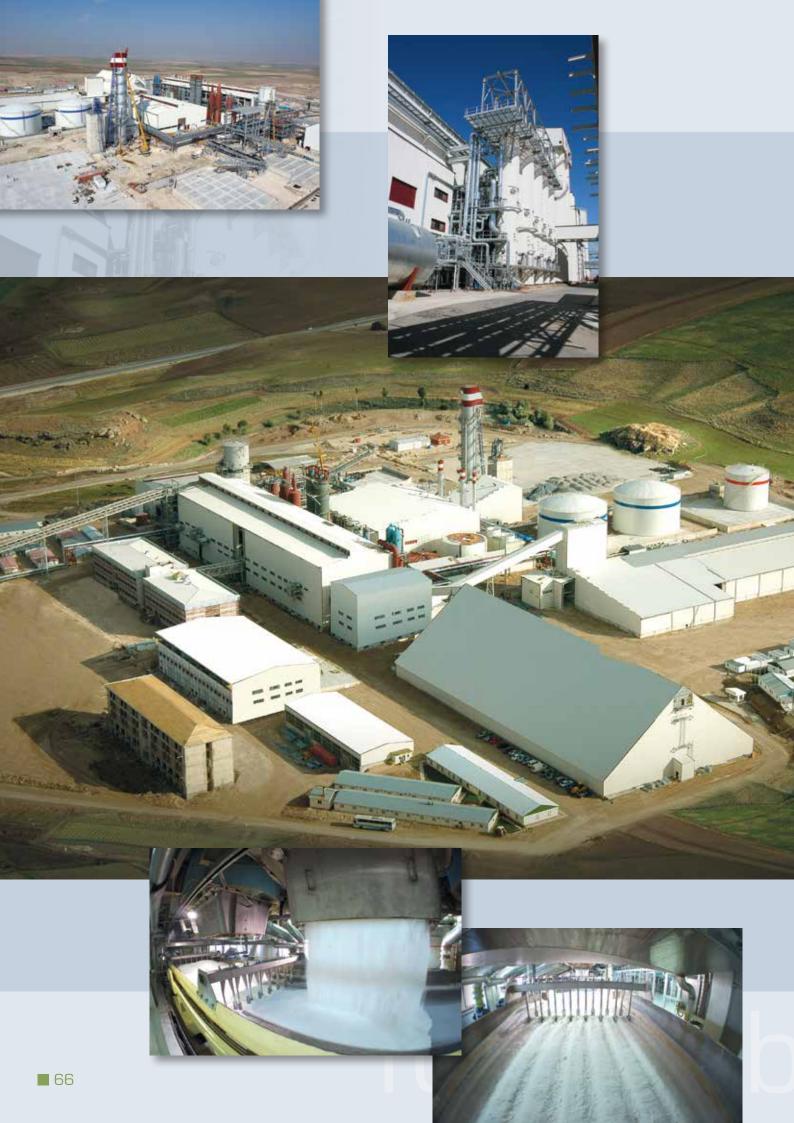
# iron & steel industry references

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
677	DEMIR VE CELIK FABRI- KALARI A.S.	ISDEMIR NO:3 BLAST FURNACE MODER- NIZATION	ENDÜSTRİ İNŞAAT VE TİCARET A.S.	ISKENDERUN	TURKEY	The project covers basic design and detail design services in reinforced concrete, steel and mechanical equipment disciplines.
676	CELİK SAN. A.S.	ENLARGEMENT OF MILL BUILDING CAPACITY	IZMIR DEMIR CELİK SAN. A.S.	IZMIR	TURKEY	The project covers basic design and detail design services in architectural, reinforced concete and steel disciplines.
671	ISDEMIR ISKENDERUN DEMIR VE CELIK FABRI- KALARI A.S.		EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	ISKENDERUN	TURKEY	The project covers basic design and detail design in steel discipline.
662		AMMAN STEEL MELT SHOP	CVS MAKİNA İNŞAAT SAN. TİC. LTD. ŞTİ.	AMMAN	JORDAN	The project covers basic design and detail design services in architectural, reinforced concete and steel disciplines.
656	ERDEMIR IRON AND STEEL PLANT	AIR SEPARATION PLANT	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	KARADENIZ EREGLI	TURKEY	The project covers detail design services in steel discipline.
642	EGE CELIK END. SAN. TIC. A.S.	CONTINUOUS CASTING DESIGN AND ENGINEERING SERVICES	EGE CELIK END. SAN. TIC. A.S.		TURKEY	The project covers basic design and detail design services in reinforced concrete and steel disciplines.
638	KROMAN CELIK SAN. A.S.	NEW STRIP MILL	KROMAN CELIK SAN. A.S.	CAYIROVASI IZMIT	TURKEY	PROKON has completed the design and engineering services for the plant in the disciplines of steel construction, reinforced concrete, architectural and grounding.
633	ISDEMIR ISKENDERUN DEMIR VE CELIK FABRI- KALARI A.S.	ASU NO.06 ISDEMIR FIELD INSTALLA- TION ELECTROTECHNIC DRAWINGS	Air Liquide Ags ger- Many	ISKENDERUN	TURKEY	The project covers electrical detail design services.
630	ISDEMIR ISKENDERUN DEMIR VE CELIK FABRI- KALARI A.S.	ISDEMIR; BENZOL TANKS, SULPHURIC ACID TANKS, FIRE WATER PROJECTS PRELIMINARY AND DETAIL DESIGN SERVICES	ISDEMIR IRON AND STEEL PLANT	ISKENDERUN	TURKEY	The project covers multi discipline basic design and detail design services.
629	ISDEMIR ISKENDERUN DEMIR VE CELIK FABRI- KALARI A.S.	ISDEMIR GAS HOLDER	PROKON MANUFAC- TURING AND ERECTION INC.	ISKENDERUN	TURKEY	The project covers multi discipline basic design and detail design services.
627	ERDEMIR IRON AND STEEL PLANT	TANDEM COLD MILL NO.1 (TCM NO.1) AND TEMPER MILL NO.2 (TMP NO.2) REVAMPING PROJECT FOR ERDEMIR	MARUBENI CORPORA- TION TOKYO	KARADENIZ EREGLI	TURKEY	The project covers multi discipline basic design and detail design services.
624	ISDEMIR ISKENDERUN DEMIR VE CELIK FABRI- KALARI A.S.	ISDEMIR AIR SEPARATION PLANT NO:6	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	İSKENDERUN	TURKEY	The project covers multi discipline detail design services.
611	MITSUBISHI HITACHI JAPON	ERDEMIR TANDEM & TEMPER MILL ENGINEERING SERVICES	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	KARADENIZ EREGLI	TURKEY	The project covers detail design services in reinforced concrete and steel disciplines.
605	EUROPEAN COMMISSION	REHABILITATION OF TURKISH IRON AND STEEL INDUSTRY	EUROPEAN COMMISSION	TURKEY	TURKEY	The project covers technical support during construction period.
603		THE EXTENSION OF UNIT 2	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	BİLECİK	TURKEY	The project covers detail design services in reinforced concrete and steel discip- lines and construction management and site supervision during construction period.
594	KROMAN CELIK SAN. A.S.	STEEL MILL CANOPY HOOD PROJECT DESIGN AND ENGINEERING SERVICES	KROMAN CELIK SAN. A.S.	GEBZE ISTANBUL	TURKEY	The project covers basic design and detail design services in architecture, reinforced concete and steel disciplines.
589	ISDEMIR ISKENDERUN DEMIR VE CELIK FABRI- KALARI A.S.	2.000.000 TONS/YEAR 2X6 STRAND CONTINUOUS BILLET CAS- TING PLANT DESIGN AND ENGINEERING SERVICES	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	ISKENDERUN	TURKEY	The project covers multi discipline basic design and detail design services for No.1 and No.2 Continuous Casting plants.
575	IZMIR IRON&STEEL IND. INC.	IZMIR IRON & STEEL INDUSTRY DUST DEDUCTION SYSTEM, REHEATING FURNACE	IZMIR IRON&STEEL IND. INC.	YENI FOCA	TURKEY	The project covers detail design services in steel discipline and technical support during construction period.
574	KROMAN CELIK SAN. A.S.	TAVSANCIL WATERFRONT FACILITIES INFRASTRUCTURE AND BUILDINGS PROJECT	KROMAN CELIK SAN. A.S.	HEREKE	TURKEY	The project covers multi discipline basic design, detail design services and technical support during construction period.
567	ASIL STEEL INDUSTRY AND TRADE INC.	MELT SHOP EXTENSION AND MODER- NIZATION ENGINEERING AND DESIGN SERVICES	EKON ENDÜSTRİ İNŞAAT VE TİCARET A.S.	BURSA	TURKEY	The Project covers basic design and detail design in architectural and reinforced concrete discipline.

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
562	IZMIR IRON&STEEL IND. INC.	MODIFICATION AND ADDITIONAL INVESTMENT PROJECT	IZMIR IRON&STEEL IND. INC.	IZMIR	TURKEY	The project covers multi discipline detail design services.
548	KROMAN CELIK SAN. A.S.	STEEL PLANT CONTINUOUS CASTING PLANT	KROMAN CELIK SAN. A.S.	osmanga- Zi gebze Kocaeli	TURKEY	The Project covers multi discipline basic design services. The existing melt shop and scrap yard buildings were analyzed for increase in crane capacity and earthquake resistance and retrofitting drawings were prepared as a result.
530	ASIL STEEL INDUSTRY AND TRADE INC.	EQUIPMENT FOUNDATIONS MODIFI- CATIONS	ASIL STEEL INDUSTRY AND TRADE INC.	BURSA	TURKEY	The project covers basic design and detail design services in reinforced concrete and steel disciplines.
528	ERDEMIR IRON AND STEEL PLANT	KE REHABILITATION	ERDEMIR IRON AND STEEL PLANT	KARADENIZ EREGLI	TURKEY	The project covers detail design services in reinforced concrete discipline.
526	DEMISAS DO- KUM EMAYE MAMULLERI SANAYI A.S.	NEW CUPOLA PLANT	DEMISAS DO- KUM EMAYE MAMULLERI SANAYI A.S.	BILECIK	TURKEY	The project covers detail design services in reinforced concrete and steel disciplines.
522	DILER IRON & STEEL IND. AND TRADE INC.	DILER COOLING WATER PLANT	DILER IRON & STEEL IND. AND TRADE INC.	DILOVASI	TURKEY	The project covers multi discipline basic design and detail design services.
518	DILER IRON & STEEL IND. AND TRADE INC.	NEW OXYGEN PLANT	DILER IRON & STEEL IND. AND TRADE INC.	dilovasi Izmit	TURKEY	The project covers multi discipline detail design services.
515	DILER IRON & STEEL IND. AND TRADE INC.	CONTINUOUS CASTING PLANT	DILER IRON & STEEL IND. AND TRADE INC.	dilovasi Izmit	TURKEY	The project covers multi discipline detail design services.
499	ERDEMIR IRON AND STEEL PLANT	CONTINUOUS GALVANIZED LINE BUIL- DING CONSTRUCTION ENGINEERING SERVICES	GERKONSAN	KARADENIZ EREGLİ	TURKEY	The project covers detail design services in reinforced concrete and steel disciplines.
497	DILER IRON & STEEL IND. AND TRADE INC.	DILOVASI 1.000.000 TON/YEAR CAPA- CITY NEW STEEL PRODUCTION PLANT & EQUIPMENT FOUNDATION	DILER IRON & STEEL IND. AND TRADE INC.	DILOVASI IZMIT	TURKEY	The project covers basic design and detail design services in architecture, reinforced concete and steel disciplines and construction management and site supervision services during construction period.
495	KARDEMIR KARABUK IRON AND STEEL	MODERNIZATION OF CONTINUOUS ROLLER MILL	KARDEMIR KARABUK IRON AND STEEL	KARABÜK	TURKEY	The project covers detail design services in reinforced concrete and steel disciplines.
486	KARDEMIR KARABUK IRON AND STEEL	IRON SLACK RECYCLING FACILITY	PROKON MANUFAC- TURING AND ERECTION INC.	KARABÜK	TURKEY	The project covers basic design and detail design services in steel and mechani- cal equipment disciplines.
484	CEMTAS STEEL AND MACHINERY INC.	DEDUSTING OF ARC FURNACE AND MELTING POT FACILITIES	PROKON MANUFAC- TURING AND ERECTION INC.	ORGANIZED INDUSTRY ZONE BURSA	TURKEY	The project covers multi discipline detail design services.
483	ASIL STEEL INDUSTRY AND TRADE INC.	MODERNIZATION OF ELECTRIC ARC FURNACE AND MELTING POT	ASIL STEEL INDUSTRY AND TRADE INC.	ORHANGAZI BURSA	TURKEY	The project covers multi discipline detail design services.
481	KARDEMIR KARABUK IRON AND STEEL	POT HEATING AND DRYING STATIONS	PROKON MANUFAC- TURING AND ERECTION INC.	KARABÜK	TURKEY	The project covers multi discipline basic design and detail design services.
475	ERDEMIR IRON AND STEEL PLANT		ERDEMIR IRON AND STEEL PLANT	KARADENIZ EREGLI	TURKEY	The project covers basic design and detail design services in reinforced concrete and steel disciplines and and site supervision services.
467	DILER IRON & STEEL IND. AND TRADE INC.	SCRAP YARD AND PRODUCT HALL	DILER IRON & STEEL IND. AND TRADE INC.	DILOVASI ISTANBUL	TURKEY	The project covers basic design and detail design services in architectural, reinforced concete and steel disciplines.
464	ASIL STEEL INDUSTRY AND TRADE INC.	VACUUM DEGASSING AREA NEW COVER SYSTEM	PROKON MANUFAC- TURING AND ERECTION INC.	ORHANGAZİ BURSA	TURKEY	The project covers basic design and detail design services in steel and mecha- nical equipment disciplines and construction management and site supervision services during construction period.
458	ASIL STEEL INDUSTRY AND TRADE INC.	ROLLER MILL UNIT 41, 69 INTERME- DIARY EXTENSION PROJECT	ASIL STEEL INDUSTRY AND TRADE INC.	BURSA	TURKEY	The project covers basic and detail design services in architectural and steel disciplines.



# Food & Beverage



# BOĞAZLIYAN SUGAR FACTORY

Yozgat, TURKEY



As being the biggest investment project of Kayseri Sugar Factories Co., the largest and most modern sugar factory of Turkey, 10.000 tons/day Sugar Beet Slicing Capacity Boğazlıyan Sugar Factory was realized as an Engineering, Procurement and Construction (EPC) Contract on turnkey basis covering all Civil, Mechanical, Electrical and Automation Designs, Commissioning and Start-Up of the sugar factory.

The project was completed by OEP (Oyak İnşaat-EKON-PROKON) and French Fives-Cail, Maguin Consortium. The complete design works were provided by PROKON. When the project finished, it is designed to operate 10.000 tons of sugar beet per day, which may also reach 12.000 tons per day. Also a storage area with 224.000 ton sugar beet capacity was built. The beet washer unit's hourly capacity is 420 tons. Also the facility has the capacity to store 60.000 tons granulated sugar and 20.000 tons packaged sugar.

#### The following structures and units are designed by PROKON:

EPC TURNKEY

- Beet Acceptance & Analysis Laboratory
- Weigh Bridges
- Beet Storage Areas & Transporting Equipment
- Beet Washing Unit
- Beet Chopping Unit
- Boiling & Diffusion Unit 10.000 Tons/Day
- Pulp Presses
- Syrup Heaters
- Syrup Refining Unit
- Filter Presses
- Evaporation
- Ion Exchange Unit
- Crystallization
- Sugar Drying Unit
- Sugar Conveyors
- Sugar Storage & Packaging Units
- Boiler Water Processing Unit
- Vacuum Lines & Cooling Tower
- Steam Boilers (2 x75 Tons / Hour, 1 x 20 Tons / Hour, 1 x 10 Tons / Hour)
- 2 Steam Turbines with 8,200 KWE
  - Power Distribution Systems
  - Automation System
  - Laboratories
  - Fuel Oil Tank
  - Molasses Tanks
  - Wastewater Treatment Plant (350 m<sup>3</sup>/h capacity)
  - Making Fields Road & Park (56.000 m<sup>2</sup>)
  - Sewer & Storm Water System Making (11,800 m)





67



Konya, TURKEY

Client: KONYA SEKER FABRIKASI A.S.



Çumra Sugar Plant which was built on a 5th class agricultural land of 2.600.000 square meters in Çumra district had a sugar beet processing capacity of 17.000 tons per day.

The Plant with a daily nominal sugar beet processing capacity of 17.000 tons per day, it is the sugar mill having the largest capacity in Turkey;

- It is the only sugar mill in the world which can obtain its raw material within 20 km radius of it.
- It is the only plant which is capable of taking sugar beets into operation with dry system and producing 2.500 tons of sugar daily.
- It is the only sugar mill with the most advanced fluidized bed boiler, which reduces energy costs to minimum.
- It is the first plant in Turkey to produce liquid sugar from sugar beets.

PROKON has also received a Letter of Gratitude from the Client to enable the completion of the Plant in a record duration.

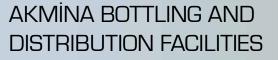
PROKON has provided Architectural, Reinforced Concrete, Structural Steel, Mechanical (Sanitary Installation, Heating, Ventilation, Cooling), Electrical (Illumination, Earthing, Lightning Protection, Fire Alarm, Low Current) Engineering Services.

The following structures were within the scope of the project:

- Main Production Building (12663 m<sup>2</sup>)
- Electrical Control Building (2966 m<sup>2</sup>)
- Office Buildings (2358 m<sup>2</sup>)
- Cafeteria & Locker Rooms (1585 m<sup>2</sup>)
- Mechanical Workshop (732 m<sup>2</sup>)
- Lime Station (644 m<sup>2</sup>)
- Main Entrance & Weighbridge (134 m<sup>2</sup>)
- Vehicle Standby Area Control Building (30 m<sup>2</sup>)
- Central Pump, Panel Transformer Building (400 m<sup>2</sup>)
- Turbine Panel, Transformer, Generator Building (200 m<sup>2</sup>)
- Pulp Press Panel, Transformer Building (155 m<sup>2</sup>)
- Clay Pit Pump, Transformer Building (103 m<sup>2</sup>)
- Beet Cleaning Panel Transformer Building (95 m<sup>2</sup>)
- Beet Loading Panel Transformer Building (85 m<sup>2</sup>)
- Beet Cleaning (900 m<sup>2</sup>)
- Liquid Sugar Building (2300 m<sup>2</sup>)
- Liquid Sugar Truck Loading Building (365 m<sup>2</sup>)
- Liquid Sugar Transport Building (210 m<sup>2</sup>)
- Liquid Sugar Panel Transformer Building (83 m<sup>2</sup>)
- Pipe Bridges (940 m)

- Equipment & Tank Foundations
- Bruckner Pool (60 m diameter)
- Cooling Tower Foundation
- Rain Drainage System
- Sewer System
- Roads
- Clay Pits
- Pulp Stock Area





Bursa, TURKEY

#### Client: DANONESA

Akmina Natural Water Bottling and Distribution Facility, an investment of DANONE and Sabanci Consortium, is located on of 10.000 m<sup>2</sup> area. PROKON provided Engineering and Design Services, Construction Management and Site Supervision Services for this project. In the facility, natural mineral spring water is bottled by automatic machinery and packaged for distribution in highly hygienic conditions.





PROKON provided the following services under the scope of this project:

#### **Engineering & Design Services**

- Functional Planning
- Architectural
- Steel & Reinforced Concrete Bearing Systems
- Mechanical Works (HVAC, Fire System, Plumbing, Piping etc.)
- Electrical Works (Power, Lighting, Earthing, Telephone, Data Lines, Fire Alarm System Automation etc.)

# Tendering File Preparation, Tender Evaluation & Contractor Appointment

 Contract, Scope, Work Plan, Technical Specifications, Cost Estimate & Quantity Survey

#### Site Supervision Services

- Plan & Activity Tracing & Control
- Cost Control
- Quality Control
- Design Control & Interior Furnishing Plan Preparing
- Coordination
- Reporting



# COCA-COLA PRODUCTION AND BOTTLING FACILITIES

Ankara, Mersin, Bursa, İzmir, TURKEY

Client: MAKSAN



# MAKSAN (the representative of Coca-Cola in Turkey) has made investments for the bottling facilities that stated below,

- Ankara Esenboğa Bottling Facility,
- Mersin Bottling Facility,
- Bursa Bottling Facility,
- İzmir Region Sales Office,
- Ankara Region Sales Office,
- 11000 m<sup>2</sup> 25000 m<sup>2</sup> 5000 m<sup>2</sup> 12000 m<sup>2</sup> 15000 m<sup>2</sup>

Coca Cola-MAKSAN assigned PROKON as the only source Consultant firm from year 1996 until 2000 for their investment project in Turkey.



#### PROKON provided the following services under the scope of this project:

#### **Engineering & Design Services**

- Functional Planning
- Architectural
- Steel & Reinforce Concrete Bearing Systems
- Mechanical Works (HVAC, Fire System, Plumbing, Piping etc.)
- Electrical Works (Power, Lighting, Grounding, Telephone, Data Lines, Fire Alarm System, Automation etc.)

# Tendering File Preparation, Tender Evaluation & Contractor Appointment

Contract, Scope, Work Plan, Technical Specifications, Cost Estimate & Quantity Survey

#### Site Supervision Services

- Plan & Activity Tracing & Control
- Cost Control
- Quality Control
- Design Control & Interior Furnishing Plan Preparing
- Coordination
- Reporting



## food & beverage references

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
837	AB HOLDING	KARAPINAR BULGUR PRODUCTION PLANT	AB HOLDING	KONYA	TURKEY	The project covers multi discipline basic design and detail design services.
828	MEY ICKI	ALASEHIR RAKI PRODUCTION FACILITY	MEY ICKI	MANISA	TURKEY	The project covers multi discipline basic design and detail design services and technical support.
745	KAYSERI SEKER FABRI- KASI A.S.	EQUIPMENT FOUNDATION DESING SERVICES	KAYSERI SEKER FABRIKASI A.S.	KAYSERI		The project covers detail design services in reinforced concrete discipline.
744	KAYSERI SEKER FABRI- KASI A.S.	BAROMETRIC CONDENSE STRUCTURE STATICAL ANALYSIS	KAYSERI SEKER FABRIKASI A.S.	BOGAZLIYAN YOZGAT	TURKEY	The project covers detail design services in steel discipline.
743	KAYSERI SEKER FABRI- KASI A.S.	SUGAR FACTORY BEET BELTS CAPACITY INCREASE PROJECT	KAYSERI SEKER FABRIKASI A.S.	BOGAZLIYAN KAYSERİ	TURKEY	The project covers basic design and detail design services in steel and mechanical equipment disciplines.
723	WHITE NILE SUGAR COM- PANY LTD.	SUDAN SUGAR FACTORY ENGINEERING SERVICES	EKON A.S.	SUDAN	SUDAN	The project covers multi discipline basic design and detail design services.
652	KAYSERI SEKER FABRI- KASI A.S.	BOGAZLIYAN SUGAR FACTORY TURNKEY DESIGN SERVICES AND CONSTRUCTION WORKS	KAYSERI SEKER FABRIKASI A.S.	KAYSERİ		OEP (Oyak inşaat-Ekon-Prokon) and French Fives-Cail, Maguin Consortium have under- taken the design services and construction works of Boğazlıyan Sugar Factory as turnkey basis. Boğazlıyan Sugar and Manufactures Integrated Facility is constructed on 700 decares of area. It is designed to operate 10.000 tons of sugar beet per day, which may also reach 12.000 tons per day. Also a storage area with 224.000 ton sugar beet capacity was built. The beet washer unit's hourly capacity was 420 tons. Also the facility has the capacity to store 60.000 tons granulated sugar and 20.000 tons packaged sugar.
602	KONYA SEKER FABRIKASI A.S.	KONYA SUGAR PLANT CUMRA FACILITIES DESIGN SERVICES	KONYA SEKER FABRIKASI A.S.	KONYA	TURKEY	The project covers multi discipline basic and detail design services for several buildings in the factory site within 2.600.000 m2 area.
580	YENIGUN INSAAT A.S.	SYRIAN GRAIN STORAGES PRELIMINARY DESIGN SERVICES	YENIGUN INSAAT A.S.	SYRIA	TURKEY	The project covers multi discipline basic design and detail design services.
533	GURBUZ DIS TIC. GIDA SAN. A.S.	GURBUZ HAZELNUT POCESSING FACILITIES, NEW PRODUCTION DIVISIONS AND PROD- UCT STORAGE DESIGN AND ENGINEERING SERVICES	TEMON MAK- INA TESISAT MONTAJ SAN. VE TICARET A.S.	DUZCE BOLU	TURKEY	The project covers detail design services in reinforced concrete and steel disciplines.
531	MAKSAN INC.	BURSA COCA COLA	MAKSAN INC.	BURSA		The project covers multi discipline basic and detail design services and site supervision services during construction period.
523	ANSAN A.S.	COCA - COLA ANKARA PRODUCTION AND BOTTLING FACILITIES MODIFICATION	ANSAN A.S.	ANKARA		The project covers multi discipline detail design services.
514	COCA COLA BEVERAGE PRODUCTION INC.	COCA COLA NEW STORAGE AND SERVICE BUILDINGS	COCA COLA BEVERAGE PRODUCTION INC.	ETIMESGUT ANKARA		The project covers multi discipline basic and detail design services and construction management and site supervision services for new service building, new storage, auxiliary buildings, water supply, lpg tank area.
512	MAKSAN INC.	COCA COLA MANISA FACILITIES	COCA-COLA (MAKSAN)	MANISA	TURKEY	The project covers multi discipline basic design and detail design services.
511	MAKSAN INC.	ISIKKENT COCA-COLA FACILITIES SALES CENTER PROJECT	COCA-COLA (İMBAT)	ISIKKENT IZMIR	TURKEY	The project covers multi discipline basic and detail design services and site supervision services during construction period.
504	SPIERER TOBACCO EXPORT IND. INC.	TOBACCO STORE AND ADMINISTRATION BUILDING MODIFICATION	SPIERER TO- BACCO EXPORT IND. INC.	ATATURK ORGANIZED INDUSTRIAL ZONE CIGLI IZMIR		The project covers multi discipline basic and detail design services and construction management and site supervision services for tobacco storage and administration building having 10.000 m <sup>2</sup> closed area.
490	DANONE SA- BANCI INC.	AKMINA BOTTLING AND DISTRIBUTION FACILITY PROJECT	DANONESA	AKKAYA BOLU		Akmina natural water bottling and distribution facility operates in an area of 10.000 m <sup>2</sup> . Services provided are described below: Engineering and Design Services • Functional Planning • Architectural • Steel and Reinforced Concrete Bearing Systems • Mechanical Works (HVAC, fire system, plumbing, piping etc.) • Electrical Works (Power, lighting, grounding, telephone, data lines, fire alarm system au- tomation etc.) Tendering File Preparation, Tender Evaluation and Contractor Appointment Site Supervision Services
478	MAKSAN INC.	EXTENSION OF COCA-COLA PRODUCTION AND BOTTLING FACILITY	MAKSAN INC.	BURSA - ESKISEHIR YOLU 20.KM. BURSA		The project covers multi discipline basic and detail design services and construction management and site supervision services for 1800 m <sup>2</sup> prefabricated storage building, steel compressor building, steel transformer building.
476	ANSAN A.S.	EXTENSION OF COCA-COLA PRODUCTION AND BOTTLING FACILITY	ANSAN A.S.	ESENBOĞA YOLU 18.KM. ANKARA	TURKEY	The project covers multi discipline basic and detail design services and site supervision services for 1140 m <sup>2</sup> steel workshop and auxiliary building.
472	MAKSAN INC.	CORLU COCA-COLA FACILITY HUSKY BUILDING	MAKSAN INC.	CORLU TEKIRDAG		The project covers multi discipline basic design and detail design services.
468	MAKSAN INC.	TURKMENISTAN ASKABAT COCA-COLA FACTORY	MAKSAN INC.	ASKABAT	ISTAN	The project covers basic design services.
461	IDIL CON- STRUCTION AND TRADE INC.	NEVINNOMISK SUGAR FACTORY	IDIL CON- STRUCTION AND TRADE INC.	STAVROPOL STATE OF NEV- INNOMISK	RUSSIA	The project covers multi discipline basic design and detail design services for the sugar factory having 900 ton/day raw sugar capacity.
433	ANSAN A.S.	EXTENSION OF COCA-COLA PRODUCTION AND BOTTLING FACILITY	ANSAN A.S.	esenboğa Yolu 18.km. Ankara	TURKEY	The project covers multi discipline basic and detail design services and construction management and site supervision services during construction period.



## Miscellaneous Industrial Plants



## DELPHI AUTOMOTIVE PRODUCTION FACILITY PROJECT AND PRODUCTION FACILITY EXTENSION PROJECT

İzmir, TURKEY

Client: DELPHI AUTOMOTIVE

Delphi is a global supplier of electronics and technologies for automotive, commercial vehicle and other market segments. The company operates major technical centers, manufacturing sites and customer support facilities in 30 countries, one of which is in İzmir, Turkey.

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In the scope of Delphi Automotive New Production Facility Project, the facility having a 14.983 m<sup>2</sup> total area was built. PROKON participated in this project on both Design Phase and Construction Phase.



#### The following services were provided during Design Phase:

- Structural Design
- Infrastructural Design
- Architectural Design
- Mechanical Design
- Electrical DesignAutomation DesignFire Systems Design

#### Also, the following services were provided during Construction Phase:

- Supervision ServicesConstruction Management
- Quality Control
- Work Schedule Management
- Cost Control
- Quality Control
- Health & Security Control

The project began in June 2001 and finished in October 2002.

In addition to New Production Facility, an Extension Project is planned in August 2011. This extension project has a total area of 11.000 m<sup>2</sup> and above mentioned services in Design Phase and Construction Phase are provided by PROKON.







Manisa, TURKEY

Client: IPEK KAĞIT - GEORGIA PASIFIC

lpek Kağıt, subsidiary of Eczacıbaşı Goup, is the leader in the tissue paper sector with Turkey's foremost tissue paper brands.

The objective of the project was to build a New Converting Facility in order to start the production of a new converting line. PROKON provided Engineering and Design Services, Construction Management and Site Supervision Services under the scope of this project.

This converting facility was a first step of a global 4 step plan, at the end of which, the site would be capable of producing and converting 180.000 Tons of paper within 225.000 m<sup>2</sup> closed area. Hence the design of this initial step must take into account all the requirements for the future extensions, i.e. none of the achievements during this first step will ever have to be reconsidered.

#### The Project cover

IPEK KAGIT

- Phase 1: 11.200 m<sup>2</sup> closed area
- Phase 2: 17.911 m<sup>2</sup> closed area
- Phase 3: 3.000 m<sup>2</sup> closed area

## The following services were provided by PROKON

- Engineering & Design Services
- Preparation of Technical Files
- Site Supervision Services



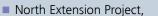
## PHILSA, PHILIP MORRIS – SABANCI CIGARETTE FACTORY, EXTENSION PROJEC

İzmir, TURKEY

Client: PHILSA- PHILIP MORRIS & SABANCI

Philsa, a 75/25 Joint Venture between Philip Morris and Sabanci Holding, was established in 1991. The factory manufactures many well-known tobacco brands for consumption in Turkey and other markets.

The scope of the work was to increase the production capacity and to benefit from the facility interior management areas in a functional way, so that a series of investments stated and below were performed,



Full Extension Project,

New Warehouse Project,

Sewage Treatment Plant

- CIBL 14 Project,
- 2050 m<sup>2</sup> 6500 m<sup>2</sup> 35000 m<sup>2</sup> 350 m<sup>3</sup>/day

4300 m<sup>2</sup>



## The following services were provided by PROKON;

- Engineering & Design Services
- Tendering File Preparation, Tender Evaluation & Contractor Appointment
- Construction Management Services

The Project started in July 1996 and completed in February 2000.







## BRISA TYRE FACTORY EXTENSION PROJECT

İzmit, TURKEY

Client: BRISA

BRISA, which was founded in 1974, with 354.000 m<sup>2</sup> closed area and production of 8.000.000 tyres/year, has become the 6th biggest tyre factory under single roof in Europe. The Design and Engineering Services were provided by PROKON during extension projects since 1996.

Consultancy Services of Preparation of Tender Documents, Engineering and Site Supervision were provided in "Extension 2" in 1996, "Earthquake Damage Maintenance" in 1999-2000, "Extension 3 Project and "Kumla River Bridge Project" in 2004 and also Consultancy Services of Multi Discipline Design Engineering Services and Preparation of Tender Documents were provided in "Bekirpaşa End Product Warehouse" and "AGR and Operation Warehouse under the scope of Extension 4" in 2006.

End Product Warehouse was built in western part of BRISA having a closed area of 52.000 m<sup>2</sup> and contains a separate structure with 850 m<sup>2</sup> Cafeteria, Locker Rooms, Wet Areas and Offices. Under the scope of Extension 4 Project, Consultancy Services of Design of 6400 m<sup>2</sup>AGR Building and 870 m<sup>2</sup> Operation Warehouse and Tender Documents Preparation were completed. The structures were designed as Prefabricated Reinforced Concrete Columns and Steel Roof Structure.





## MUBEA NEW FACILITY BUILDING

Manisa, TURKEY

Client: MUBEA

MUBEA is a global partner for the Automotive Industry and a Lightweight Design Specialist that provides heavy duty spring components and related products, since 1916. The company has operations in 14 countries.

The scope of work comprises the Design Services of New Facility-Phase 1 with 8.585 m2 enclosed area to be built in Manisa;

The buildings designed are as follows;

- Production Building Phase 1 (approximately 6750 m<sup>2</sup>)
- Canopy Phase 1 (approximately 750 m<sup>2</sup>)
- Office & Social Building Phase 1 2x495 m<sup>2</sup> (approximately 990m<sup>2</sup>)
- Overhang Axis A/1-2 (approximately 95m<sup>2</sup>)

PROKON provided the following services under the scope of this project;

- Preparation of Preliminary Design,
- Preparation of Architectural Design,
- Preparation of RC Construction Drawings,
- Preparation of Structural Steel Drawings,
- Preparation of HVAC Drawings,
- Preparation of Plumbing Drawings,
- Preparation of Fire System Drawings,
- Preparation of Electrical Drawings,
- Preparation of Automation Drawings,
- Preparation of Infrastructural Drawings,
- Establishment of the Technical Files for the Permits.
- Preparation & Approval of Energy Permit Drawings to TEDAŞ (Turkish Electricity Distribution Co.)

PROKON is also responsible for preparing the technical documents, drawings etc. and to assist client for the approval of all projects to the Engineering Associations.



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PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
832	PHILSA PHILIP MORRIS	TF2 BUILDING HVAC SYSTEM ROOM	PHILSA PHILIP MORRIS	İZMİR	TURKEY	The project covers construction management, site supervision and
827	SABANCI TURK HENKEL KIM. SAN. ve TIC. A.S.	SULFONATION BULDING ENGINEERING PROCUREMENT AND CONSTRUCTION WORKS (TURNKEY)	SABANCI TURK HENKEL KIM. SAN. ve TIC. A.S.	HASANO- GLAN - ANKARA	TURKEY	technical support services during the construction period. The project covers multi discipline detail design, construction management, site supervision and technical support services during the construction period.
825	BRISA BRIDGESTONE SABANCI	ZG - ZH TBR CURING LINE CONSTRUCTION ENGINEERING SERVICES AND PRESS LINE ADDITIONAL WORKS	BRISA BRIDGESTONE SABANCI	izmit - Kocaeli	TURKEY	The project covers multi discipline basic design, detail design services and technical support during construction period.
824	SECRETARIAT OF THE NATIONAL INTELLIGENCE ORGANISATION (MIT)	HATAY FACILITY BUILDINGS	SECRETARIAT OF THE NATIONAL INTELLIGENCE ORGANISATION (MIT)	HATAY	TURKEY	The project covers construction management, site supervision and technical support services during the construction period.
821	IPEK KAGIT	IPEK KAGIT MANISA FACILITY KM4 PROJECT	IPEK KAGIT	MANISA	TURKEY	Multi discipline detail desing service and technical support service are provided for the project.
820	HEAS HAVAALANI ISLETME VE HAVACILIK END. A.S.	MAIN STORAGE LANDSCAPING AND ANNEX- ES CONSTRUCTION CONSULTANCY	HEAS	ISTANBUL	TURKEY	The project covers construction management, site supervision and technical support services during the construction period.
819	ISKENDERUN DIRECTORATE OF ORGANIZED INDUSTRI- AL ZONES	ISKENDERUN ORGANIZED INDUSTRY ZONE - WATER TREATMENT PLANT	ISKENDERUN DIRECTORATE OF ORGANIZED INDUSTRIAL ZONES	ISKENDERUN	TURKEY	Multi discipline detail desing service and technical support service are provided for the project.
808	IPEK KAGIT	MANISA FACILITY CONVERTING EXTENSION BUILDING	IPEK KAGIT	MANISA	TURKEY	The project covers multi disipline basic design and detail design services.
806	STRABAG AG	WASTE WATER TREATMENT PLANT DESIGN FOR DIGESTERS AND PIPE GALLERY	STRABAG AG	CEYHAN - ADANA	TURKEY	The project covers detail design services in reinforced concrete discipline.
803	BRISA BRIDGESTONE SABANCI		BRISA BRIDGESTONE SABANCI	İZMİT	TURKEY	The project covers multi disipline basic design and detail design services.
798	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVELOPMENT ADMINIS- TRATION OF TURKEY	PRIME MINISTRY SERVICE BUILDING	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVEL- OPMENT ADMINISTRATION OF TURKEY	ANKARA	TURKEY	Site supervision and technical support services are provided for the project.
789	PHILSA PHILIP MORRIS SABANCI	NEW NTM LOGISTIC BUILDING	PHILSA PHILIP MORRIS SABANCI	İZMİR	TURKEY	Site supervision service is provided for the Philsa Project.
784	BRISA BRIDGESTONE SABANCI		BRISA BRIDGESTONE SABANCI	İZMİT	TURKEY	The project covers multi discipline basic design, detail design services and technical support during construction period.
783	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVELOPMENT ADMINIS- TRATION OF TURKEY	1760 FLATS, 300 BEDS CAPACITY HOSPITAL AND SOCIAL FACILITIES IN ANKARA	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVEL- OPMENT ADMINISTRATION OF TURKEY	ANKARA	TURKEY	The project covers construction management, site supervision and technical support services during the construction period.
780	IPEK KAGIT	MANISA FACILITY - NEW WAREHOUSE AND OFFICE BUILDING PROJECT	IPEK KAGIT	MANISA	TURKEY	The project covers multi discipline basic design, detail design services and technical support during construction period.
779	PHILSA PHILIP MORRIS SABANCI	NEW NTM LOGISTIC BUILDING	PHILSA PHILIP MORRIS SABANCI	IZMIR	TURKEY	The project covers multi discipline detail design services.
771	PROKON EKON GROUP	PROKON - EKON GROUP NEW HEADQUARTER BUILDING ENGINEERING SERVICES	PROKON EKON GROUP	ANKARA	TURKEY	The project covers multi discipline basic design, detail design services, construction supervision and technical support during construction period.
769	ARTCON MUH.	MUBEA PRODUCTION FACILITY ENGINEERING SERVICES	ARTCON MUH.	MANISA	TURKEY	The project covers multi discipline basic design and detail design services. The buildings designed in The New Facility - Phase 1 (with 8585 m <sup>2</sup> enclosed area) are as follows; - Production Building Phase 1 (6750 m <sup>2</sup> ), - Canopy Phase 1 (750 m <sup>2</sup> ), - Office & Social Building Phase 1 (990 m <sup>2</sup> ), - Overhang axis A/1-2 (95 m <sup>2</sup> )
766	PARSAN A.S.	NEW PLANT SITE WORK FEASIBILITY REPORT	PARSAN A.S.	DILOVASI	TURKEY	The project covers technical support during construction period.
762	DELPHI OTOMOTIV SIS. SAN. VE TIC. A.S.	DELPHI AUTOMOTIVE SYSTEMS THE EXTEN- SION OF NEW PRODUCTION FACILITIES	DELPHI OTOMOTIV SIS. SAN. VE TIC. A.S.	AGEAN FREE ZONE IZMIR	TURKEY	The project covers multi discipline (structural, architectural, infrastructur- al, mechanical, electrical, automation, fire systems) basic design, detail design services, construction supervision and technical support during construction period. The new facility extension project is designed having a total area of 11000 m <sup>2</sup> .
758	IPEK KAGIT	DESIGN OF KARAMURSEL NEW WARE HOUSE AND OFFICE BUILDINGS	IPEK KAGIT	IZMIT	TURKEY	The project covers multi discipline basic and detail design services and technical support during construction period.
754	BRISA LASTIK SANAYI VE TICARET A.S.	THE EXTENSION 4 PROJECT MIXER BUILDING, PRESS FOUNDATION ENGINEERING SERVICES	BRISA LASTIK SANAYI VE TICARET A.S.	IZMIT	TURKEY	The Extension 4 project cume consultance services for multi discipline detail design of mixer building and press foundation and technical support during construction.
752	ASIL STEEL INDUSTRY AND TRADE INC.	GEBZE TAYSAD OSB STEEL SERVING CENTER	ASIL STEEL INDUSTRY AND TRADE INC.	GEBZE ISTANBUL	TURKEY	The project covers multi discipline basic design, detail design services and technical support during construction period.
738	ROKETSAN ROKET SANAYII VE TICARET A.S.	ALTAY PROJECT	ROKETSAN ROKET SANAYII VE TICARET A.S.	ELMADAG	TURKEY	The project covers multi discipline basic and detail design services, construction management and site supervision services during construction period.
734	PHILSA PHILIP MORRIS SABANCI SIGARA VE TUTUNCULUK SAN.VE TIC.A.S. IZMIR	FTD - FX10 PROJECT DESIGN AND CON- STRUCTION SUPERVISION SERVICES	PHILSA PHILIP MORRIS SABANCI SIGARA VE TUTUN- CULUK SAN.VE TIC.A.S. IZMIR	TORBALI IZMIR	TURKEY	The project covers multi discipline detail design services, construction management and site supervision services during construction period.
733		MILITARY FACILITIES ENGINEERING AND CONSULTANCY SERVICES	ROKETSAN ROKET SANAYII VE TICARET A.S.	YAHSIHAN KIRIKKALE	TURKEY	The project covers multi discipline basic and detail design services, construction management and site supervision services during construction period.
728	ROKETSAN ROKET SANAYII VE TICARET A.S.	PROCESS BUILDING CENTER ENGINEERING AND CONSULTANCY SERVICES	ROKETSAN ROKET SANAYII VE TICARET A.S.	lalahan Ankara	TURKEY	The project covers multi discipline basic and detail design services, construction management and site supervision services during construction period.
727	BRISA LASTIK SANAYI VE TICARET A.S.		BRISA LASTIK SANAYI VE TICARET A.S.	IZMIT	TURKEY	The project covers multi discipline detail design services and technical support.

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PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
724	IPEK KAGIT	CONSULTANCY SERVICES FOR DESIGN AND CONSTRUCTION SUPERVISION OF NEW CONVERTING PLANT	IPEK KAGIT	MANISA	TURKEY	The project covers multi discipline basic and detail design and construction management during construction phase. A 4 step plan for a 225.000 m <sup>2</sup> facility was made and this first step covers; - Steel Structure Factory Building (9300 m <sup>2</sup> closed area), - Auxiliary Facilities (400 m <sup>2</sup> closed area), - Administration Building (1500 m <sup>2</sup> closed area), - Ground Improvement, - Mechanical, Electrical, Infrastructural and Fine Works
709	ETI GUMUS A.S. BAYMINA ENERJI A.S.	PROCESS PLANT FOUNDATION ELECTRIC BUILDING ANNEX ADDITIONAL	CHCONSULTANTS BAYMINA ENERJI A.S.	KUTAHYA TEMELLI	TURKEY	The project covers the basic design and detail design services in reinforced concrete discipline. The project covers multi discipline basic design, detail design services
		STOREY		ANKARA		and technical support during construction period.
705	BRISA LASTIK SANAYI VE TICARET A.S.	THE EXTENSION 4 AGR ENGINEERING SERVICES	BRISA LASTIK SANAYI VE TICARET A.S.	IZMIT	TURKEY	Under the scope of Extension 4 project, Consultancy services for design of 6400 m <sup>2</sup> AGR Building and 870 m <sup>2</sup> Operation Warehouse and preparation of tender documents were completed. The structures were designed as prefabricated reinforced concrete columns and steel roof. Also technical support is given during construction period.
696	EKONUT A.S.	CORLU PARK 588 HOUSING AND SHOPPING CENTER ENGINEERING AND DESIGN SERVICES	EKONUT A.S.	CORLU TEKIRDAG	TURKEY	The project covers multi discipline detail design services.
695	BRISA LASTIK SANAYI VE TICARET A.S.	AGR AND OLD EXPERIMENTAL CENTER BUILDINGS	BRISA LASTIK SANAYI VE TICARET A.S.	IZMIT KOCAELI	TURKEY	The project covers multi discipline basic design, detail design services and technical support during construction period.
688	PROKON EKON GROUP	PROKON EKON GROUP MACHINERY AND STEEL MANUFACTURING PLANT PAINTING WORKSHOP ENGINEERING SERVICES	PROKON EKON GROUP	SARAYKOY ANKARA	TURKEY	The project covers multi discipline basic design and detail design services.
687	BRISA LASTIK SANAYI VE TICARET A.S.	NEW WARE HOUSE PROJECT	BRISA LASTIK SANAYI VE TICARET A.S.	IZMIT	TURKEY	The project covers multi discipline basic design, detail design services and technical support during construction period.
681	PHILSA PHILIP MORRIS SABANCI SIGARA VE TUTUNCULUK SAN.VE TIC.A.S. IZMIR	TF-4, NEW WAREHOUSE AND CANTEEN PROJECT	PHILSA PHILIP MORRIS SABANCI SIGARA VE TUTUN- CULUK SAN.VE TIC.A.S. IZMIR	TORBALI IZMIR	TURKEY	The project covers multi discipline detail design services and construction management and site supervision services during construction period. Structures within the scope of the project are as follows; - New Production Hall (TF4 - Torbalı Factory 4), - New Ware- house Block, - Cafeteria Building, - Archive Building, - Modernisation in Auxiliary Facilites
665	PHILSA PHILIP MORRIS SABANCI SIGARA VE TUTUNCULUK SAN.VE TIC.A.S. IZMIR	FLASH TOWER DRYER DESIGN AND CONSUL- TANCY SERVICES	PHILSA PHILIP MORRIS SABANCI SIGARA VE TUTUN- CULUK SAN.VE TIC.A.S. IZMIR	TORBALI IZMIR	TURKEY	The project covers multi discipline basic and detail design services, construction management and site supervision services during construction period.
663	BRITISH AMERICAN TOBACCO	TIRE TOBACCO FACILITIES SECONDARY EXTENTION	BRITISH AMERICAN TOBACCO	TIRE IZMIR	TURKEY	The project covers multi discipline basic design and detail design services.
653	PHILIP MORRIS SABANCI PAZARLAMA VE SATIS A.S. ISTANBUL	PMSA İZMİR DC RENOVATION PROJECT PREPARATION OF TENDER DOCUMENTS AND CONSULTANCY SERVICES	PHILIP MORRIS SABANCI PAZARLAMA VE SATIŞ A.Ş. İSTANBUL	İZMİR	TURKEY	The project covers detail design services in architectural and me- chanical equipment disciplines and construction management and site supervision during construction period.
647	PHILIP MORRIS SABANCI PAZARLAMA VE SATIS A.S. ISTANBUL	PMSA İSTANBUL GÜNEŞLİ DC. SURVEYING AND REINFORCEMENT PROJECT FOR EARTH- QUAKE SAFETY	PHILIP MORRIS SABANCI PAZARLAMA VE SATIŞ A.Ş. İSTANBUL	GÜNEŞLİ İSTANBUL	TURKEY	The project covers detail design services in reinforced concrete discipline and technical support during construction period.
644	ANKARA CHAMBER OF INDUSTRY	ANKARA II. ORGANIZED INDUSTRIAL ZONE INFRA- STRUCTURE CONSULTANCY SERVICES FOR CONSTRUCTION SUPERVISION	ANKARA CHAMBER OF INDUSTRY II. ORGANIZED INDUSTRIAL ZONE	ANKARA	TURKEY	The project covers construction management and site supervision services during construction period.
643	ATM HAVALIMANI YAPIM VE ISLETME A.S.	DALAMAN AIRPORT NEW INTERNATIONAL LINES TERMINAL COMPLEX FOLLOW UP WORK SCHEDULE AND STEEL CONSULTANCY SERVICES FOR PREPARATION OF CONSTRUC- TION DRAWINGS	ATM HAVALİMANI YAPIM VE İŞLETME A.Ş.	DALAMAN IZMIR	TURKEY	The project covers construction management during construction period.
636	TEKSER CONST. AND TRADE	BENGHAZI CONVEYANCE POMP STATION "FOREBAY" TANK PIPING DESIGN SERVICES	TEKSER CONST. AND TRADE	BENGHAZI	LIBYA	The project covers the detail design services in mechanical equip- ment discipline.
631	BRISA LASTIK SANAYI VE TIC.A.S.	EXTENTION PHASE NO3 CONSTRUCTION PROJECT CONSULTANCY SERVICES	BRISA LASTIK SANAYI VE TIC.A.S.	IZMIT KOCAELI	TURKEY	The project covers multi discipline basic design, detail design services and technical support during construction period for 45000 m <sup>2</sup> closed area of warehouse.
625	TURKISH WAGON INDUS- TRY CO.	12. HALL (PREPARING HALL) DETAIL DESIGN	TURKISH WAGON INDUSTRY CO.	ADAPAZARI	TURKEY	The project covers multi discipline basic design and detail design services.
618	PUBLIC PROCUREMENT AUTHORITY	PUBLIC PROCUREMENT AUTHORITY DIRECTORATE BUILDING INFRASTRUCTURE PROJECT	PUBLIC PROCUREMENT AUTHORITY	ANKARA	TURKEY	The project covers basic design and detail design services in mechan- ical installation discipline.
617	PHILIP MORRIS SABANCI PAZARLAMA VE SATIS A.S. ISTANBUL	PROJECT PMSA DIYARBAKIR DC PROJECTS TENDER DOCUMENT PREPARATION AND CONSTRUCTION SUPERVISION SERVICES	PHILIP MORRIS SABANCI PAZARLAMA VE SATIS A.S. ISTANBUL	DIYARBAKIR	TURKEY	The project covers multi discipline basic and detail design and construction management during construction phase.
615		ANKARA ESENBOGA AIRPORT PRELIMINARY DESIGN SERVICES	GAMA ENDUSTRI TESISLERI IMALAT VE MONTAJ A.S.	ESENBOGA ANKARA	TURKEY	The project covers basic design and detail design services in architec- ture, reinforced concete disciplines.
609	PHILSA PHILIP MORRIS SABANCI SIGARA VE TUTUNCULUK SAN.VE TIC.A.S. IZMIR	TOBACCO FACILITIES EXTENSION PROJECT PHASE II CHILLER PROJECTS	PHILSA PHILIP MORRIS SABANCI SIGARA VE TUTUN- CULUK SAN.VE TIC.A.S. IZMIR	TORBALI IZMIR	TURKEY	The project covers multi discipline basic and detail design services and construction management and site supervision services during construction period.
607	PHILSA PHILIP MORRIS SABANCI SIGARA VE TUTUNCULUK SAN.VE TIC.A.S. IZMIR	TOBACCO PLANT DEVELOPMENT PROJECT PHASE I CONSULTANCY AND CONSTRUC- TION MANAGEMENT SERVICES	PHILSA PHILIP MORRIS SABANCI SIGARA VE TUTUN- CULUK SAN.VE TIC.A.S. IZMIR	TORBALI IZMIR	TURKEY	The project covers multi discipline basic and detail design services and construction management and site supervision services during construction period.
606	TURKISH WAGON INDUS- TRY CO.	RAILWAY CAR PLANT NEW GLASS, BREAK, VALVE, CARPENTER, FURNISHING SHOP APPLICATION DESIGN SERVICES	TURKISH WAGON INDUSTRY CO.	ADAPAZARI	TURKEY	The project covers basic and detail design and construction manage- met and site supervision services during construction period.

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
604	REPUBLIC OF TURKEY ANKARA METROPOLITAN MUNICIPALITY EGO GENERAL DIREC- TORATE	EGO GENERAL DIRECTORATE BUILDING CONSULTANCY SERVICES FOR CI-ONSTRUC- TION SUPERVISION	REPUBLIC OF TURKEY ANKARA METROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE	ANKARA	TURKEY	The project covers supervision of demolishing of existing buildings on the construction area and construction of EGO General Management Service Building, having 25 storeys. This building is a smart building composed of high technology applications, Building Automation Systems (BAS), Energy Management Systems (EMS), Central Control and Management Systems (CCMS), Communication Systems (video, sound and data), Security systems, Optimum energy management, Building automation, SCADA and the required network systems, applications, control, commu- nication systems. Total construction area: 94.000 m <sup>2</sup>
600	USAK CHAMBER OF COM- MERCE & INDUSTRY	USAK CHAMBER OF COMMERCE INDUSTRY SHOPPING BUILDING DESIGN SERVICES	USAK CHAMBER OF COM- MERCE & INDUSTRY	USAK	TURKEY	The project covers detail design services in reinforced concrete, electrical and mechanical installation disciplines.
596	AKAR ELEVATOR MOTOR CO.	ELEVATOR MOTOR NEW PRODUCTION PLANT DESIGN AND PREPARATION OF TENDER DOCUMENTS SERVICES	AKAR ELEVAIOR MOIOR CO.	SILIVRI İSTANBUL	TURKEY	The project covers multi discipline basic and detail design services and construction management and site supervision services during construction period.
593	PHILSA PHILIP MORRIS SABANCI SIGARA VE TUTUNCULUK SAN.VE TIC.A.S. IZMIR	TOBACCO FACILITIES DEVELOPMENT BURLEY LINE PROJECT CONSULTANCY AND CON- STRUCTION MANAGEMENT	PHILSA PHILIP MORRIS SABANCI SIGARA VE TUTUN- CULUK SAN.VE TIC.A.S. IZMIR	TORBALI IZMIR	TURKEY	The project covers multi discipline basic and detail design services and construction management and site supervision services during construction period.
592	TUBITAK THE SCIENTIFIC AND TECH- NICAL RESEARCH COUNCIL OF TURKEY	T.T.Ü.D.A. PROJECT ROCKET PRODUCTION PLANT PROJECT	TUBITAK - SAGE	TUBITAK SAGE LALAHAN ANKARA	TURKEY	The project covers multi discipline basic and detail design services and construction management and site supervision services during construction period.
587	SANLI URFA MUNICIPALITY	SANLIURFA FRESH WATER PREPARATION PROPOSAL PROJECT	ERKO INSAAT TICARET LTD. STI.	SANLI URFA	TURKEY	The project covers multi discipline basic design services.
586	PHILIP MORRIS SABANCI PAZARLAMA VE SATIS A.S. ISTANBUL	PMSA GENERAL DIRECTORATE BUILDING	PHILIP MORRIS SABANCI PAZARLAMA VE SATIS A.S. ISTANBUL	CAMLICA ISTANBUL	TURKEY	The project covers multi discipline basic and detail design services and construction management and site supervision services for Di- rectorate General Buildings of PHILSA in Istanbul during construction period. The total closed area of the buildings is 14.750 m <sup>2</sup> . The building has composed of closed parking area, offices and warehouses
582	TURKISH WAGON INDUS- TRY CO.	TUVASAS CHEMICAL PROCESS, CUTTING PRE- PARING, AND REPAIRING FABRICATION HALL	PROKON MANUFACTURING AND ERECTION INC.	ADAPAZARI	TURKEY	The project covers multi discipline basic design and detail design services.
573		MELEN WATER INTAKE REGULATOR AND ME- LEN AND CUMHURIYET PUMPING SYSTEMS PROJECT	YUKSEL INSAAT A.S.	MELEN - K.EREGLISI CUMHURI- YET VILLAGE - İSTANBUL	TURKEY	The project covers basic design and detail design services in mechan- ical equipment discipline.
572	MASTER ENERJI LTD.	PAPER FACTORY TURBINE PIPING STRESS ANALYSIS	MASTER ENERJI LTD.	CORLU	TURKEY	The project covers basic design services in process and piping discipline.
570	VE TIC. A.S.	DELPHI AUTOMOTIVE SYSTEMS NEW PRO- DUCTION FACILITIES	DELPHI OTOMOTIV SIS. SAN. VE TIC. A.S.	EGE FREE ZONE IZMIR	TURKEY	In the scope of Delphi Automotive New Production Facility Project, the facility having a 14.983 m <sup>2</sup> total area was built. Prokon Mühendislik ve Müşavirlik A.Ş.providedboth multi discipline basic and detail design and construction supervision services.
568	TURKISH WAGON INDUS- TRY CO.	NEW FABRICATION HALL REPAIRING, REINFORCED, ROOF AND WALL CLADDING	EKON A.S.	TURKISH WAGON INDUSTRY CO.	TURKEY	The project covers detail design services in architectural, reinforced concrete and steel disciplines.
558	IZMIR BERGAMA ORGANIZED INDUSTRIAL ZONE ENTREPRENEUR ORGANIZATION	IZMIR BERGAMA ORGANIZED INDUSTRIAL ZONE STUDY AND DESIGN ENGINEERING SERVICES	IZMIR BERGAMA ORGA- NIZED INDUSTRIAL ZONE ENTREPRENEUR ORGANI- ZATION	BERGAMA İZMİR	TURKEY	The project covers multi discipline basic design and detail design services.
553	TURKISH WAGON INDUS- TRY CO.	WAGON WORKSHOP AFTER EARTHQUAKE MAINTENANCE AND MODIFICATION	EKON A.S.	ADAPAZARI	TURKEY	The project covers multi discipline detail design services.
551		ERDEMİR NEW GENERAL DIRECTORATE BUILDING DESIGN SERVICES	ERDEMIR IRON AND STEEL PLANT	KARADENIZ EREGLI	TURKEY	The project covers multi discipline basic design and detail design services.
536	SPIERER TOBACCO EXPORT IND. INC.	AKHISAR TOBACCO STORE BUILDING	SPIERER TOBACCO EXPORT IND. INC.	AKHISAR MANISA		The project covers multi discipline basic and detail design services and construction management and site supervision services during construction period.
517	KARS KAFKAS UNIVERSITY	KARS KAFKAS UNIVERSITY BRIDGE PROJECT	KARS KAFKAS UNIVERSITY	KARS	TURKEY	The project covers basic design and detail design services in rein- forced concrete and steel disciplines.
510	DILER HOLDING INC.	RIVER BRIDGE PASSING (DILDERESI PASSING)	DILER HOLDING INC.	DILDERESI	TURKEY	The project covers basic design and detail design services in rein- forced concrete and steel disciplines.
501	TURKISH STATE METE- OROLOGICAL GENERAL DIRECTORATE	RADAR OPERATION CENTER	TURKISH STATE METE- OROLOGICAL GENERAL DIRECTORATE	ANKARA	TURKEY	The project covers multi discipline basic and detail design services and site supervision services during construction period.
487	OZTAS A.S.	HEATING CENTER PROJECT	OZTAS A.S.	IZMIR	TURKEY	The project covers the detail design services in architecture and steel disciplines.
459	TURKISH ORGANIZATION OF SCIENTIFIC RESEARCH	AEROBLASTIC RESERCH LABORATORY	TUBITAK - SAGE	lalahan Ankara	TURKEY	The project covers multi discipline detail design services.
455	ETIBANK	BIGADIC BORACS MILL FACILITIES DESIGN AND ENGINEERING SERVICES	GIMAS A.S.	BIGADIC BALIKESIR	TURKEY	The project covers multi discipline basic design and detail design services.
453	BRISA LASTIK SANAYI VE TICARET A.S.	EXTENTION PHASE NO2 CONSTRUCTION PROJECT CONSULTANCY SERVICES	BRISA LASTIK SANAYI VE TICARET A.S.	IZMIT KOCAELI	TURKEY	The project covers multi discipline basic design, detail design services and technical support for the buildings having 53.000 m <sup>2</sup> closed area and field having 15.000 m <sup>2</sup> area.



## **Building Construction**

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## PROKON - EKON GROUP NEW HEADQUARTER BUILDING

#### Ankara, TURKEY

Client: PROKON - EKON GROUP COMPANIES



Prokon - Ekon Group of Companies has decided to gather all the companies under a single roof. Therefore, it is decided to design and build a Headquarter Building as a Green Building which is a Candidate for LEED Platinum Certificate.

The details of the headquarter building are as follows:

- 16.750 m<sup>2</sup> Construction Area
- 8.000 m<sup>2</sup> Closed Area (excluding the car parks)
- Conference Hall with 120 People Capacity
- Working Area for 270 People

- Car Park for 140 Vehicles
- Cafeteria
- 90 m<sup>2</sup> Fitness Area
- 700 tons of Steel

Headquarter is designed with a modern architectural concept featuring the transparency. The steel elements are left open in order to be identified at interior and the facade of the building is selected as glass facade system in order for steel elements to be spotted from outside.

The structural design of the building pushes the boundaries with console block having 22 m width and reaching a length of 16 m, the composite floors having just 10 cm thickness, and stairs having 6 m console length and produced with only plates.

#### The following design approaches were applied for LEED Platinum Certificate Candidacy:

- Design of the building shell having increased performance to reduce energy expenses
- Cogeneration, Solar Collectors, Solar Wall, Heat Accumulation, Building Automation System, %30 more Air Quality, Gray Water System, Sun Light Control & Illumination Automation.

Also all of the design and engineering stages were completed by using the Software, "COMOSYS" which is developed by PROYA Yazılım ve Ticaret A.Ş. a member of PROKON-EKON Group of Companies.

PROKON provided the following services under the scope of this project;

#### **Design & Engineering Services:**

- Structural
- Architectural
- Mechanical Works (HVAC, Fire System, Plumbing, Piping etc.)
- Electrical Works (Power, Lighting, Grounding, Telephone, Data Lines, Fire Alarm System, Automation etc.)

**Construction Supervision Services** 

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## ANKARA METROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE BUILDING

#### Ankara, TURKEY

Client: ANKARA METROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE



The service area of EGO (The Administration responsible from transportation and natural gas, under Ankara Municipality) has increased incrementally along with increasing population of Ankara.

Due to serving in different parts of the city with very old buildings, EGO's work progress was slowed and became inefficient. This case brought the necessity of a General Directorate Building including all units of EGO and some units of the Municipality. The Old Bus Terminal with very old buildings was picked as the place of this building. First phase was to demolish those buildings. During demolition of buildings, the design of 25-storey building was completed.

This building is a Smart Building composed of high technology applications, Building Automation Systems (BAS), Energy Management Systems (EMS), Central Control and Management Systems (CCMS), Communication Systems (Video, Sound and Data), Security Systems, Optimum Energy Management, Building Automation, SCADA and the required Network Systems, Applications, Control, Communication Systems.

The construction works took 3 years and the contract ended at February 2006. However due to some unfinished construction works, EGO, the contractor and we signed another contract in March 2006 and the final touches were finished at August 2006.

The total area of the project was 93.000 m<sup>2</sup>.

PROKON provided the following services under the scope of this project;

## Design & Engineering Services:

Control of the Drawings according to Technical Specifications

## Preparation of the Tender Files

Preparation of the Tender Files & Technical Support to the Client in Preparation of the BOQ.

## **Construction Supervision Services:**

- Construction Supervision (Planning, Activity Monitoring, Cost Control, Quality Control, Design Control, Coordination, Reporting)
- Supervision of Demolition Works
- Supervision of Mechanical Works
- Supervision of Electrical Works
- Supervision of Infrastructural Works

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## PROKON provided the following services under the scope of the projects;

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## Construction Supervision Services:

- Construction Supervision Services:
   Construction Supervision (Planning, Activity Monitoring, Cost Control, Quality Control, Design Control, Coordination, Reporting)
   Supervision of Mechanical Works
   Supervision of Electrical Works
   Supervision of Infrastructural Works

## BTK BUILDING, MAYEM BUILDING, 1760 HOUSES AND HOSPITAL HAVING 300 BEDS CAPACITY, IN ANKARA

#### Ankara, TURKEY

Client: REPUBLIC OF TURKEY PRIME MINISTRY, HOUSING DEVELOPMENT ADMINISTRATION OF TURKEY



PROKON and Republic of Turkey Prime Ministry Housing Development Administration of Turkey signed the contract for the Consultancy Services for Construction Supervision of 1760 houses, a hospital having 300 beds capacity, BTK and MAYEM Buildings in Ankara. Under the scope of the contract, construction supervision services has provided for the following projects.

## MAYEM (Higher Education Center of Finance) Service Building

Project covers 9-storey (2 Basement + Entrance + 6 Floor) building with 13 blocks. MAYEM Service Building includes these units; Guest Rooms, Sport Hall, Social Domain, Game Arcade, Administrative Divisions, Classrooms, Dining Hall, Café, Meeting Rooms, Multi-Purpose Hall, Conference Hall, Heating Unit, Air Conditioning Unit and Parking Lots. Building's facade designed as aluminum curtain-wall. Building is constructed with Conventional Formwork Construction Technology on Raft Foundation and has aluminum skylight system on steel roof. 10.000 m<sup>2</sup> Synthetic Turf is used for walkable roof.

Total construction area is approximately 67.047,68 m<sup>2</sup> and total construction period is 650 days.

## BTK (Information Technologies & Communication Institution) Service Building

Housing Development Administration has decided to build a new service building for Information Technologies and Communication Institution Department in Ankara. Project covers 20-storey (3 Basement + Entrance + 16 Floor) building with 16 blocks. Foundation begins at -19,00 m and supported by 22 meter length bored piles. In architectural perspective, building has aluminum skylight system on steel construction at +78,60. Building's facade has glass curtain-wall and has aluminum sunshades. Plywood and plastic formworks are used for Conventional Formwork Construction Technology.

Total construction area is approximately 113.481,40 m<sup>2</sup> and total construction period is 1.300 days.

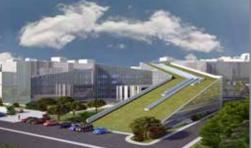
## **Polatlı Hospital**

Project covers Construction Supervision Services for 300-bed-capacity hospital in Polatlı, Ankara.

## 1760 Houses

Project covers Construction Supervision Services for 1760 houses in several locations in Ankara.

# Project covers locations in An





## 1<sup>ST</sup> GROUP CULTURAL, SPORT, SERVICE AND CAR PARK BUILDINGS AROUND İSTANBUL

## İstanbul, TURKEY

Client: İSTANBUL METROPOLITAN MUNICIPALITY The Contract related to "Design and Engineering Services of 1<sup>st</sup> Group Cultural, Sport, Service and Car Park Buildings around İstanbul" was signed between PROKON and İstanbul Metropolitan Municipality on January 27<sup>th</sup>, 2012.

The consultancy services of this project include the design of stadium, youth center, sports halls, buildings, underground car parks and also landscaping having an area of 203.000 m<sup>2</sup>.

#### The Project covers the design services of the following structures;

- Çatalca Soild Waste Transfer Station (4.740 m<sup>2</sup>),
- Üsküdar Haydarpaşa Numune Hospital Underground Car Park (51.865 m<sup>2</sup>),
- Çatalca Kaleiçi Fire Station (3.407 m<sup>2</sup>),
- Gaziosmanpaşa Barbaros Hayrettinpaşa Closed Sport Hall & Youth Center (24.120 m<sup>2</sup>),
- Esenler Stadium (38.223 m<sup>2</sup>),

BUNEY MEYDAN

- Ümraniye Çakmak Quarter Underground Multi-storey Car Park (39.471 m<sup>2</sup>),
- Esenler Fevzi Çakmak Quarter Multi-storey Car Park (4.016 m<sup>2</sup>),
- Küçükçekmece Fevzi Çakmak Quarter Multi-storey Car Park (73.460 m<sup>2</sup>),
- Esenler Havaalani Underground Multi-storey Car Park (35.191 m<sup>2</sup>).

The features of Esenler Stadium designed within the scope of Project are;

- 5231 seat capacity,
- Closed Area: 38.223 m<sup>2</sup>.
- Football Field: 8.834 m<sup>2</sup>.
- Swimming Pool
- 4 Sport Halls (for Indoor Sport)





## ÇORLU PARK COMPLEX

Tekirdağ, TURKEY

Client: PROKON-EKON GROUP

Çorlu Park Complex is an investment project of PROKON-EKON Group of Companies in Çorlu.



## The project covers the following buildings:

588 Dwellings (9 blocks with 14 storeys)

PROKON provided following services under the scope of this project:

- Plant Lay-Out
- Site Preparation
- Architectural & Engineering Design Services Including Structural, Mechanical, Electrical
- Technical Support During Implementation of the Work
- Overall Design Work Schedule Monitoring
- Coordination between Units & Engineering Disciplines







## MARMARA EARTHQUAKE SAKARYA REGION PERMANENT HOUSING

Sakarya, TURKEY

Client: T.R. MINISTRY OF PUBLIC WORKS & SETTLEMENT



Following the severe earthquake that occurred in the Marmara Region on 17<sup>th</sup> August 1999, TR Ministry of Public Works and Settlement has identified an Emergency Reconstruction Program in the affected areas.

Sakarya Region Permanent Housing Engineering Design and Consultancy Services were provided by PROKON.

Reconstruction program has been composed of 5 regions such as Bolu-Düzce, Sakarya-Centrum, Kocaeli-Centrum, Kocaeli-Gölcük-Gulf Region and Yalova-İstanbul. Our consultancy services have included reconstruction program of 6000 houses and 1500 work places in Sakarya-Centrum. The total construction area of housings, social facilities, infrastructure and landscaping is 700.000 m<sup>2</sup>.



The following services were provided by PROKON under the scope of this project;

Geologic & Geotechnical Studies (Boring, Laboratory Experiments & Preparation of Technical Reports),

Preparation of Development Plans, Mapping & Topographical Survey

## **Design Services**

- Architectural
- Reinforced Concrete Bearing System
- Mechanical Works
- Electrical Works
- Landscaping

#### **Construction Supervision Services**

- Plan & Activity Tracing & Control
- Cost Control
- Quality Control
- Design Control & Interior Furnishing Plan Preparing
- Coordination
- Reporting



## 4669 HOUSES WITH THE SOCIAL FACILITIES IN AGEAN REGION

Afyon, Balıkesir, Bilecik, Bursa, Isparta, Kütahya, Uşak, Yalova, TURKEY

Client: REPUBLIC OF TURKEY, HOUSING DEVELOPMENT ADMINISTRATION OF TURKEY



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The project covers Construction Supervision of 4669 Houses with the Social Facilities in Afyon, Balıkesir, Bilecik, Bursa, Isparta, Kütahya, Uşak and Yalova during and after construction period.

The total building area of the project is 726.450 m<sup>2</sup>.

The project also covers the Construction Supervision of Road Connections, Infrastructural, Environmental and Landscaping Works.

#### Some of the social facilities within the scope of this project are as follows;

- Bursa 24-Classroom & 32-Classroom Primary Schools, two Sport Halls, two Mosques & two Commercial Centers,
- Afyon Kindergarten, Commercial Center,
- Balıkesir Kindergarten, Commercial Center, Fountain & Mosque
- Uşak Primary

PROKON provided the following services under the scope of this project;

#### Site Supervision Services

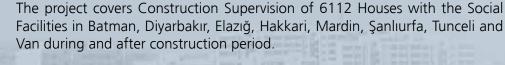
- Plan & Activity Tracing & Control
- Contract Management,
- Coordination & Management Services
- Cost Control,
- Quality Control,
- Coordination
- Reporting
- Follow up Settlement Permits
- Provisional & Final Acceptances



## 6112 HOUSES WITH THE SOCIAL FACILITIES IN EAST ANATOLIA REGION

Batman, Diyarbakır, Elazığ, Hakkari, Mardin, Şanlıurfa, Tunceli, Van, TURKEY

Client: REPUBLIC OF TURKEY, HOUSING DEVELOPMENT ADMINISTRATION OF TURKEY



The total building area of the project is 935.399 m<sup>2</sup>.

The project also covers the Construction Supervision of Road Connections, Infrastructural, Environmental and Landscaping Works.

## Some of the social facilities within the scope of this project are as follows;

Thirteen Trade Centers, one Social Centre, eleven Shops, three Health Centers, one 32-Classroom Elementary School, two 40-Classroom Elementary Schools, two 16-Classroom Elementary Schools, four 24-Classroom Elementary Schools, one 8-Classroom Elementary School, two 5-Classroom Elementary Schools, six Nursing Homes, three Sports Halls, three Kindergartens, eight Mosques.

PROKON provided the following services under the scope of this project;

#### Site Supervision Services

- Plan & Activity Tracing & Control
- Contract Management,
- Coordination & Management Services
- Cost Control,
- Quality Control,
- Coordination
- Reporting
- Follow up Settlement Permits
- Provisional & Final Acceptances





## building construction references

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
824	SECRETAR- IAT OF THE NATIONAL INTELLI- GENCE OR- GANISATION (MIT)	HATAY FACILITY BUILDINGS	SECRETAR- IAT OF THE NATIONAL INTELLIGENCE ORGANISA- TION (MIT)	НАТАҮ	TURKEY	The project covers construction management, technical support and site supervision services during construction period.
798	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVEL- OPMENT ADMINIS- TRATION OF TURKEY	PRIME MINISTRY SERVICE BUILDING	REPUBLIC OF TURKEY PRIME MINIS- TRY HOUSING DEVELOP- MENT ADMIN- ISTRATION OF TURKEY	ANKARA	TURKEY	The project covers construction management and technical support services during construction period.
783	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVEL- OPMENT ADMINIS- TRATION OF TURKEY	1760 FLATS, 300 BEDS CAPACITY HOSPITAL AND SOCIAL FACILITIES IN ANKARA	REPUBLIC OF TURKEY PRIME MINIS- TRY HOUSING DEVELOP- MENT ADMIN- ISTRATION OF TURKEY	ANKARA	TURKEY	The project covers construction management, technical support and site supervision services during construction period.
772	ISTANBUL METROPOLI- TAN MUNICI- PALITY	1st GROUP CULTURE, SPORTS, SERVICE AND CAR PARK STRUCTURES	ISTANBUL METROPOLI- TAN MUNICI- PALITY	İSTANBUL	TURKEY	The project covers multi discipline basic and detail desing engineering services during the construction period.
771	PROKON EKON GROUP	PROKON - EKON GROUP NEW HEAD- QUARTER BUILDING	PROKON EKON GROUP	ANKARA	TURKEY	The project covers multi discipline engineering services for basic and detailed design, technical support and site supervision services during construction period.
751	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVEL- OPMENT ADMINIS- TRATION OF TURKEY	CONSULTANCY SERVICES FOR CONSTRUCTION SUPERVISION OF 4614 FLATS, 7 HOSPITALS AND SOCIAL FACILITIES IN EAST ANATOLIA, EAST BLACKSEA ANATOLIA DURING CONSTRUCTION AND DEFECTS AND LIABILITY PERIODS	REPUBLIC OF TURKEY PRIME MIN- ISTRY HOUSING DE- VELOPMENT ADMINIS- TRATION OF TURKEY	LIA AND EAST BLACKSEA PROVINCES	TURKEY	The project covers site supervision services during construction and defects and liability period. The facilities in the scope of this project are as follows: - 4614 houses in 17 different cities - Ağrı Diyadin State Hospital (50 Beds Capacity) and mass housing - Bingöl Hospital (200 Beds Capacity) - Diyarbakır Bismil Hospital (100 Beds Capacity) - Diyarbakır Bismil County, Tepe Town Hospital (18 Beds Capacity) - Erzincan Tercan Hospital (50 Beds Capacity) and mass housing - Gümüşhane Torul Hospital (10 Beds Capacity) - Malatya Hospital (640 Beds Capacity) - Muş State Hospital (300 Beds, 400 patients capacity)
740	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVEL- OPMENT ADMINIS- TRATION OF TURKEY	CONSULTANCY SERVICES FOR CONSTRUCTION SUPERVISION OF 6712 FLATS, 4 HOSPITALS AND SOCIAL FACILITIES IN EAST ANATOLIA DURING CONSTRUCTION AND DEFECTS AND LIABILITY PERIODS	REPUBLIC OF TURKEY PRIME MIN- ISTRY HOUSING DE- VELOPMENT ADMINIS- TRATION OF TURKEY	EAST ANATOLIA PROVINCES (12 CITIES)	TURKEY	The project covers site supervision services during construction and defects and liability period. The facilities in the scope of this project are as follows: - 6712 houses in 12 cities - Ardahan State Hospital (150 Bed Capacity) - Bingöl, Genç State Hospital (50 Bed Capacity) and public housing - Kars, Sarıkamış State Hospital (50 Bed Capacity) - Tunceli State Hospital (150 Bed Capacity)

## building construction references

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
698	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVEL- OPMENT ADMINIS- TRATION OF TURKEY	CONSULTANCY SERVICES FOR CONSTRUCTION SUPERVISION OF 6112 HOUSING, 3 HEALTH UNITS AND SOCIAL FACILITIES DURING CONSTRUCTION AND DEFECTS AND LIABILITY PERIODS	REPUBLIC OF TURKEY PRIME MIN- ISTRY HOUSING DE- VELOPMENT ADMINIS- TRATION OF TURKEY	HAKKARI DIYARBAKIR TUNCELI BATMAN SANLIURFA ELAZIG VAN MARDIN	TURKEY	The project covers site supervision services during construction and defects and liability period. The total building area of the project is 935.398,80 m <sup>2</sup> . The project also covers the construction supervision of road connections, infrastructural, environmental and landscaping works. The social facilities within the scope of this project are as follows; -13 Trade Center, 1 Social Centre, 11 shops, 3 Health Centre, 1 32-Class- roomed Elementary School, 2 40 Classroomed Elementary School, 2 16 Classroomed Elementary School, 4 24 Classroomed Elementary School, 1 8 Classroomed Elementary School, 2 5 Classroomed Elementary School, 6 nursing home, 3 Sports Hall, 3 kindergartens, 8 mosques.
683	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVEL- OPMENT ADMINIS- TRATION OF TURKEY	CONSULTANCY SERVICES FOR CON- STRUCTION SUPERVISION OF (6644 EACH) PUBLIC HOUSING	REPUBLIC OF TURKEY PRIME MIN- ISTRY HOUSING DE- VELOPMENT ADMINIS- TRATION OF TURKEY	ZONGULDAK, ESKISEHIR, ANKARA, BARTIN, KARABUK, SAMSUN, KASTAMONU	TURKEY	The project covers construction supervision services during construction and defects and liability period for 6644 houses with social facilities (956.546 m2 closed area) in Zonguldak, Eskişehir, Ankara, Bartın, Karabük, Samsun, Kastamonu.
680	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVEL- OPMENT ADMINIS- TRATION OF TURKEY	CONSULTANCY SERVICES FOR CON- STRUCTION SUPERVISION OF 3380 HOUSING AND SOCIAL FACILITIES DURING CONSTRUCTION AND DEFECTS AND LIABILITY PERIODS		YOZGAT, KAYSERİ, KASTAMONU, ÇORUM, KONYA, BOLU, KIRŞEHİR	TURKEY	The project covers site supervision services during construction and defects and liability period. The total building area of the project is approximately 520.000 m <sup>2</sup> . The project also covers the construction supervision of road connections, infrastructural, environmental and landscaping works. The social facilities within the scope of this project are as follows; - One high school, - Three 24 classroomed primary schools, - Two commercial centers, - Mosque, Library and Fountain.
651	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVEL- OPMENT ADMINIS- TRATION OF TURKEY	CONSULTANCY SERVICES FOR CON- STRUCTION SUPERVISION OF 4669 HOUSING AND SOCIAL FACILITIES DURING CONSTRUCTION AND DEFECTS AND LIABILITY PERIODS		AFYON BALIKESİR Bİ- LECİK BURSA UŞAK ISPARTA KÜTAHYA YALOVA	TURKEY	The project covers site supervision services during construction and defects and liability period. The total building area of the project is 726.449,77 m <sup>2</sup> . The project also covers the construction supervision of road connections, infrastructural, environmental and landscaping works. The social facilities within the scope of this project are as follows; - Bursa- 24 classroomed and 32 classroomed primary schools, two sport saloons, two mosques and two commercial centers, - Afyon-Kindergarten, commercial center, fountain and mosque - Uşak- Primary School, commercial center, fountain, mosque and cafeteria.
595	CEVREGOL PARLAMENT HOUSING COOPERA- TIVE	CEVREGOL PARLAMENT HOUSING COOPERATIVE (TOTAL 194 VILLASCON- STRUCTION)	EKON A.S.	ANKARA	TURKEY	The project covers basic design and detail design services in infrastructure discipline and construction management and site supervision services within two areas of 200.000 m <sup>2</sup> .
571	REPUBLIC OF TURKEY PRIME MINISTRY PROJECT IMPLEMEN- TATION UNIT	MARMARA EARTHQUAKE INFRASTRUC- TURAL AND URBAN RECONSTRUCTION PROJECT (TERRA-1) SMALL BUSINESS- ES CENTER ENGINEERING DESIGN AND CONSULTANCY SERVICES		ADAPAZARI DUZCE BOLU	TURKEY	The project covers multi discipline basic and detail design services and site supervision services for 31 small business facility having approximately 200.000 m <sup>2</sup> area.

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
566	EKON INDUSTRY CONSTRUC- TION TRADE INC.	BILKENT BUILDINGS ENGINEERING SERVICES	EKON A.S.	BILKENT ANKARA	TURKEY	The project covers basic design and detail design services in reinforced concrete and steel disciplines.
552	TEAS GENER- AL DIREC- TORATE	YALOVA TRANSFORMER STATION DISMANTLING OF EARTHQUAKE DAM- AGED HOUSING BUILDING AND NEW STEEL HOUSING BUILDING (1X6 APTS) ENGINEERING SERVICES	EKON A.S.	TEAS THER- MAL POWER YALOVA	TURKEY	The project covers basic design and detail design services in reinforced concrete, steel and mechanical equipment disciplines.
547	CEVREGOL PARLAMENT HOUSING COOPERA- TIVE	PARLAMENT HOUSING COOPERATIVE (205 VILLAS)	EKON A.S.	INCEK ANKARA	TURKEY	The project covers infrastructural basic design services.
539	REPUBLIC OF TURKEY MINISTRY OF PUBLIC WORKS	MARMARA REGION 2.nd GROUP SAKARYA CENTER EARTHQUAKE BUILDINGS (6.000 HOUSES + 1.500 SMALL BUSINESS) PROJECT	REPUBLIC OF TURKEY MINISTRY OF PUBLIC WORKS	SAKARYA CENTER/ KARAMAN FERIZLI	TURKEY	The project covers multi discipline basic and detail design services and site supervision services during construction period. Consultancy services have included reconstruction programme of 6000 houses and 1500 work places in Sakarya-Centrum. The total construction area of housings, social facilities, infrastructure and landscaping is 700.000 m <sup>2</sup> .
507	ARIF TANSI	TANSI VILLA	DINO ARCHI- TECTURE	INCEK ANKARA	TURKEY	The project covers multi discipline basic and detail design services and construction management and site supervision services during construction period.
479	DOGAYAKA HOUSING COOPERA- TIVE	DESIGN SERVICES FOR 32 VILLAS	DOGAYAKA HOUSING CO- OPERATIVE	ORHANGAZI BURSA	TURKEY	The project covers multi discipline basic and detail design services and site supervision services during construction period.

# nstruction



## Education



## ATATURK DORMITORY CAMPUS AND 40 SCHOOLS (EIB-CB1.5/A)

#### İstanbul, TURKEY

## Client:

ISTANBUL SPECIAL PROVINCIAL ADMINISTRATION ISTANBUL PROJECT COORDINATION UNIT - WORLD BANK In response to this risk, the Government of Turkey (GOT), with the assistance of the International Bank of Reconstruction and Development (IBRD), has identified a project called Istanbul Seismic Risk Mitigation and Emergency Preparedness Project (ISMEP) which is financed by a World Bank Loan (4784 TU). The project is implemented by Istanbul Project Coordination Unit which is established under the Istanbul Special Provincial Administration (ISPA).

The specific objective of the project is to improve the preparedness of İstanbul for a potential earthquake through enhancing the Institutional and Technical Capacity for Disaster Management and Emergency Response, Strengthening Critical Public Facilities for Earthquake Resistance, and Supporting Measures for better enforcement of building codes and land use plans.

Within the scope of Consultancy Services for Design Services, PROKON provided Design and Tender Documents Preparation of 44 schools (approximately 315.000 m<sup>2</sup> area), Atatürk Dormitory Campus (approximately 109.990 m2 area), Disaster Logistic Center (approximately 13.000 m<sup>2</sup>) and 2 District Governorship Buildings (approximately 26.000 m2 area).

Within the scope of Consultancy Services for Design Services, PROKON provided Consultancy and Construction Supervision of 45 School Buildings (322.420 m<sup>2</sup>), Atatürk Dormitory Campus (109.990 m<sup>2</sup>), Additional Service Building of Süleymaniye Maternity and Gynecology Training and Research Hospital (8.158 m<sup>2</sup>), 1 Nursery House (4.546 m<sup>2</sup>), 1 Social Center (1.700 m<sup>2</sup>) and 1 District Governorship Building (9.817m<sup>2</sup>) during the Construction Stage and Defects Liability Period.

PROKON provided the following services under the scope of this project:

- Engineering and Design Services
- Preparation of Tender Documents related with the Construction Contract in accordance with International Financial Institutions (IFI's) such as the World Bank (IBRD), Islamic Development Bank (IDB), European Investment Bank (EIB), Council of Europe Development Bank (CEB) etc. Guidelines and Standard Bidding documents.
- Construction Supervision Services





## RECONSTRUCTION PROJECT FOR SELECTED SCHOOLS IN ISTANBUL (CB 1.4/B)

İstanbul, TURKEY

#### Client: ISTANBUL PROJECT COORDINATION UNIT

Within the framework of this project, Consultancy Services cover the Design of 32 schools (154.000 m<sup>2</sup>) and Construction Supervision of 33 School Buildings to be reconstructed.

#### PROKON provided the following services under the scope of this project:

#### **Engineering and Design Services**

- Structural
- Architectural
- Mechanical Works (HVAC, Fire System, Plumbing, Piping etc.)
- Electrical Works (Power, Lighting, Grounding, Telephone, Data Lines, Fire Alarm System, Automation etc.)

Preparation of Tender Documents related with the Construction Contract in accordance with International Financial Institutions (IFI's) such as the World Bank (IBRD), Islamic Development Bank (IDB), European Investment Bank (EIB), Council of Europe Development Bank (CEB) etc. Guidelines and Standard Bidding Documents

Tender Document includes the Conditions of Contract, Form of Bid, Technical Specifications, Bill of Quantities (BOQ's), Final Designs, System/Detailed Drawings and etc.

#### **Supervision Services**

- Demolition Supervision Services
- Construction Supervision Services (Planning, Activity Tracing, Cost Control, Quality Control, Design Control and Interior Furnishing Plan Preparation, Coordination, Reporting)



#### PROKON provided the following services under the scope of this project:

## **Design & Engineering Services**

- Preparation of Preliminary & Final Drawings.
- Geologic & Geotechnical Studies (Boring, Laboratory Experiments & Preparation of Technical Reports)
- Mapping Works

#### **Tender File Preparation**

Tender File Preparation & Technical Contribution to Administration about Cost Estimating & Quantity Surveying

#### Site Supervision Services

 Construction Supervision (Planning, Activity Tracing, Cost Control, Quality Control, Design Control & Interior Furnishing Plan Preparation, Coordination, Reporting)



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## PHYSICAL CONTRIBUTION TO EDUCATION PROJECT, (EFIKAP 2), 1<sup>ST</sup>, 2<sup>ND</sup>, 3<sup>RD</sup>, 4<sup>TH</sup> GROUP EDUCATION INSTITUTIONS

Various Cities, TURKEY

Client: TR MINISTRY OF NATIONAL EDUCATION

The origin of the project was started with signing the protocol of Physical Contribution to Education Project between Republic of Turkey Ministry of National Education and Istanbul Stock Exchange (ISE). The overall project is divided into 5 groups composing of different education institutions with different characteristics. The education institutions are composed of Elementary Schools, General High Schools, Multipurpose High Schools, Anatolian Teacher High School, Fine Arts High School, Industrial Profession High Schools and Apprenticeship School, etc.

## 1<sup>st</sup> Group Education Institutions:

Project covers Construction Supervision of 1<sup>st</sup> Group Education Institutions composing of 28 projects in 14 different cities. Total construction area: 227.000 m<sup>2</sup>.

## 2<sup>nd</sup> Group Education Institutions:

Construction Supervision of 2<sup>nd</sup> Group Education Institutions composing of 23 projects in 16 different cities. Total construction area: 201.000 m<sup>2</sup>.

## 3<sup>rd</sup> Group Education Institutions:

Construction Supervision of 3<sup>rd</sup> Group Education Institutions composing of 28 projects in 13 different cities. Total construction area: 197.000 m<sup>2</sup>.

## 4<sup>th</sup> Group Education Institutions:

Construction Supervision of 4<sup>th</sup> Group Education Institutions composing of 25 projects in 20 different cities. Total construction area: 181.000 m<sup>2</sup>.

The project covers 4 groups, 63 cities, 104 different projects with 806.000 m<sup>2</sup> total construction area.







## HEALTH, EDUCATION, YOUTH SPORT, REAL ESTATE INVESTMENTS IN ANKARA

## Ankara, TURKEY



Client: ANKARA SPECIAL PROVINCIAL ADMINISTRATION

The project covers Design and Construction Supervision of Health Centers, Educational Buildings, Youth sport Centers and Real Estate Investments that are to be constructed in the center and counties of Ankara.

Under the scope of this project, Design and Construction Supervision of 24 Educational Buildings (Primary School, High School, Engineering College, etc.) and 18 Health Centers were completed.

Total Construction area of the project is approximately 127.000 m<sup>2</sup>.

## PROKON provided the following services under the scope of this project

## **Design & Engineering Services**

- Preparing of Preliminary & Final Drawings.
- Geologic & Geotechnical Studies (Boring, Laboratory Experiments & Preparation of Technical Reports)
- Mapping Works

### **Tender File Preparation**

Tender File Preparation & Technical Contribution to Administration about Cost Estimating & Quantity Surveying

### Site Supervision Services

 Construction Supervision (Planning, Activity Tracing, Cost Control, Quality Control, Design Control & Interior Furnishing Plan Preparation, Coordination, Reporting)







## EALTH, EDUCATION, YOUTH SPORT, REAL ESTATE INVESTMENTS IN ANKARA

## Ankara, TURKEY

Client: ANKARA SPECIAL PROVINCIAL ADMINISTRATION





The project covers Design and Construction Supervision of Health Centers, Educational Buildings, Youth Sport Centers and Real Estate Investments that are to be constructed in the center and counties of Ankara.

Under the scope of this project, design of 33 Educational Buildings (Primary School, High School, Engineering College, etc.) and 4 Health Centers were completed.

Total Construction area of the project is approximately 149.950 m<sup>2</sup>.

PROKON provided the following services under the scope of this project:

### **Design & Engineering Services**

- Preparation of Preliminary & Final Drawings.
- Geologic & Geotechnical Studies (Boring, Laboratory Experiments & Preparation of Technical Reports)
- Mapping Works

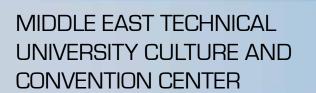
## **Tender File Preparation**

Tender File Preparation & Technical Contribution to Administration about Cost Estimating & Quantity Surveying

### Site Supervision Services

 Construction Supervision (Planning, Activity Tracing, Cost Control, Quality Control, Design Control & Interior Furnishing Plan Preparation, Coordination, Reporting)





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Ankara, Turkey

Client: MIDDLE EAST TECHNICAL UNIVERSITY PROKON provided Architectural, Reinforced Concrete, Steel Structure, Mechanical Equipment, Mechanical Installation, Electrical Installation Engineering Services for The Culture and Convention Center Project of METU.

The Culture and Convention Center of METU, which encompasses the most recent technological facilities, is designed to host local and international conventions, seminars, meetings, conferences, concerts, other cultural activities and related services. The center consists of nine halls, two foyers, a restaurant, support and service units and benefits from the rich facilities and resources of the METU campus.



## education references

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
800	REPUBLIC OF TURKEY ISTAN- BUL SPECIAL PROVINCIAL ADMINISTRA- TION ISTANBUL PROJECT CO- ORDINATION UNIT (IPCU)	45 SCHOOLS IN ISTANBUL (ISDB-CB1.5)	REPUBLIC OF TURKEY ISTAN- BUL SPECIAL PROVINCIAL ADMINISTRA- TION ISTANBUL PROJECT COORDINATION UNIT (IPCU)		TURKEY	The project covers multi discipline basic and detail design services and site supervi- sion services.
788	TURKIYE SISE VE CAM FABRI- KALARI A.S	PROJECT PREPARATION OF INDUSTRIAL VOCATIONAL HIGH SCHOOL OF SISE VE CAM A.S IN MERSIN (24 CLASSROOMS)	TURKIYE SISE VE CAM FABRI- KALARI A.S	MERSIN	TURKEY	The project covers multi discipline basic and detail design services.
772	ISTANBUL MET- ROPOLITAN MUNICIPALITY		ISTANBUL METROPOLITAN MUNICIPALITY	ISTANBUL	TURKEY	The project covers multi discipline basic and detail design services.
742	REPUBLIC OF TURKEY ISTAN- BUL SPECIAL PROVINCIAL ADMINISTRA- TION ISTANBUL PROJECT CO- ORDINATION UNIT - WORLD BANK	OF ATATURK DORMITORY CAMPUS AND 40 SCHOOLS IN ISTANBUL (EIB-CB1.5/A)	REPUBLIC OF TURKEY ISTAN- BUL SPECIAL PROVINCIAL ADMINISTRA- TION ISTANBUL PROJECT COORDINATION	ISTANBUL	TURKEY	The project covers multi discipline basic and detail design services and site supervi- sion services. The consultancy services within the frame of this project include the design and construction supervision of 40 schools (approximately 275.000 m <sup>2</sup> area) and Atatürk Dormitory Campus having approximately 110.000 m2 area.
737	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION INVESTMENTS AND FACILITIES DEPARTMENT	CONSULTANCY SERVICES FOR CONSTRUC- TION SUPERVISION OF EDUCATIONAL BUILDINGS IN EAST ANATOLIA AND SOUTH EAST ANATOLIA PROVINCES	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION INVESTMENTS AND FACILITIES DEPARTMENT	EAST ANATOLIA AND SOUTH- EAST ANATLIA PROVINCES (35 CITIES)	TURKEY	The project covers consultancy services for construction supervision of educational buildings.
729	ANKARA SPECIAL PROVINCAL ADMINISTRA- TION DIREC- TORATE OF DEVELOPMENT AND HOUSING	CONSULTANCY SERVICES FOR DESIGN AND CONSTRUCTION SUPERVISION OF HEALTH, EDUCATION, YOUTH SPORT, REAL ESTATE INVESTMENTS TO BE CONSTRUCTED IN THE CENTRAL AND COUNTIES OF ANKARA, 2008	ANKARA SPECIAL PROVINCAL AD- MINISTRATION DIRECTORATE OF DEVELOP- MENT AND HOUSING	THE CENTER & COUNTRIES OF ANKARA	TURKEY	The project covers multi discipline basic and detail design services and site supervi- sion services. Under the scope of this project, design and construction supervision of 33 Educa- tional Buildings (Primary School, High School, Engineering College, etc.) and 4 Health Centers have been completed. Total Construction area of the project is approximately 149.950 m <sup>2</sup> .
726	REPUBLIC OF TURKEY ISTAN- BUL SPECIAL PROVINCIAL ADMINISTRA- TION ISTANBUL PROJECT CO- ORDINATION UNIT - WORLD BANK	CONSULTANCY SERVICES FOR DESIGN AND CONSTRUCTION SUPERVISION OF 33 SCHOOLS IN ISTANBUL (CB1.4/B)	REPUBLIC OF TURKEY ISTAN- BUL SPECIAL PROVINCIAL ADMINISTRA- TION ISTANBUL PROJECT COORDINATION UNIT - WORLD BANK	İSTANBUL	TURKEY	The project covers basic and detail design and construction managemet and site supervision services during construction period. Within the framework of this project, this consultancy services cover the design of 32 schools (167.000 m <sup>2</sup> ) and construction supervision of 33 school buildings (163.000 m <sup>2</sup> ) to be reconstructed.
706	REPUBLIC OF TURKEY ISTAN- BUL SPECIAL PROVINCIAL ADMINISTRA- TION ISTANBUL PROJECT CO- ORDINATION UNIT - WORLD BANK	SUPERVISION OF SELECTED HIGH PRIORITY 13 SCHOOL BUILDINGS IN ISTANBUL TO BE RECONSTRUCTED (CB-1.4/A)	REPUBLIC OF TURKEY ISTAN- BUL SPECIAL PROVINCIAL ADMINISTRA- TION ISTANBUL PROJECT COORDINATION WORLD BANK	ISTANBUL	TURKEY	The project covers multi discipline basic and detail design services and site supervi- sion services. Within the framework of this project, this consultancy services cover the design/ design review of 14 high priority school buildings having an area of approximately 85.000 m <sup>2</sup> and and construction supervision of 11 schools having 69.000 m <sup>2</sup> closed area.
701	ANKARA SPECIAL PROVINCAL ADMINISTRA- TION DIREC- TORATE OF DEVELOPMENT AND HOUSING	CONSULTANCY SERVICES FOR DESIGN AND CONSTRUCTION SUPERVISION OF HEALTH, EDUCATION, YOUTH SPORT, REAL ESTATE INVESTMENTS TO BE CONSTRUCTED IN THE CENTRAL AND COUNTIES OF ANKARA, 2007	DIRECTORATE OF DEVELOP- MENT AND HOUSING	THE CENTER & COUNTRIES OF ANKARA		The project covers design and construction supervision of health centers, educational buildings; youth sport centers and real estate investments that are to be constructed in the center and counties of Ankara. Under the scope of this project, design and construction supervision of 24 Education- al Buildings (Primary School, High School, Engineering College, etc) and 18 Health Centers were completed. Total Construction area of the project is approximately 127.000 m <sup>2</sup> .
691	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION INVESTMENTS AND FACILITIES DEPARTMENT	CONSULTANCY SERVICES FOR DESIGN AND SUPERVISION OF RETROFITTING WORKS OF 32 SCHOOL BUILDINGS AND ALSO FACILI- TIES IN THE 4TH GROUP PROVINCES	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION INVESTMENTS AND FACILITIES DEPARTMENT	4.rd GROUP PROVINCES AN- TALYA, AYDIN, BURDUR, DEN- IZLI, ISPARTA, KONYA, MUGLA		The project covers multi discipline basic and detail design services and site supervi- sion services during construction period.

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
690	NATIONAL EDUCATION INVESTMENTS AND FACILITIES DEPARTMENT	CONSULTANCY SERVICES FOR DESIGN AND SUPERVISION OF RETROFITTING WORKS OF 23 SCHOOL BUILDINGS AND ALSO FACILI- TIES IN THE 3RD GROUP PROVINCES	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION INVESTMENTS AND FACILITIES DEPARTMENT	3.GROUP PROVINCE- SAFYON, IZMIR, KUTAHYA, MANISA, USAK	TURKEY	The project covers multi discipline basic and detail design services and site supervi- sion services during construction period.
689	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION	CONSULTANCY SERVICES FOR PHYSICAL CONTRIBUTION TO EDUCATION PROJECT (EFIKAP) IN ERZURUM	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION	ERZURUM	TURKEY	The project covers multi discipline basic and detail design services and site supervi- sion services during construction period.
664	TURK TELECOM	TURK TELECOM SCHOOLS ENGINEERING SERVICES	TURK TELECOM	ANKARA	TURKEY	The project covers multi discipline basic design services.
661	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION	CONSULTANCY SERVICES FOR DESIGN OF RETROFITTING OF 6 SCHOOLS	USAK NATION- AL EDUCATION DIRECTORATE	USAK	TURKEY	The project covers detail design services in reinforced concrete discipline. The project was completed in three stages; - Investigation, analysis, laboratory testing and reporting of the existing schools, having a total area of 40.000 m <sup>2</sup> . - Preparation of retrofitting designs according to the approved reports and prepara- tion of quantity surveys, cost estimations and technical specifications. - Technical consultancy services during the retrofitting works.
660		EDUCATION, CONGRESS, ARCHIVES AND SOCIAL COMPLEX DESIGN SERVICES	TURKISH REPUBLIC CEN- TRAL BANK	ANKARA	TURKEY	The project covers multi discipline detail design services and preparation of tender files of the social complex.
637		PRIMARY SCHOOL (32 CLASSROOMS) CONSTRUCTION SUPERVISION SERVICES	MEHMET ZORLU FOUN- DATION	SERDIVAN SAKARYA	TURKEY	The project covers construction management and site supervision services during construction period.
635	ISDEMIR ISKENDERUN DEMIR VE CELIK FABRI- KALARI A.S.	ISDEMIR SPORTS STADIUM IMPROVEMENT	ISDEMIR IRON AND STEEL PLANT	ISKENDERUN	TURKEY	The project covers multi discipline detail design services. A stadium having a capacity of 10.000 spectators with dimensions of 66,02 m x 18 m x 14,7 m, and a steel roof is designed in the scope of the modernization of ISDEMIR Stadium
622	REPUBLIC OF TURKEY MINISTRY OF	CONSULTANCY SERVICES FOR THE SECOND- ARY EDUCATION PROJECT (EFIKAP 2) IN 4th GROUP CITIES (181.000m <sup>2</sup> )	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION	4th GROUP CIT- IES (BLACKSEA REGION)	TURKEY	The project covers multi discipline basic and detail design services and site supervi- sion services during construction period. 4th Group Education Institutions are composed of 25 projects in 20 different cities. Total construction area: 181.000 m <sup>2</sup> .
621	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION	CONSULTANCY SERVICES FOR THE SECOND- ARY EDUCATION PROJECT (EFIKAP 2) IN 3rd GROUP CITIES (197.000m <sup>2</sup> )	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION	3rd GROUP CITIES (INNER ANATOLIA AND SOUTH EAST ANATOLIA REGIONS)	TURKEY	The project covers multi discipline basic and detail design services and construction management and site supervision services during construction period. 3rd Group Education Institutions are composed of 28 projects in 13 different cities. Total construction area: 197.000 m <sup>2</sup> .
620	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION	CONSULTANCY SERVICES FOR THE SECOND- ARY EDUCATION PROJECT (EFIKAP 2) IN 2nd GROUP CITIES (201.000m2)	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION	2nd GROUP CITIES (INNER ANATOLIA AND AEGEAN REGION)	TURKEY	The project covers multi discipline basic and detail design services and construction management and site supervision services during construction period. 2nd Group Education Institutions are composed of 23 projects in 16 different cities. Total construction area: 201.000 m <sup>2</sup> .
619	MINISTRY OF	CONSULTANCY SERVICES FOR THE SECOND- ARY EDUCATION PROJECT (EFIKAP 2) IN 1st GROUP CITIES (227.000m <sup>2</sup> )		1st GROUP CITIES (MAR- MARA REGION)	TURKEY	The project covers multi discipline basic and detail design services and construction management and site supervision services during construction period. 1st Group Education Institutions are composed of 28 projects in 14 different cities. Total construction area: 227.000 m <sup>2</sup> .
588	GOKKUSAGI EGITIM OGRE- TIM A.S.	USAK UFTADE HIGH SCHOOL CAMPUS (20000m2) PROJECT	UFTADE COLLEGE	UŞAK	TURKEY	The project covers multi discipline basic design and detail design services.
544		ERDEMIR SPORT HALL EXTENSION PROJECT	EKON A.S.	KARADENIZ EREGLI	TURKEY	The project covers basic and detail design services.
542	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION	(66 SCHOOLS 400,000M2) DESIGN AND CONSTRUCTION SUPERVISION SERVICES	REPUBLIC OF TURKEY MINISTRY OF NATIONAL EDUCATION	4th.GROUP CITIES NORTH ANATOLIA REGION	TURKEY	The project covers multi discipline basic and detail design services and site supervi- sion services for 77 schools having 438.000 m2 area.
535	DILER HOLD- ING INC.	TION AND RECREATION FACILITIES	DILER HOLDING INC.		TURKEY	The project covers multi discipline basic design and detail design services.
498	CENTRAL BANK OF		MIDDLE EAST TECHNICAL UNIVERSITY	Çayyolu Ankara	TURKEY	The project covers multi discipline basic and detail design services and site super- vision services for educational and congress hall, guest houses, sports facilities and restaurants having total area of 34.227 m <sup>2</sup> .
456	MENSEL	ASKAABAT MOUNTAIN STADIUM	MENSEL	ASKAABAT	TURKMENI- STAN	The project covers basic and detail design services in architectural and steel disciplines.
351	MIDDLE EAST TECHNICAL UNIVERSITY	METU CULTURE CENTER	MIDDLE EAST TECHNICAL UNIVERSITY	ANKARA	TURKEY	The project covers multi discipline basic design and detail design services for the culture center having 9500 m <sup>2</sup> closed area.



# Health



## ÜMRANİYE PEDIATRIC AND MATERNITY HOSPITAL

### İstanbul, TURKEY

Client: ISTANBUL PROJECT COORDINATION UNIT





The contract covers the Consultancy Services for Design and Construction/ Furnishing Supervision of 347 Bed Ümraniye Pediatric and Maternity Hospital (98.115 m<sup>2</sup>), Design of Pendik Vali Cahit Bayar District Polyclinic (Mehmet Oğuz District Polyclinic, 14.939 m<sup>2</sup>) and Design/Design Review of Küçükyalı Nursery (Typical Design, 4.654 m<sup>2</sup>) and Kocamustafapaşa Social Center (1857 m<sup>2</sup>).

This will also lead to the Preparation Works of Bidding Documents for Construction Activities of 347 Bed Ümraniye Pediatric and Maternity Hospital, Pendik Vali Cahit Bayar District Polyclinic (Mehmet Oğuz District Polyclinic), Küçükyalı Nursery (typical design) and Kocamustafapaşa Social Center and Preparation of Bidding Documents for the procurement of goods to furnish/equip Koşuyolu Pediatric Hospital in Istanbul.

Supervision Services during the Implementation of Works and Supplies Contracts will also be provided thus ensuring the high quality of the works to be undertaken for Ümraniye Pediatrics and Maternity Hospital in Istanbul.

## PROKON provided the following services under the scope of this project:

- Engineering & Design Services
- Preparation of Tender Document related with the Construction Contract in accordance with the World Bank (IBRD) Guidelines & Standard Bidding documents.
- Supervision Services





## SSK MATERNITY AND PEDIATRICS HOSPITAL AND OUTPATIENT CLINIC

İzmit, TURKEY

Following the severe earthquakes that occurred in the Marmara Region on August 17<sup>th</sup> and November 12<sup>th</sup>, 1999, the Government of Turkey (GOT) with the assistance of the European Investment Bank (EIB) has identified an Emergency Reconstruction Program in the affected areas. This is entitled the Turkey Infrastructure and Urban Reconstruction Project (TERRA-1) which includes the provision of a new İzmit SSK Maternity and Pediatrics Hospital and Outpatient Clinic.

İzmit, Ministry of Health, Maternity & Pediatrics Hospital consists of 200 beds, having an area of approximately 29.450 m<sup>2</sup> and Central Polyclinic has an area of 8.375 m<sup>2</sup>.

The total construction area is approximately 37.825 m<sup>2</sup>.

### PROKON provided the following services under the scope of this project:

### Preparation of Design & Tender Documents

- Preliminary Design & Medical Equipment Draft List & Room Settlement Plans Preparation.
- Construction & Detail Drawings & Contractor Contract Documents Preparation
- Preparation of Technical Specifications & Purchase Tender Documents of Medical Equipment, Medical Equipment Final List & Room Equipment Settlement Plans.
- Preparation of Final Furniture List, Room Settlement Plan, Technical Specification & Purchase Tender Documents of Furniture.
- Evaluation of Civil & Medical Equipment Contractor Contract
- Evaluation of Contractor Tenders & Signing of the Contract (Furniture)

### **Construction Supervision**

- Construction Supervision
- Medical Equipment Supervision
- Furniture Supervision
- Defects Liability Period







## KARTAL LUTFI KIRDAR HOSPITAL IN ISTANBUL (EIB-CB1.7)

## İstanbul, TURKEY

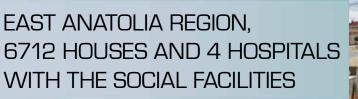
Client: İSTANBUL PROJECT COORDINATION UNIT The contract was signed between PROKON and İstanbul Project Coordination Unit for the consultancy services for construction supervision of Kartal Lütfi Kırdar Hospital that will be reconstructed under the scope of ISMEP (Istanbul Seismic Risk Mitigation ad Emergency Preparedness Project) on 7<sup>th</sup> of September, 2012.

The consultancy services cover the design review and construction supervision of the hospital and polyclinics.

İstanbul Kartal Lütfi Kırdar Hospital Campus has the capacity of 920 beds in 250.000 m<sup>2</sup> built-up area (2B+G+12 Floor) of which 53.000 m<sup>2</sup> is underground parking area.









Client: REPUBLIC OF TURKEY, HOUSING DEVELOPMENT ADMINISTRATION OF TURKEY T.R. Housing Development Administration of Turkey has decided the Construction of Houses, Hospitals and Social Facilities in order to satisfy the necessity in East Anatolia Region.

The Project covers 12 different cities: Ağrı, Ardahan, Bingöl, Elazığ, Erzincan, Erzurum, Hakkâri, Kars, Malatya, Muş, Tunceli, and Van.

The hospitals in the scope of the project are as follows:

- Ardahan State Hospital (150 Bed Capacity)
- Bingöl, Genç State Hospital (50 Bed Capacity) & public housing
- Kars, Sarıkamış State Hospital (50 Bed Capacity)
- Tunceli State Hospital (150 Bed Capacity)



## The services provided by PROKON under the scope of the contract, that was signed in June 2009, are listed below:

- Site Supervision Services
- Planning, Activity Monitoring & Control
  - Contract Management
- Coordination & Management Services
- Cost Control

- Quality Control
- Reporting
- Certificate of Occupancy Monitoring
- Provisional and Final Acceptances

## EAST ANATOLIA REGION AND EAST BLACK SEA REGION, **4614 HOUSES AND 8 HOSPITALS WITH THE SOCIAL FACILITIES**

## 17 Different Cities, TURKEY

Client: REPUBLIC OF TURKEY, HOUSING DEVELOPMENT ADMINISTRATION OF TURKEY

T.R. Housing Development Administration of Turkey has decided the Construction of Houses, Hospitals and Social Facilities in order to satisfy the necessity in East Anatolia Region and East Black Sea Region.

The Project covers 17 different cities: Ağrı, Ardahan, Artvin, Batman, Bingöl, Bitlis, Diyarbakır, Elazığ, Erzincan, Erzurum, Gümüşhane, Malatya, Mardin, Muş, Ordu, Rize and Van.

## The services provided by PROKON in the scope of the contract, that was signed in July 2010, are listed below:

### Site Supervision Services

- Planning, Activity Monitoring & Control
- Contract Management
- Coordination & Management Services
- Cost Control
- Quality Control
- Reporting
- Certificate of Occupancy Monitoring
- Provisional & Final Acceptances

### The hospitals in the scope of the project are as follows:

- Ağrı Diyadin State Hospital (50 Beds Capacity) & Mass Housing
- Bingöl Hospital (200 Beds Capacity)
- Divarbakır Bismil Hospital (100 Beds Capacity)
- Diyarbakır Bismil County, Tepe Town Hospital (18 Beds Capacity)
- Erzincan Tercan Hospital (50 Beds Capacity) & Mass Housina
- Gümüşhane Torul Hospital (10 Beds Capacity)
- Malatya Hospital (640 Beds Capacity)
- Muş State Hospital (300 Beds, 400 Patients Capacity)







## TR MINISTRY OF HEALTH FIRST HEALTH PROJECT

Ankara, Diyarbakır, İstanbul, Mardin, Muğla, Sivas, Yozgat, TURKEY

Client: UNDP/OPS & TR MINISTRY OF HEALTH

Regarding the agreement between the United Nations (UNDP/OPS) and TR Ministry of Health, following projects were performed. The projects were financed by the World Bank. The following health structures were designed and constructed under Supervision of PROKON.

- Ankara-Polatlı 150 bed capacity State Hospital 11000 m<sup>2</sup>
- Ankara-Haymana 50 bed capacity State Hospital 8500 m<sup>2</sup>
- Muğla Milas 100 bed capacity State Hospital 10000 m<sup>2</sup> Muğla-Fethiye
  - 200 bed capacity State Hospital 14000 m<sup>2</sup>
- In 7 different cities (Diyarbakır, Mardin, Yozgat, Sivas, Ankara, İstanbul, Muğla), 38 Health Center



## ERZÍNCAN EARTHQUAKE REHABILITATION AND RECONSTRUCTION PROJECT

## Erzincan, TURKEY

Client: TR PRIME MINISTRY HOUSING DEVELOPMENT ADMINISTRATION ERZINCAN EARTHQUAKE REHABILITATION AND RECONSTRUCTION PROJECT, PROJECT IMPLEMENTATION UNIT Within the scope of Erzincan Earthquake Rehabilitation and Reconstruction Project, the Hospitals listed below were reconstructed instead of the Social Security (SSK), State & Military Hospitals which had collapsed due to severe Earthquake occurred on March 13<sup>th</sup>, 1992.

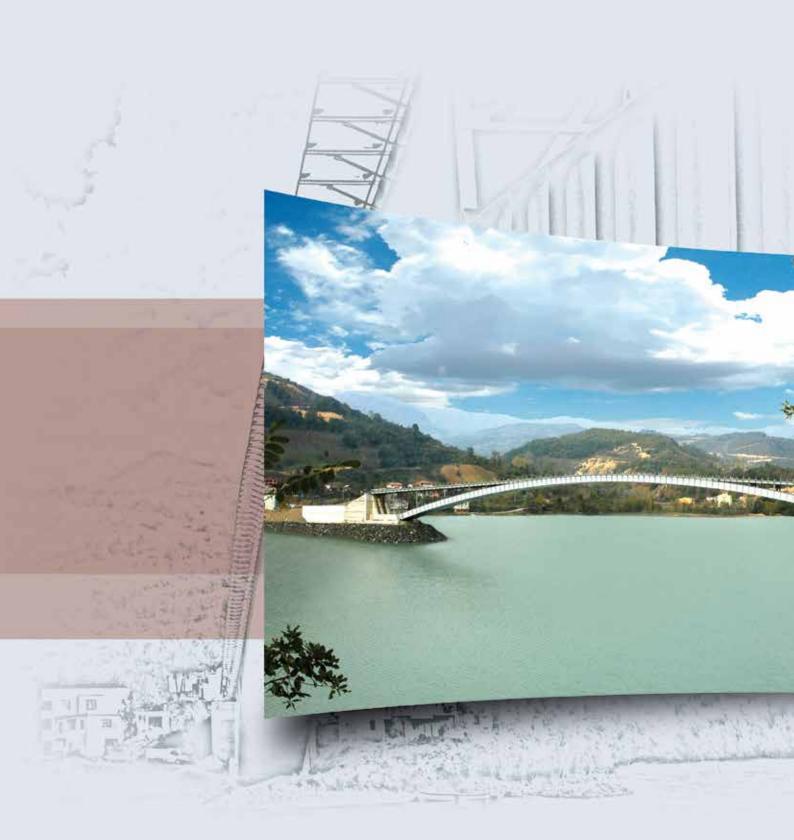
- 100 Bed capacity, SSK Hospital & Nursing Hostel (60 bed cap.) 9077 m<sup>2</sup>
- 150 Bed capacity, State Hospital & Nursing Hostel (30 bed cap.) 10179 m<sup>2</sup>
- 100 Bed capacity, Military Hospital & Heating Center 8735 m<sup>2</sup>

PROKON provided Design, Engineering, Tender File Preparation and Site Supervision Services of all hospital projects.



## health references

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
783	REPUBLIC OF TUR- KEY PRIME MIN- ISTRY HOUSING DEVELOPMENT ADMINISTRATION OF TURKEY	1760 FLATS, 300 BEDS CAPACITY HOSPITAL AND SOCIAL FACILITIES IN ANKARA	TURKEY PRIME MINISTRY HOUSING DEVELOPMENT ADMINISTRATION OF TURKEY		TURKEY	Construction management, site supervision and technical support services are provided during the project.
777	REPUBLIC OF TURKEY ISTANBUL SPECIAL PROVIN- CIAL ADMINISTRA- TION ISTANBUL PROJECT COOR- DINATION UNIT (IPCU)	HOSPITAL IN ISTANBUL (250.000m2)	REPUBLIC OF TUR- KEY ISTANBUL SPE- CIAL PROVINCIAL ADMINISTRATION ISTANBUL PROJECT COORDINATION UNIT (IPCU)	KARTAL - ISTANBUL	TURKEY	Construction management, site supervision and technical support services are provided during the project.
751	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVELOPMENT ADMINISTRATION OF TURKEY	CONSULTANCY SERVICES FOR CONSTRUC- TION SUPERVISION OF 4614 FLATS, 7 HOSPITALS AND SOCIAL FACILITIES IN EAST ANATOLIA, EAST BLACKSEA ANATOLIA DURING CONSTRUCTION AND DEFECTS AND LIABILITY PERIODS	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVELOPMENT ADMINISTRATION OF TURKEY	EAST ANATOLIA AND EAST BLACKSEA PROVINCES (17 CITIES)	TURKEY	The project covers site supervision services during construction and defects and liability period. The facilities in the scope of this project are as follows: - 4614 houses in 17 different cities - Ağın Diyadin State Hospital (50 Beds Capacity) and mass housing - Bingöl Hospital (200 Beds Capacity) - Diyarbakır Bismil Hospital (100 Beds Capacity) - Diyarbakır Bismil County, Tepe Town Hospital (18 Beds Capacity) - Erzincan Tercan Hospital (50 Beds Capacity) and mass housing - Gümüşhane Torul Hospital (10 Beds Capacity) - Malatya Hospital (640 Beds Capacity) - Malatya Hospital (300 Beds, 400 patients capacity)
740	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVELOPMENT ADMINISTRATION OF TURKEY	CONSULTANCY SERVICES FOR CONSTRUC- TION SUPERVISION OF 6712 FLATS, 4 HOSPITALS AND SOCIAL FACILITIES IN EAST ANATOLIA DURING CONSTRUCTION AND DEFECTS AND LIABILITY PERIODS	REPUBLIC OF TURKEY PRIME MINISTRY HOUSING DEVELOPMENT ADMINISTRATION OF TURKEY	EAST ANATOLIA PROVINCES (12 CITIES)	TURKEY	The project covers site supervision services during construction and defects and liability period. The facilities in the scope of this project are as follows: - 6712 houses in 12 cities - Ardahan State Hospital (150 Bed Capacity) - Bingöl, Genç State Hospital (50 Bed Capacity) and public housing - Kars, Sarıkamış State Hospital (50 Bed Capacity) - Tunceli State Hospital (150 Bed Capacity)
736	REPUBLIC OF TURKEY ISTANBUL SPECIAL PROVIN- CIAL ADMINISTRA- TION ISTANBUL PROJECT COORDI- NATION UNIT - WORLD BANK	CONSULTANCY SERVICES FOR DESIGN AND CONSTRUCTION / FURNISHING SUPERVI- SION SERVICES OF ÜMRANİYE MATERNITY AND PEDIATRICS HOSPITAL (CB-1.4/C)	REPUBLIC OF TUR- KEY ISTANBUL SPE- CIAL PROVINCIAL ADMINISTRATION ISTANBUL PROJECT COORDINATION UNIT - WORLD BANK	ISTANBUL	TURKEY	The project covers the consultancy services in Design and Construction/ Furnishing Supervision of 327 Bed Ümraniye Pediatric and Maternity Hospi- tal(96.960 m²), Design of Pendik Vali Cahit Bayar District Polyclinic (Mehmet Oğuz District Polyclinic)(14.939 m²) and design/design review of Küçükyalı Nursery (typical design)(4.654 m²) and Kocamustafapaşa Social Center (1857 m²).
597	REPUBLIC OF TURKEY MINISTRY OF LABOR AND SOCIAL SECURITY TURKISH SOCIAL SECURITY INSTI- TUTION	TERRA-1 PROJECT IZMIT MATERNITY AND PEDIATRICS HOSPITAL AND OUTPATIENT CLINIC CONSULTANCY SERVICES FOR DESIGN AND CONSTRUCTION SUPERVISION	REPUBLIC OF TUR- KEY MINISTRY OF LABOR AND SOCIAL SECURITY TURKISH SOCIAL SECURITY INSTI- TUTION	IZMIT	TURKEY	Izmit, Ministry of Health, Maternity & Pediatrics Hospital consists of 200 bed and approximately it has an area of 29450 m <sup>2</sup> and central polyclinic has an area of 8375 m <sup>2</sup> . Total construction area: 37.825 m <sup>2</sup> . Services provided are described below: 1. Preparation of Design and Tender Documents 2. Construction Supervision
494	UNITED NATIONS	FIRST HEALTH PROJECT (4 HOSPITALS AND 38 HEALTH UNITS)	UNITED NATIONS DEVELOPMENT PROJECT	MUĞLA ANKARA İSTANBUL SİVAS TOKAT YOZGAT DİYARBAKIR MARDİN	TURKEY	Regarding the agreement between the United Nations (UNDP/OPS) and TR Ministry of Health, following projects were performed. The projects were financed by the World Bank. • Ankara-Polatlı 150 bed capacity State Hospital 11000 m2 • Ankara-Haymana 50 bed capacity State Hospital 8500 m2 • Muğla –Milas 100 bed capacity State Hospital 10000 m2 • Muğla-Fethiye 200 bed capacity State Hospital 14000 m2 • In 7different cities (Diyarbakır, Mardin, Yozgat, Sivas, Ankara, İstanbul, Muğla), 38 Health Center, were constructed. Prokon provided consultancy services, engineering and inspection services in the construction of the hospitals and health centers with respect to FIDIC rules.
369	REPUBLIC OF TURKEY PRIME MINISTRY PROJECT IMPLEMENTATION UNIT	ERZINCAN EARTHQUAKE REHABILITA- TION AND RECONSTRUCTION PROJECT, STATE(150 BEDS), MILITARY(100 BEDS) AND SOCIAL SECURITY HOSPITALS(100 BEDS) DESIGN, PREPARATION OF TENDER DOCU- MENTS AND CONSTRUCTION SUPERVISION SERVICES (WORLD BANK PROJECT)	REPUBLIC OF TURKEY PRIME MINISTRY PROJECT IMPLEMENTATION UNIT	ERZINCAN	TURKEY	Listed below the reconstructed Social Security (SSK), State & Military Hospitals which had collapsed due to severe Earthquake occurred on March 13, 1992. • 100 Bed capacity, SSK Hospital and Nursing Hostel (60 bed cap.) 9077 m2 • 150 Bed capacity, State Hospital and Nursing Hostel (30 bed cap.) 10179 m2 • 100 Bed capacity, Military Hospital and Heating Center 8735 m2 The project was financed by the World Bank. Medical equipment and furniture installation of all three hospitalswere provided. Services provided are described below: - Design and Engineering Services: - Tender File Preparation - Site Inspection Services



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## SAMSUN AYVACIK **EYNEL STEEL BRIDGE**

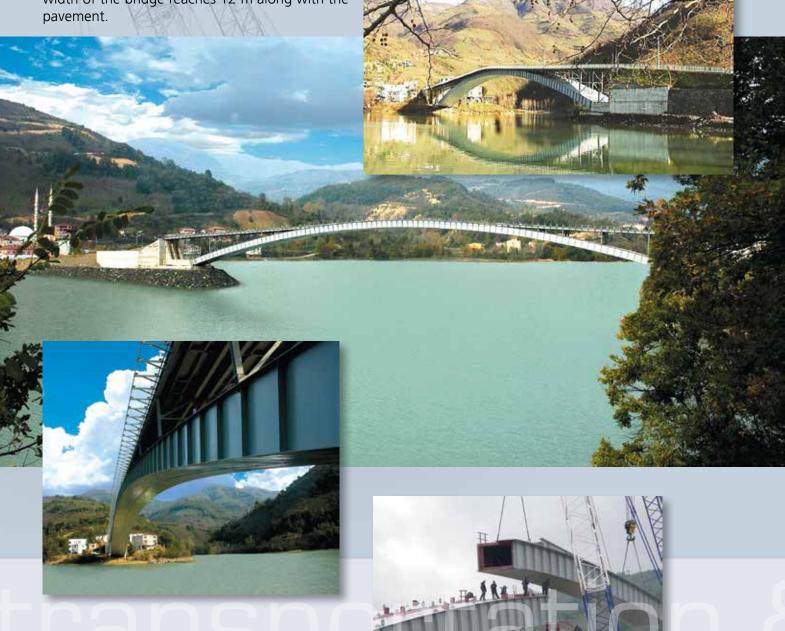
Samsun, TURKEY

Client: SAMSUN AYVACIK VILLAGE SERVICES UNION

In 2007, Samsun Special Provincial Administration, Samsun Ayvacık Village Services Union made a decision about a bridge over the dam lake in order to reach to the villages that the dam water separated. The Consultancy and Supervision Services of Ayvacık Eynel Steel Bridge was performed by PROKON after the signing of the contract in 04.05.2007.

Ayvacık Eynel Bridge is in the arch form of a reverse chain curve with a 216m opening. The arch was designed as a 3 division box section with dimensions of 8x2,4m and flat parts with 5% slope were formed by ST52 steel plates and profiles. All flat parts and parts that were exposed to vehicle loads on the bridge were made

by composite reinforced concrete plates. The width of the bridge reaches 12 m along with the





## AIRBUS A 380 HANGARS STEEL ROOF PROJECT

Dubai, UNITED ARAB EMIRATES

Client: TAV İNŞAAT, TURİZM, İŞLETME VE DANIŞMANLIK A.Ş. / DUBAI BRANCH

The Engineering Services of Airbus A 380 Hangar Project were provided by PROKON under the scope of the contract between TAV and Emirates Airlines. The project covers Basic and Detail Design of the steel roof for the Maintenance Hangars of the World's Largest Passenger Aircraft A 380, designed by Airbus. Each hangar has the approximate volume of 108m x 100m x 30m.

### The points makes the project different from other ordinary designs are

- Being composed of 7000 bar elements & 800 different load combinations,
- Mounting difficulties due to the extreme temperature differences in manufacture & erection sites,
- The use of HISTAR steel with very high strength.
- Thousands of loads, each calculated according to the 800 different load combinations,
- All nodes being "Slip Critical Friction Grip", Detailed Erection Engineering Service which may be the first in Turkey,
- Preparation of special video showing the practicability of erection works,
- Giving a reverse deflection to a truss having 108m opening (Mega Truss) & Preparation of the Shop Drawings accordingly, Preparation of Specific Engineering Calculations for the truss having four-story building height starting from pre-erection works to the Final Erection Stage,
- Extraordinary & specific solution of lifting & placement problems of an arch having 108 m opening (Facade Arch) which was complicated as a bridge itself,
- Considering the scenario of the cracking of the concrete over time which lies under the hangars,
- Transportation problems & occurring of difficult "brand" geometries due to the geometry of the structure,

Each Hangars, weighing approximately 1800 tons, (including the Erection Engineering) were performed by the COMOSYS software that was developed by PROYA Yazılım ve Ticaret A.Ş., a member of PROKON-EKON Group of Companies.





## ANKARA METRO PROJECT - 3RD STAGE

Ankara, TURKEY

Client: T.R. ANKARA METROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE

PROKON provided Engineering and Supervision Services for Ankara Metro 3<sup>rd</sup> Stage Project. This project connects 15,36 km long Batikent-Sincan Stations and 3,11 km long Kızılay-Söğütözü Stations. Double-Track Rail System is constructed together with 5 pieces Level Crossing, 2 pieces Viaduct, 2 pieces Buried and 3 pieces Deep Buried Stations. The route is built with different types of line structures; 6,84 km. long Cut & Cover Line, 1,63 km long Cutting, 1,82 km long Level Crossing, 0,62 km long Elevated, 4,12 km long Tunnel, 2,03 km long Viaduct and 1,68 km long Station Line. The tunnels were performed with Cut & Cover and TBM Tunneling System.



### Properties of the system is as follows:

- Distance Between Stations
- Average Speed
- Maximum Speed
- Daily Operation TimeQueue Interval
- : 18 hours

: 1255 m

: 40 km/hour

: 80 km/hour

- : 90 seconds
- Batıkent-Sincan Circulation Time : 22 minutes

Services within the scope of the project are listed below

Design Services Supervision Services





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## AȘTİ - ÇAYYOLU METRO PROJECT PHASE 1

Ankara, TURKEY

Client: T.R. ANKARA METROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE

PROKON provided engineering and supervision services for 1st Phase AŞTI-Çayyolu Metro Line Project.

Ankara Metro, 1<sup>st</sup> Phase AŞTI-Çayyolu Rail Transport System connects AŞTİ and Köy Hizmetleri Stations with a 5575 m long line and Köy Hizmetleri and Ümitköy Stations with 3815 m long line. The double-track railway line was constructed together with 7 underground stations. The lane was constructed in different type of track ways; 0,140 km long At-Grade line, 0,070 km long Cut Line, 5,955 km long Cut & Cover Line, 1,945 km long Tunnel, 1,28 km long 7 Station Lines. The tunnels have been constructed in Cut & Cover and TBM Tunneling Methods. The total closed area of 7 underground stations is 55.000 m<sup>2</sup>.

## Services within the scope of the project are listed below;

## **Design Services**

- Preparation of Updated Feasibility Report
- Preparation of Final Design of Track ways
- Coordination, Review & Approval of
  - Architectural & Landscaping,
  - Reinforced Concrete Bearing System
  - Mechanical Works (HVAC, Plumbing & Firefighting System)
  - Electrical Works (Power, Lighting, Grounding)

## **Construction Management**

- Contract Management
- Quality Control / Quality Assurance
- Cost Control , Management of Change Orders
- Planning & Program Control
- Occupational Health & Safety







## TANDOĞAN - KEÇİÖREN METRO PROJECT

Ankara, TURKEY

Client: T.R. ANKARA METROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE





PROKON provided Engineering and Construction Supervision Services for Ankara Tandoğan-Keçiören Metro Line Project.

Ankara Metro, Tandoğan-Keçiören Rail Transport System connects Tandoğan and Keçiören Stations with a 10,59 km long line. The double-track railway line has been constructed together with 9 underground stations. The lane was constructed in different type of track ways; 7,23 km long Tunnel, 0,684 km long Cut & Cover line, 1,26 km long Station Lines. The tunnels were constructed in Cut & Cover and TBM Tunneling Methods.

Services within the scope of the project are listed below;

### **Design Services**

- Revision of Metro Lines
  - Revision of Existing Travelling Estimations
  - Determination of Commissioning Scenarios for the Entire Project
  - Determination of Fleet According to the Travelling Estimation & Train Frequency
- Preparation of Tender Documents for Construction Works
- Project Coordination, Review & Approval
- Architectural & Landscaping,
- Reinforced Concrete Bearing System
- Mechanical Works (Heating, Ventilating, AC, Plumbing & Firefighting System)
- Electrical Works (Power, Lighting, Grounding)

### **Construction Management**

- Contract Management
- Quality Control / Quality Assurance
- Cost Control, Management of Change Orders
  - Planning & Program Control
  - Occupational Health & Safety





## BURSA LIGHT RAIL SYSTEM PROJECT

Bursa, TURKEY

Client: T.R. BURSA METROPOLITAN MUNICIPALITY BURSA RAY PROJECT COORDINATION UNIT

The scope of the work is to perform the Infrastructure, Civil, Architectural and Mechanical Design Works of the fields and units for the Light Rail System Operation and Maintenance Services to be performed.

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## The following units were designed by PROKON under the scope of the project:

### **Design Services**

- Operation & Maintenance Center (approximately 240.000 m<sup>2</sup> area);
  - General Facility Settlement Plan,
  - Site Storm Water Drainage System,
  - Sewer System,
  - Utility Water System,
  - Site Fire Hydrant System,
  - Pressurized Air Installation System,
  - Protection Walls, Platforms, Electricity & Installation Canals,
  - Natural Gas Pipe Line Drawings
- Maintenance & Repair Warehouse
- Administration Building,
- Paint Warehouse,
- Heating Center,
- Transformer Building
- Security Building,
- Binelli Konutlar Station,
- Vehicle Washing Unit



## ANTALYA 1<sup>st</sup> STAGE RAIL SYSTEM PROJECT

### Antalya, TURKEY

Client: T.R. ANTALYA METROPOLITAN MUNICIPALITY



Light Rail System, lying on Fatih-Bus Station-Square line, has the main line length of 11,5 km. The project covers Supervision Services of Construction and Electromechanical Works. It has two stages:

1<sup>st</sup> Stage: Pre-Construction Consultancy Services,

- Inspection of the Designs
- Inspection of the Construction Works Tender Documents
- Technical Support to the Client during the Tender Evaluation Stage

2<sup>nd</sup> Stage: Construction Stage Consultancy Services

### PROKON provided the following services;

### **Design Review Services**

- Project Coordination, Review & Approval;
  - Architecture & Landscape,
  - R.C. Support System,
  - Mechanical Works (Heating, Ventilation, Air-conditioning, Plumbing & Firefighting)
  - Electrical Works (Power, Lighting, Grounding)
- Review of Tender Documents
- Helping the Client during Tender Evaluation Stage

## Supervision Services

- Contract Management
- Quality Control / Quality Assurance
- Cost Control, Change Management Instructions
- Planning & Program Control
- Occupational Health & Safety
- Public Presentations

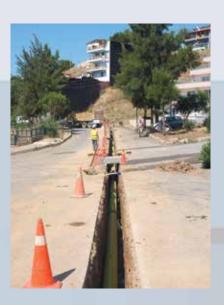
## The following works are to be done mainly on 11.5 km line;

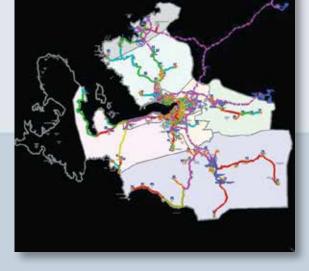
- 9,32 Km. Level Crossing Line,
- 1,63 Km. Cut-Fill Line,
- 0,15 Km. Underground Station Structure (Bus Station Çallı Stations),
- 0,41 Km. Underground Station Underpass Connection,
- 0,45 Km. Road Underpass,
- 0,44 Km. Road Approach Tunnel
- Infrastructure Transposition Works
- 14 Level Crossing Stations,
- Warehouse & Storage Field,
- Storage Field & Support Buildings,
- Transformer Buildings,
- Power Supply & Electrification System,
- Signaling System,
- Communication & Control System,
- Supply & Installation of Maintenance Equipment,
- Operation & Maintenance Support & Control,
- Vehicle Supply (14 units) & Commissioning ,
- Electromechanical Works Spare Parts (2 Years),
- Vehicle Spare Parts (2 Years),
- Vehicle Special Equipment





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## IZMIR LICENSE ZONE NATURAL GAS DISTRIBUTION WORKS

İzmir, TURKEY

Client: İZMİRGAZ ŞEHİR İÇİ DOĞALGAZ DAĞITIM TİC. VE TAAH. A.Ş. The Design, Engineering and Construction Supervision Services of İzmir License Zone Natural Gas Distribution works were provided by PROKON.

The following services were within the scope of the project:

- Preparation for Design & Construction Drawings of all steel pipelines
   438.895m Intermediate Pressure (12-19 Bar) Steel Distribution Line (Route Determination, Design, Cathodic Protection Drawings Preparation, Preparation of Materials Lists)
- Preparation for Design & Construction Drawings of all PE (Polyethylene) lines,
  - 7.827.457m Low Pressure PE Distribution Line (Route Determination, Design, Cathodic Protection Drawings Preparation, Preparation of Materials Lists)
- Preparation for Design & Construction Drawings of High Pressure Lines
  - Field Works, Route Determination, Design, Ground Investigation, Expropriation Documents Preparation, Cathodic Protection Drawings Preparation of 11.703m 36", 7.764m 32", 40.150m 30", 99.000m 8"-12" High Pressure Lines
- Preparation for Design & Construction Drawings of RMS-A (12), RMS-B (approximately 560) Stations & Stations for Industrial Consumptions (PI Diagrams, Mechanical, Electrical & Automation Design)
- Preparation of Scada Specifications & Drawings
- Supply, Update & Digitizing of all the Maps in İzmir License Zone.
- Building Surveys for Houses & Industrial Facilities of the Whole City and Calculation of TAKS & KAKS Values in the Zoning Plan.
- Construction Supervision Services







## EGO GÖLBAŞI NATURAL GAS PRESSURE REDUCING STATIONS AND PIPE LINES

Ankara, TURKEY

Client: ANKARA METROPOLITAN MUNICIPALITY The Consultancy and Construction Supervision Services for Gölbaşı Natural Gas Pressure Reducing Stations and Pipe Lines were provided by PROKON.

The second natural gas supply point was planned with an RMS-A Type Station (Pressure Reducing and Measurement Station) near Gölbaşı considering the Urban Development and Natural Gas Consumption of Ankara in the year 2025. The capacity of the 2nd RMS station was 600.000 m<sup>3</sup>/h, which was also designed as allowing a capacity increase up to 1.000.000 m<sup>3</sup>/h. The Natural Gas was carried from station to Doğukent District by steel pipes. The distribution was performed by a B Type RMS Station with a capacity of 250.000 m<sup>3</sup>/h on that district. The total pipeline length was approximately 50 km. The gas pressure on RMS-A station outlets were considered to be 40 Bar, rather than 19-20 Bar Operation Pressure.



# transportation & infrastructure references

PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
817	MINZE ENERGY	KIRKLARELI GAS	MINZE ENERGY	KIRKLARELI	TURKEY	The project covers basic design and detail design services in infrastructure discipline. Construction management service is also provided during the construction period.
799	ISTANBUL METROPOLI- TAN MUNICI- PALITY	KARTAL KAYNARCA METRO LINE - CON- STRUCTION AND ELECTROMECHANICAL WORKS	ISTANBUL METROPOLI- TAN MUNICI- PALITY	ISTANBUL	TURKEY	The project covers multi discipline detail design services. Site supervision and technical support services are also provided during the construction period.
796	ATLAS ENERGY	ISKENDERUN THERMAL POWER PLANT - RMS-A ENGINEERING SERVICES	ATLAS ENERGY	ISKENDERUN	TURKEY	The project covers multi discipline detail design services. Site supervision is also provid- ed during the construction period.
794	ENERJISA POWER GENERATION COMPANY	YAMANLI II WEIR AND HEPP PROJECT 2nd STAGE AQUEDUCT	NTF CON- STRUCTION CO.	ADANA	TURKEY	Multi discipline detail design services are provided in reinforces concrete and steel discipline.
746	IZMIR GAZ	IZMIR NATURAL GAS DISTRIBUTION SYSTEM AS-BUILT PROJECTS	IZMIR GAZ	IZMIR	TURKEY	The project covers infrastructural detail design services.
710	SAMSUN IL OZEL IDARESI ALT YAPI DAIRE BASKANLIGI	CONSULTANCY SERVICES FOR CON- STRUCTION OF AYVACIK EYNEL-ORENCIK SUSPENSION BRIDGE	SAMSUN AYVACIK KOY- LERE HIZMET GOTURME BIRLIGI	AYANCIK SAMSUN	TURKEY	The project covers engineering design review and site supervision services during construction period. Ayvacık Eynel Bridge is in the arch form of a reverse chain curve with a 216m opening. The arch was designed as a 3 division box section with dimensions of 8x2.4m and flat parts with 5% slope were formed by ST52 steel plates and profiles. All flat parts and parts that were exposed to vehicle loads on the bridge were made by composite rein- forced concrete plates. The width of the bridge reaches 12 m along with the pavement.
704	REPUBLIC OF TURKEY ANTALYA MET- ROPOLITAN MUNICIPALITY	ANTALYA LIGHT RAIL SYSTEM CONSUL- TANCY SERVICES FOR CONSTRUCTION SUPERVISION FOR PHASE 1	REPUBLIC OF TURKEY ANTALYA MET- ROPOLITAN MUNICIPALITY	ANTALYA	TURKEY	The project covers site supervision services during construction period. Light Rail System, lying on Fatih-Bus Station-Square line, has the main line length of 11,5 km. The project consist supervision services in construction and electromechanical works. It has two stages: - 1 <sup>st</sup> Stage: Pre-Construction Consultancy Services - 2 <sup>nd</sup> Stage: Construction Stage Consultancy Services The following structures are mainly on 11.5 km line; • 9,32 Km. level crossing line, • 1,63 Km. Cut-Fill line, • 0,15 Km. Underground Station structure (Bus Station - Çallı Stations), • 0,41 Km. Underground Station Underpass connection, • 0,45 Km. Road Underpass, • 0,44 Km. Road Approach Tunnel • Infrastructure transposition works • 14 Level Crossing Stations
699	ASKI ANKARA SU VE KA- NALIZASYON IDARESI GENEL MUDURLUGU	CONNECTION ROAD BETWEEN TED ANKA- RA COLLEGE - KIZILCAR HIGHWAY (YASLIPI- NARI CATCHMENT) DESIGN PROJECT	ASKI ANKARA SU VE KA- NALIZASYON IDARESI GENEL MUDURLUGU	INCEK GOLBASI ANKARA	TURKEY	The project covers basic design and detail design services in architectural, reinforced concete disciplines.
682	ASKI ANKARA SU VE KA- NALIZASYON IDARESI GENEL MUDURLUGU	CONNECTION ROAD BETWEEN INCEK - GOLBASI (HAYMANA ROAD) DESIGN PROJECT	ASKI ANKARA SU VE KA- NALIZASYON IDARESI GENEL MUDURLUGU	INCEK GOLBASI ANKARA	TURKEY	The project covers basic design and detail design services in architectural and rein- forced concete disciplines.
674	IZMIR GAZ	IZMIR NATURAL GAS PIPING AND DISTRI- BUTION LINES CONSULTANCY SERVICES	IZMIR GAZ	IZMIR	TURKEY	The design, engineering and construction supervision services in İzmir License Zone Natural Gas Distribution works were implemented by PROKON Mühendislik ve Müşavirlik A.Ş. Following services were provided; -Construction supervision of all steel pipelines (438.895 m intermediate pressure (12- 19 Bar) steel distribution line) -Construction supervision of all PE (Polyethylene) lines (7.827.457 m low pressure PE distribution line) -Construction supervision of high pressure lines

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PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
667	KAYSERI SEKER FABRI- KASI A.S.	BOGAZLIYAN SUGAR FACTORY CONNEC- TION ROAD DESIGN PROJECT	EKON A.S.	BOGAZLIYAN KAYSERİ	TURKEY	The project covers basic design and detail design services in infrastructure discipline.
658	IZMIR GAZ	IZMIR NATURAL GAS PIPING AND DISTRI- BUTION LINES ENGINEERING AND DESIGN SERVICES	IZMIR GAZ	IZMIR	TURKEY	The design, engineering and construction supervision services in İzmir License Zone Natural Gas Distribution works were implemented by PROKON Mühendislik ve Müşavirlik A.Ş. The following services were within the scope of the project: -Design and Construction Drawings preparation of all steel pipelines • 438.895m intermediate pressure (12-19 Bar) steel distribution line (route determina- tion, design, cathodic protection drawings preparation, preparation of materials lists -Design and Construction Drawings preparation of all PE (Polyethylene) lines, • 7.827.457m low pressure PE distribution line (route determination, design, cathodic protection drawings preparation of materials lists) -Design and Construction Drawings preparation of high pressure lines • To supply the city's needs, field works, route determination, design, ground investiga- tion, expropriation documents preparation, cathodic protection drawings preparation of 11.703m 36", 7.764m 32", 40.150m 30", 99.000m 8"-12" high pressure lines
655	ASKI ANKARA SU VE KA- NALIZASYON IDARESI GENEL MUDURLUGU	CONSULTANCY SERVICES FOR DESIGN OF ATATÜRK ORMAN ÇİFTLİĞİ CROSSING	ASKI ANKARA SU VE KA- NALIZASYON IDARESI GENEL MUDURLUGU	ANKARA	TURKEY	The project covers multi discipline basic design and detail design services for 3572 m 2x2 seperated road, 1 crossing with bridge, 2117 m of infrastructure line.
628	ROPOLITAN	ANKARA METRO UMITKOY-CAYYOLU LINE 2nd PHASE; CAYYOLU 1-CAYYOLU 2 STATIONS AND TRUCK STORAGE WITH MAINTENANCE AREA CONSTRUCTION CONSULTANCY AND ENGINEERING SERVICES	REPUBLIC OF TURKEY ANKARA MET- ROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE	CAYYOLU UMIT- KOY ANKARA	TURKEY	The project covers consultancy services for Ümitköy - Çayyolu Line, Çayyolu 1 and Çayyolu 2 stations and truck storage with maintenance area.
614	REPUBLIC OF TURKEY ANKARA MET- ROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE		REPUBLIC OF TURKEY ANKARA MET- ROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE	ULUS - KECIO- REN ANKARA	TURKEY	The project covers site supervision services during construction period for Tandoğan - Keçiören Line.
613	REPUBLIC OF TURKEY ANKARA MET- ROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE		REPUBLIC OF TURKEY ANKARA MET- ROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE	KIZILAY-SOGU- TOZU ANKARA	TURKEY	The project covers site supervision services during construction period. Ankara Metro Project connects 15,36 km long Batikent-Sincan Stations and 3,11 km long Kizlay- Söğütözü Stations. Double-track rail system is constructed together with 5 pieces level crossing, 2 pieces viaduct, 2 pieces buried and 3 pieces deep buried stations. The route is built with different types of line structures; 6,84 km. long cut&cover line, 1,63 km long cutting, 1,82 km long level crossing, 0,62 km long elevated, 4,12 km long tunnel, 2,03 km long viaduct and 1,68 km long station line. The tunnels were performed with cut&cover and TBM Tunneling system.
612	REPUBLIC OF TURKEY ANKARA MET- ROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE		REPUBLIC OF TURKEY ANKARA MET- ROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE	ASTI - CAYYOLU ANKARA	TURKEY	The project covers site supervision services during construction period for 140 m road crossing, 70 m retained cut, 5955 m cut-off tunnel, 1945 m bored tunnel and 7 stations having 55000 m2 closed area.

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PROJECT NO	OWNER	DESCRIPTION	CLIENT	PLACE	COUNTRY	SCOPE OF SERVICES
598	ANKARA MET-	ANKARA METRO 3rd PHASE BATIKENT - SINCAN (TOREKENT) METRO LINE CONSULTANCY SERVICES FOR CON- STRUCTION SUPERVISION	REPUBLIC OF TURKEY ANKARA MET- ROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE	Batıkent - Sin- can (Törekent) ANKARA	TURKEY	Ankara Metro Project connects 15,36 km long Batikent-Sincan Stations and 3,11 km long Kizılay-Söğütözü Stations. Double-track rail system is constructed together with 5 qty level crossing, 2 qty. viaduct, 2 qty. buried and 3 qty. deep buried stations. The route is built with different types of line structures; 6,84 km. long cut&cover line, 1,63 km long cutting, 1,82 km long level crossing, 0,62 km long elevated, 4,12 km long tunnel, 2,03 km long viaduct and 1,68 km long station line. The tunnels were performed with cut&cover and TBM Tunneling system. Properties of the system is as follows: Distance between stations:1255 m Average speed: 40 km/hour Maximum speed: 80 km/hour Daily operation time: 18 hours Queue interval: 90 seconds Batikent-Sincan Round time: 22 minutes Type of Services provided; -Design Services -Supervision Services
579	BOTAS	NATURAL GAS PIPING (600000 m3/h RMS-A) WITH DISTRIBUTION RMS-B PROJECT	REPUBLIC OF TURKEY ANKARA MET- ROPOLITAN MUNICIPALITY EGO GENERAL DIRECTORATE	GOLBAŞI ANKARA	TURKEY	A second natural gas supply point was planned with an RMS-A type Station (Pressure Reducing and Measurement Station) near Gölbaşı. The capacity of the 2nd RMS station was 600.000m3/h, which was also designed as allowing a capacity increase up to 1.000.000m3/h. The Natural Gas was carried from station to Doğukent District by steel pipes. The distribution was performed by a B type RMS station with a capacity of 250.000m3/h on that district. The total pipeline length was approximately 50 km. The gas pressure on RMS-A station outlets were considered to be 40 Bar operation pressure.
509		BURSA LIGHT RAIL SYSTEM ENGINEERING DESIGN SERVICES	GURIS INC.	BURSA	TURKEY	The project covers multi discipline basic design and detail design services.
502	REPUBLIC OF TURKEY ISTANBUL METROPOLI- TAN MUNICI- PALITY	ISTANBUL METRO UNKAPANI - TAKSIM METRO LINE METROSU GOLDEN HORN BRIDGE	ANADOLU METRO JOINT VENTURE	ISTANBUL	TURKEY	The project covers multi discipline basic design and detail design services.

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Saray Mahallesi Fatih Sultan Mehmet Bulvan No: 420, 06980 Kazan-ANKARA, TURKEY P: +90 (312) 287 26 43 (pbx) F: +90 (312) 286 69 47 info@prokon.com.tr www.prokon.com.tr