

PERFECTION IN INDUSTRIAL CONTRACTING & AUTOMATION

GENERAL SYSTEMS DESIGN INC.



GENERAL
SYSTEMS
DESIGN INC.

May 2019



Company Profile

GSD carries out its activities at Techno Plaza in Maltepe / Istanbul that has approximately 4000 m2 covered area.



www.gsdas.com

D100 Maltepe Kavşagi Nazmi İlker Sk. No : 10 34852

Maltepe / Istanbul / TURKEY

Tel : +90 216 458 4848 (pbx) Fax : +90 216 399 5374

Company Profile

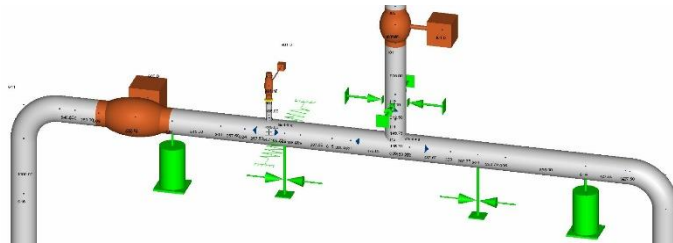
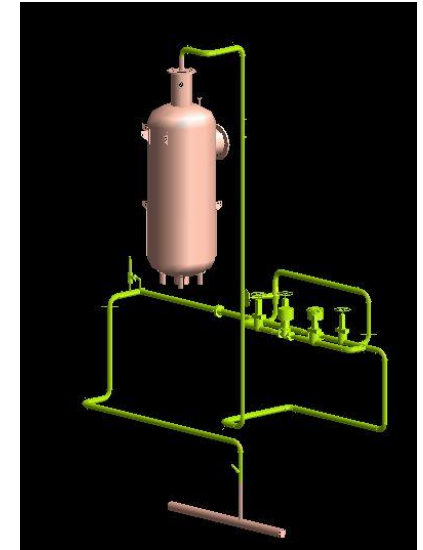
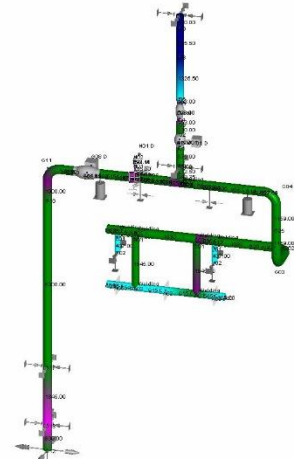
- General Systems Design Inc. (GSD) has been founded by two Mechanical Engineers in 1987.
- As of now, GSD has a good reputation in the market and has won important projects locally and abroad.
- GSD consists of approximately 80-85 team members active in Headquarters and in fabrication facilities.



Company Profile

International Engineering & Contracting Capability

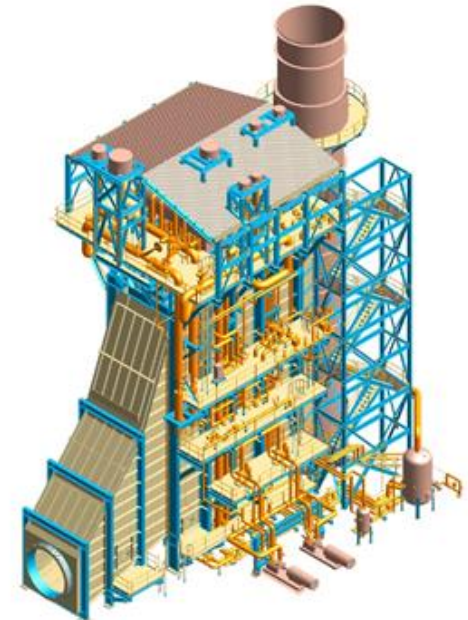
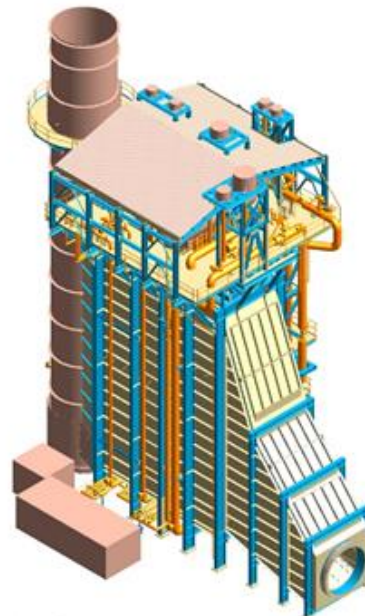
GSD has a strong team in different disciplines for completion of the works for the satisfaction of its clients, starting from Engineering to Turn-Key completion of the Industrial Plants, and where required, gets the responsibility of the systems for operation and maintenance in proper manner. Some of our engineering programs are Aveva PDMS, Autocad, AutoPIPE, PV Elite and Solid Works...



Industrial Plants

Following services are provided by GSD Industrial Plants:

- Engineering (Civil, Mechanical, Process, Electrical, Automation)
- Material Supply (Tanks, Piping, Instrumentation and Control Systems, Valves, Steel Structures etc.)
- Civil Works
- Erection
- Commissioning and Start up
- Operation and Maintenance



ManPower

STAFF

Engineers	10
Technicians and QA-QC	15
Finance/Customer Service/Miscellaneous	15
Project /Construction Teams	40-150
TOTAL PERSONNEL : 80-190	



All engineers are capable of communicating in English.
German and Japanese speakers are also available.

Quality Certification

PERFECTION IN INDUSTRIAL CONTRACTING & AUTOMATION



CERTIFICATE

58843

This certificate is given to the below stated company by UDEM International Certification Audit Training Cent. Ind. Inc. Co.

Genel Sistem Dizaynı Mühendislik Bilişim Taahhüt San. ve Tic. A.Ş.

Zümrütevler Mahallesi Nazmi İker Sokak No:10 Maltepe İSTANBUL / TÜRKİYE

ISO 9001:2015

Scope: Provision of engineering services, DCS, PLC Hybrid and scada systems for industrial and building automation, designing, production and testing of panels, preparation of software in this scope, complete project applications including training, selection, supply of turnkey automation solutions for site instruments and manual and automatic vessels, combine trigeneration applications until 300 MW, designing, production and sales of vessels and actuator, selection, design, application of heat recovery steam generator (HRSG) for combined cycle plants and trigeneration applications, provision, installation and implementation of field instruments and all related equipments

EA Code: 18-19-29-33-34

Certification Audit Date	: 20.08.2016
Decision Date	: 24.08.2016
Reissue Date	: 29.08.2018
Expiry Date	: 23.08.2019





UDEM International Certification Audit Training Cent. Ind. Inc. Co.

Hereby, UDEM International Certification Audit Training Cent. Ind. Inc. Co. certifies that the above stated company have the appropriate management system according to the requirements of the above standard. This certificate is valid for 3 years since the decision date as long as the system is effectively maintained and surveillance audits are carried out. The validity of the certificate can be checked through www.udemcert.com.tr. The certificate is the property of UDEM International Certification Audit Training Cent. Ind. Inc. Co. and shall be returned if requested.

Address: Mürşel Mahallesi 2079 Sokak (Etiler 93 Sokak) No:10 Çarşıbaşı - Ankara - TÜRKİYE
Tel: +90 312 443 03 90 (Sabit) Fax: +90 312 443 03 76
E-mail: info@udemcert.com Web: www.udemcert.com



CERTIFICATE

Genel Sistem Dizaynı Mühendislik Bilişim Taahhüt San. ve Tic. A.Ş.

Atatürk Cad. Nazmi İker Sok. GSD Techno Plaza No:8 Maltepe İSTANBUL / TÜRKİYE

OHSAS 18001:2007

Scope: Engineering about industrial and building automation, supplying DCS, PLC, hybrid and scada systems, panel design, manufacturing and test; preparation all the softwares related, project implementation including training; supplying and choosing area instrument, manual and automatic stopcocks, offering turnkey automation solutions; implementation of 300 MW combined cycle and trigeneration; design, manufacturing and sales of stopcock and actuator

EA Code: 19-34

Hereby, AKSERT Audit and Certification Ltd. Co., certifies that the above stated company have the appropriate management system according to the requirements of the above standard. This certificate is valid for 3 years since the decision date as long as the system is effectively maintained and surveillance audits are carried out. The validity of certificate can be checked through www.aksert.com. The Certificate is property of AKSERT Audit and Certification Ltd. Co. and shall be returned if requested.

AKSERT Audit and Certification Ltd. Co.



Certificate Number : 80136
Registration Date : 22.02.2019

Reissue Date :
Expiry Date : 21.02.2020

Adres: Mustafa Kemal Mah. 2357/1 Sokak No:5/7 Çarşıbaşı / ANKARA - TÜRKİYE
Tel: +90 312 238 82 50 (Sabit) Faks: +90 312 238 82 32
E-posta: info@aksert.com Web: www.aksert.com



CERTIFICATE

61117

This certificate is given to the below stated company by UDEM International Certification Audit Training Cent. Ind. Inc. Co.

Genel Sistem Dizaynı Mühendislik Bilişim Taahhüt San. ve Tic. A.Ş.

Zümrütevler Mahallesi Nazmi İker Sokak No:10 Maltepe İSTANBUL / TÜRKİYE

ISO 14001:2015

Scope: Provision of engineering services, DCS, PLC Hybrid and scada systems for industrial and building automation, designing, production and testing of panels, preparation of software in this scope, complete project applications including training, selection, supply of turnkey automation solutions for site instruments and manual and automatic vessels, combine trigeneration applications until 300 MW, designing, production and sales of vessels and actuator, selection, design, application of heat recovery steam generator (HRSG) for combined cycle plants and trigeneration applications, provision, installation and implementation of field instruments and all related equipments

EA Code: 18-19-29-33-34

Certification Audit Date	: 25.08.2014
Decision Date	: 27.08.2014
Reissue Date	: 29.08.2018
Expiry Date	: 26.08.2019





UDEM International Certification Audit Training Cent. Ind. Inc. Co.

Hereby, UDEM International Certification Audit Training Cent. Ind. Inc. Co. certifies that the above stated company have the appropriate management system according to the requirements of the above standard. This certificate is valid for 3 years since the decision date as long as the system is effectively maintained and surveillance audits are carried out. The validity of the certificate can be checked through www.udemcert.com.tr. The certificate is the property of UDEM International Certification Audit Training Cent. Ind. Inc. Co. and shall be returned if requested.

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Tel: +90 312 443 03 90 (Sabit) Fax: +90 312 443 03 76
E-mail: info@udemcert.com Web: www.udemcert.com

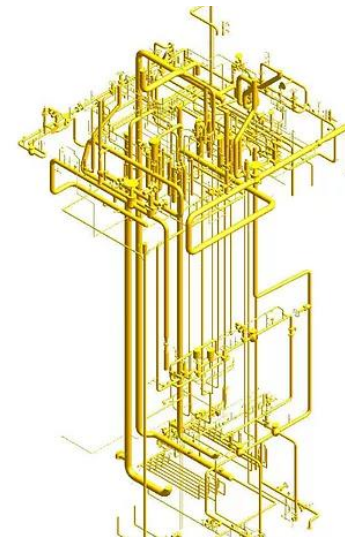
GENERAL SYSTEMS DESIGN INC.



- **Automation**
(Solution Partner of EMERSON)
- **Industrial Contracting**
(EPC)
- **Production and Supply of Equipment**
- **Steel and Pressure Parts and Vessels Fabrication**
(3S)



Field of Activity



- Oil and Gas
- Energy
- Petrochemistry
- Refinery
- Textile
- Iron and Steel
- Food and Beverage
- Chemical Process
- Water and Wastewater

Customer Portfolio



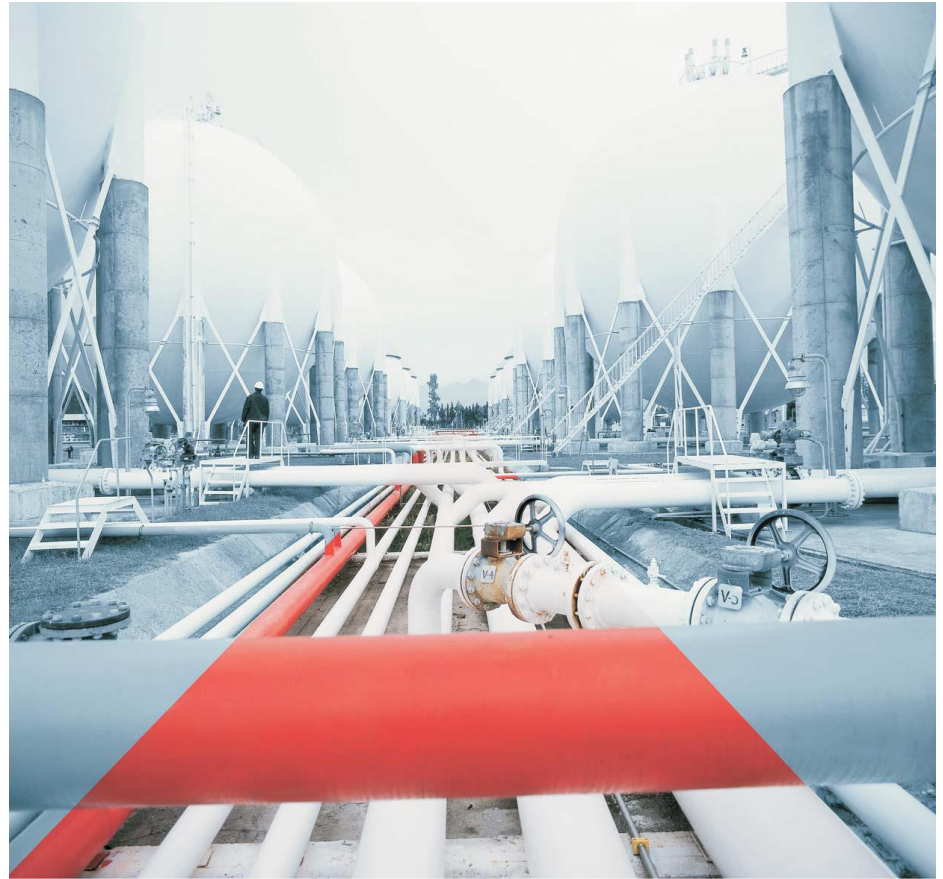
Some of Our References





- Dörtyol Embedded LPG Tank Farm Project Main Automation Vendor

Oil & Gas References



Oil & Gas References



- Dörtyol Tank Farm Project Main Automation Vendor





Oil & Gas References

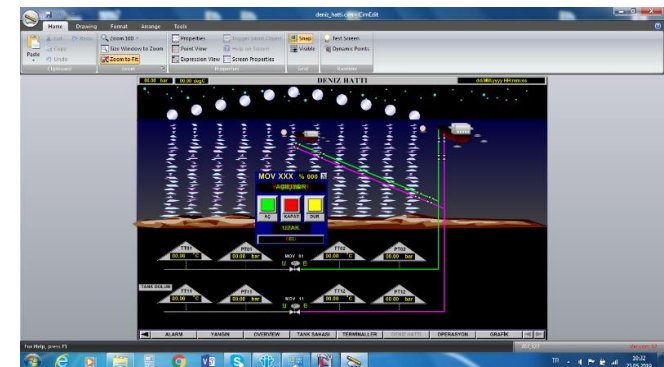
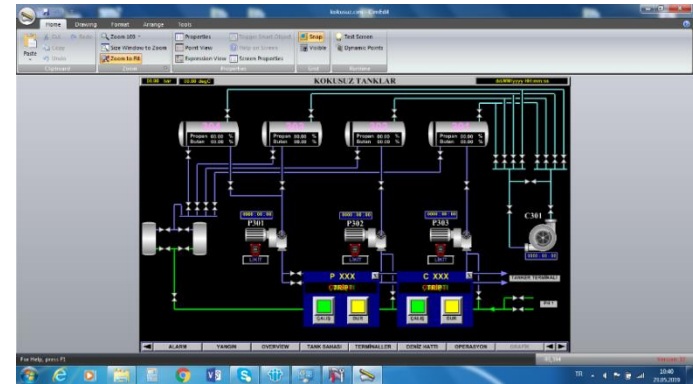
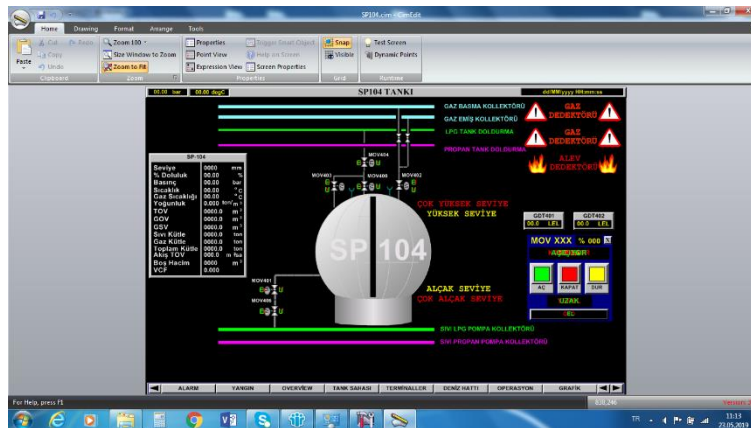
- Tekirdag Tank Farm Project
Main Automation Vendor





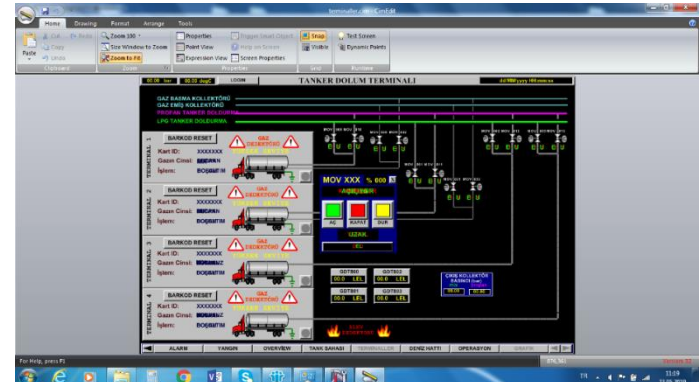
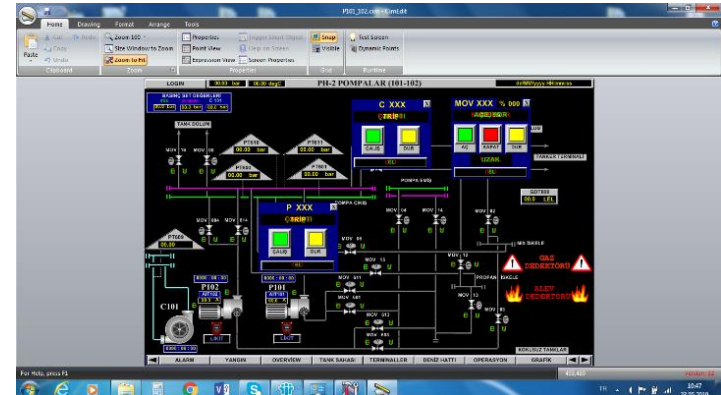
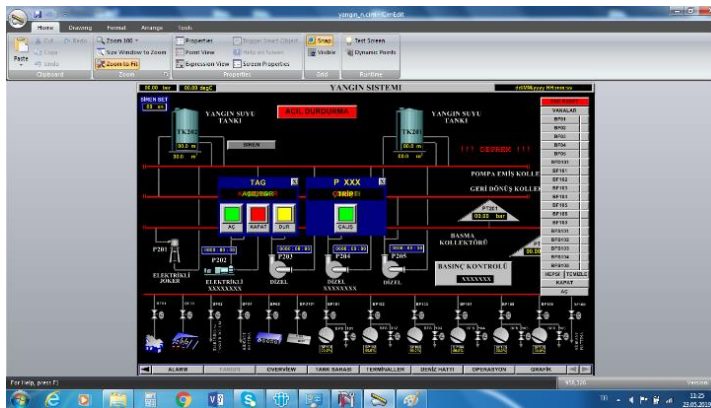
- Tekirdag Tank Farm Project Main Automation Vendor

Oil & Gas References



Oil & Gas References

- Tekirdag Tank Farm Project
Main Automation Vendor



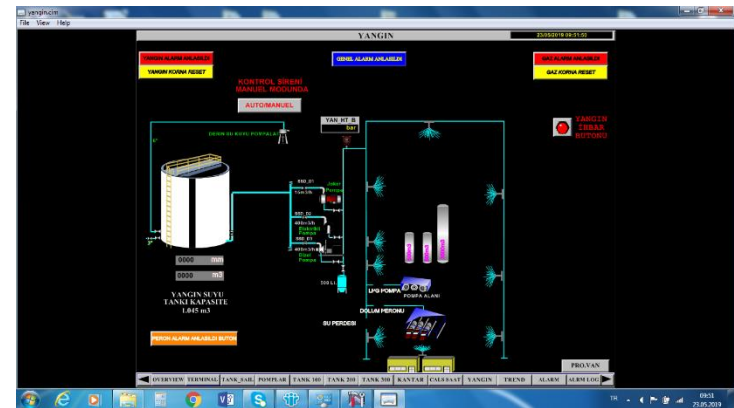
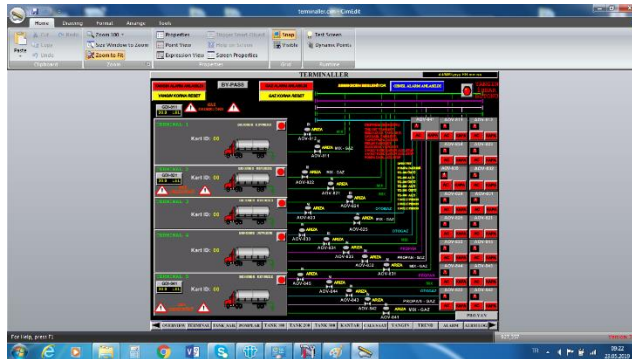
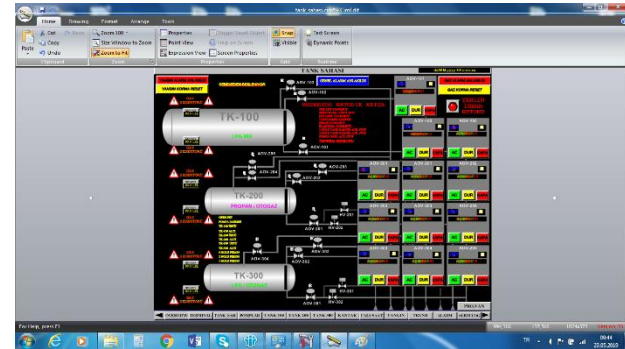
Oil & Gas References

- Izmir LNG Tank Farm Project
Main Automation Vendor

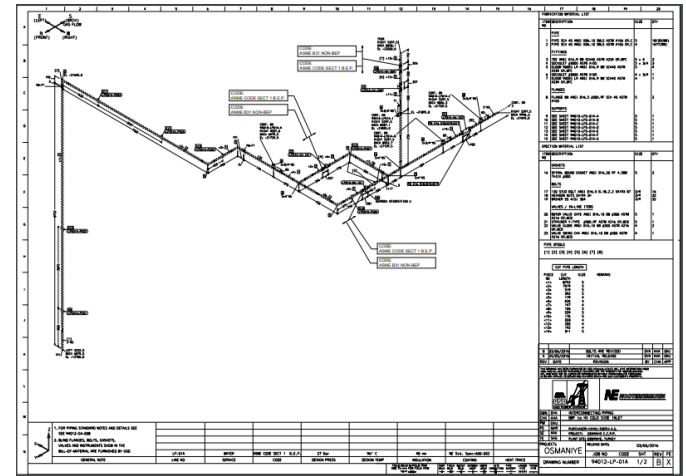
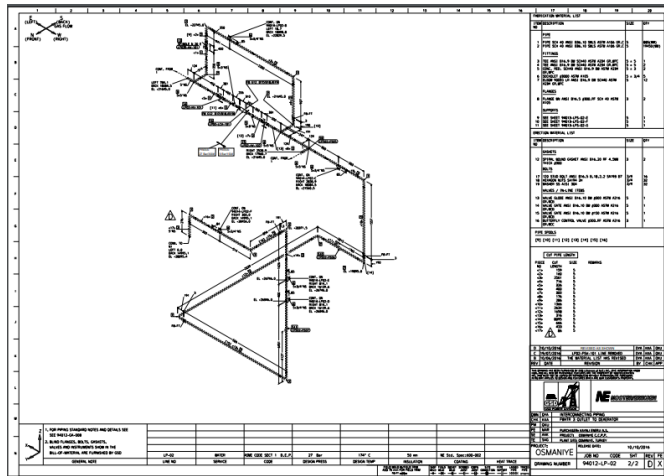
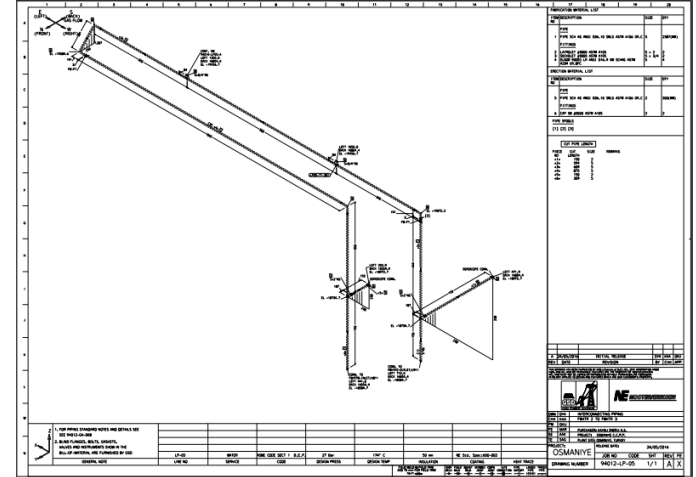
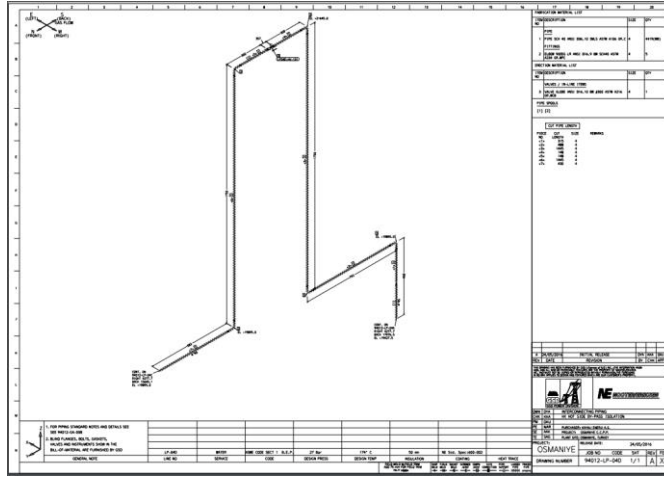


Oil & Gas References

- BP Yarımca



Piping Engineering



EPC Procurement Capabilities

LPG Spherical Tanks

(*Cimtas, Titas...*)



Manufacturing



3S is a subsidiary of GSD



GENERAL
SYSTEMS
DESIGN INC.



www.3scelik.com

Tasli Tarla Mevkii Balikli Cesme Koyu Biga Organize Sanayi Bolgesi 11 no'lu yol
17200 Biga / Canakkale / TURKEY Tel : +90 286 324 3780

GENERAL
SYSTEMS
DESIGN INC.



SCIENTIFIC STEEL STRUCTURES is an industrial plants' construction, contracting, and engineering house with experienced field erection team under one roof with a focus of Worldwide coverage.

SCIENTIFIC STEEL STRUCTURES factory is located in Biga Çanakkale Turkey with a closed area of 8000m²/open area 14000m² and 1MW power. Placed in the prestigious Biga Industrial Zone, 3S plant is only 19 km from Biga commercial port and less than 1 km from Bursa – Çanakkale main road D200.



ENGINEERING / FABRICATION / INSTALLATION

Typical manufacturing materials are;
Carbon Steel, Alloy Steel 11, 22, 91, Stainless Steel...

Products

- Structural steel components
- Steel stacks
- HRSG casing and inlet ducts
- Pressure parts and steel parts for Coal Fired Power Plants
- Pressure vessels , drums certified as per ASME and CE
- Power and process piping spools, supports
- Steel building structures
- HRSG modules and similar heat exchangers
- Crane structural parts
- Secondary steel structures (Platforms, Stair towers, Bridges, buildings etc.)
- Large size valve maintenance
- Other advanced structural components

Field Erection Services

- Erection of Combined Cycle Power Plants
- Erection of Thermal Power Plants
- Erection of Refineries, Oil and Gas and other Industrial Plants

All of the fabrication is based in the Biga factory and thanks to direct port and land transportation access 3S is positioned to be the global fabricator that is preferred by EPC and OEM companies from all over the World.





Besiktas Vodafone Football Stadium



Osmaniye Kayali CCPP Project



Hebetec 3rd Intercontinental Bridge



BIS Energy CCPP



Osmaniye Kayali CCPP Project



Osmaniye Kayali CCPP Project



Osmaniye Kayali CCPP Project



BIS Energy CCPP



Calik Energy Navoi-II Project



Osmaniye Kayali CCPP Project



Osmaniye Kayali CCPP Project



3S Quality Certification

PERFECTION IN INDUSTRIAL CONTRACTING & AUTOMATION



CERTIFICATE

56987

This certificate was given to the below stated company by UDEM International Certification
Audit Training Cent. Ind. Inc. Co.

**3S Endüstri Tesisleri İmalat Mühendislik
Sanayi ve Ticaret Limited Şirketi**

Head Office: Zümrütevler Mah. Nazmi İker Sok. No:8/3-301 Maltepe
İSTANBUL / TURKEY
Factory: Taşlı Tarla Mevki Bölükü Çeşme Köyü Biga OSB 11 No'lu Yol No:67 Biga 17200
ÇANAKKALE / TURKEY

ISO 9001:2015

Scope: Manufacturing of steel construction and pressure pot (tank, drum)
EA Code: 17

Certification Audit Date	: 04.07.2014
Decision Date	: 07.07.2014
Reissue Date	: 13.07.2018
Expiry Date	: 06.07.2019




Noting, UDEM International Certification Audit Training Cent. Ind. Inc. Co. certifies that the above stated company have the appropriate management system according to the requirements of the above standard. The certificate is valid for 5 years since the decision date as long as the system is effectively maintained and surveillance audits are carried out. The validity of the certificate can be checked through www.udem.com.tr. This certificate is the property of UDEM International Certification Audit Training Cent. Ind. Inc. Co. and will be returned if requested.

Adres: Mülkiye Mahallesi 2075 Sokak (Eski 19 Sokak) No:2 Çarşıya Akademi - TURKEY
Tel: +90 312 445 89 90 / 91 / 92 / 93 / 94 / 95 / 96 / 97 / 98 / 99 / 00
E-MAIL: info@udem.com.tr Web: www.udem.com.tr



CERTIFICATE

81077

This certificate was given to the below stated company by UDEM International Certification
Audit Training Cent. Ind. Inc. Co.

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İSTANBUL / TURKEY
Factory: Taşlı Tarla Mevki Bölükü Çeşme Köyü Biga OSB 11 No'lu Yol No:67 Biga 17200
ÇANAKKALE / TURKEY

OHSAS-18001

Scope: Manufacturing of steel construction and pressure pot (tank, drum)
EA Code: 17

Certification Audit Date	: 01.07.2014
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Reissue Date	: 13.07.2018
Expiry Date	: 06.07.2019




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E-MAIL: info@udem.com.tr Web: www.udem.com.tr



CERTIFICATE

61093

This certificate was given to the below stated company by UDEM International Certification
Audit Training Cent. Ind. Inc. Co.

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Sanayi ve Ticaret Limited Şirketi**

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İSTANBUL / TURKEY
Factory: Taşlı Tarla Mevki Bölükü Çeşme Köyü Biga OSB 11 No'lu Yol No:67 Biga 17200
ÇANAKKALE / TURKEY

ISO 14001:2015

Scope: Manufacturing of steel construction and pressure pot (tank, drum)
EA Code: 17

Certification Audit Date	: 04.07.2014
Decision Date	: 07.07.2014
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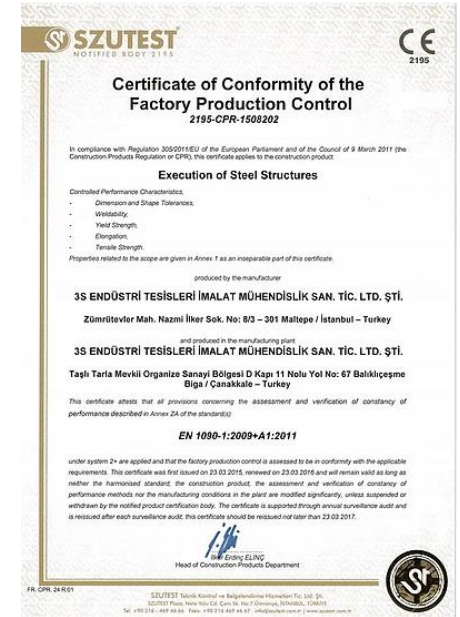
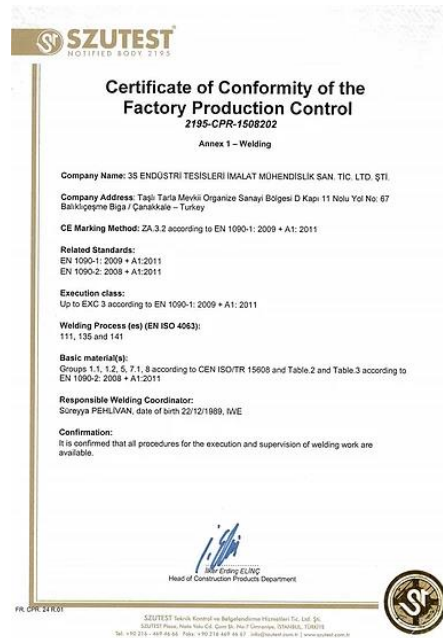
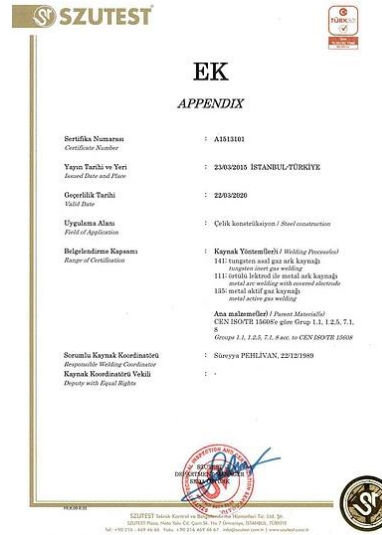
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E-MAIL: info@udem.com.tr Web: www.udem.com.tr

GENERAL
SYSTEMS
DESIGN INC.



3S Quality Certification

PERFECTION IN INDUSTRIAL CONTRACTING & AUTOMATION



GENERAL SYSTEMS DESIGN INC.

QA / QC Documentation

PERFECTION IN INDUSTRIAL CONTRACTING & AUTOMATION

SAN-RAD
SARAFI & PARTNER S.A.S.

35 ENDÜSTRİ TESİSLERİ İMALAT
MÜHENDİSLİK SAN. TİC. LTD. ŞTİ.

QUALITY CONTROL PLAN FOR SHOP FABRICATIONS
JOB NUMBER : 31584

Doc. No. : 35-SAN-FCV-002
Revision : 2
Client : CALK ENERJI
Client Order No. :
Project : NAKO 3
Project No. : 31584

Date: 10-Oct-18
Unit: 1

Customer: Vacuum Deaerator

Phase	Activity	Applicable documents		Acceptance	Interventions and Involved parts codes						
		ISO Supplier	Client		Inspector	QC Inspector	C	O	AI	Report	Notes
1	Follow Customer (before sub-contracted by vendor)										
2	Check and Dimensional Inspection.										
3	Verify Customer Identification										
4	Verify Applied Material Quality										
5	Verify Plate Rolling Machine Operator certificate										
6	Verify use of accepted weld procedures and use of approved Welding Machine Operators.										
7	Verify Applied Welding Wires										
8	View Radiographs for longitudinal seams.										
9	Review Code Data Reports and EN Code Drawing.										
10	Verify ISO Job Number Identification.										
11	Verify Welder and Operator certificate										
12	Verify Applied Welding Wires										
13	Inspect dimensional diameter										
14	Inspect dimensional bending/flat plates										
15	Inspect dimensional by out of probes and pipes.										
16	Inspect the shape of nozzles prior to cutting nozzles openings on the shell.										
17	Verify use of accepted weld procedures and use of approved Welding Machine Operators.										
18	Verification of the drum shell and head joints surface view girth beading before fabrication.										
19	Inspect the shape of longitudinal and circumferential seams.										
20	Visual inspection of longitudinal and circumferential seams.										
21	Visual inspection of longitudinal production pipes.										

WELDING PROCEDURE SPECIFICATIONS (WPS)

Company Name : 35 ENDÜSTRİ TESİSLERİ İMALAT MÜHENDİSLİK SAN. TİC. LTD. ŞTİ. By : Ethem GUNGÖR

WPS No. : WPS-35-001 Rev.0 Date : 26/06/2014

Supporting PQR No. : Pre-Qualified (AWS D1.1 - 2010) Date : 16th July 2014

Welding Process (es) : GMAW Type(s) : Semi-Auto

CCDC : (Automatic/Manual, Machine or Semi-Auto)

ASME IX API 1104 ASME B31.3 AWS D1.1 OTHER

JOINTS

Joints Design : B-US-GF

Backing : N/A Type : N/A

T1 = Unlimited

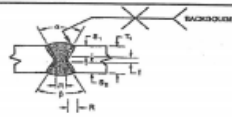
Root Face = f = 0-3 mm

Root Opening = R = 0-3 mm

Groove Angle = α = 3 = 45°

Tolerances IR: As Detailed +2, -0 t: +2, -0 α, β: +10', -0° As Fit-up, +6, -2 Unlimited +10', -5'

All dimensions in mm



BASE METALS

P.No. : N/A Group No. : 1 To P.No. : N/A Group No. : 1

Specification Type and Grade : S305 J2

to Specification Type and Grade : S305 J2

Chem. Analysis and Mech. Prop. : N/A

to Chem. Analysis and Mech. Prop. : N/A

Base Metal Thickness Range : Groove Unlimited Fillet N/A

Pipe Diameter Range : Groove N/A Fillet N/A

Other : None

FILLER METALS

P.No. : 6 Other : N/A

A.No. : T Other : N/A

SFA Specification : A5.18

AWS Classification : ER 70 S-6

Size of Filler Metals : Ø 1.2 mm


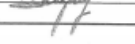
Electrode - Flux (Class) : N/A

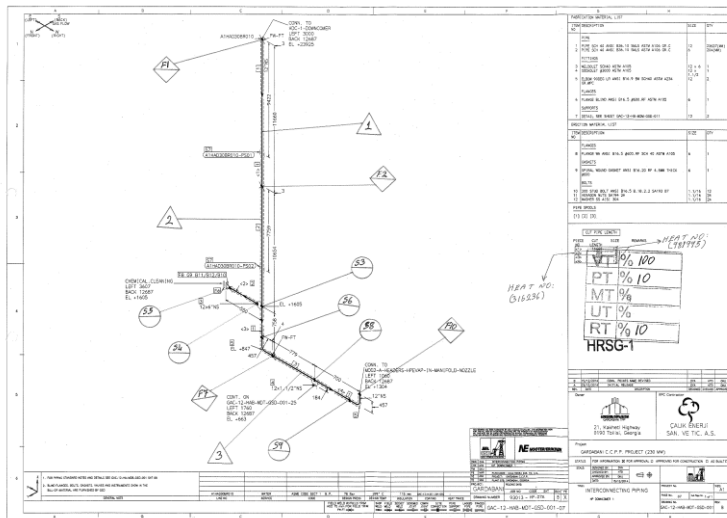
Flux and/or Electrode Trade Name : As Applicable

Consumable Inert : N/A

Other : N/A

TECHNICAL APPROVAL:

Name :  Unit/Dept. :
Signature :  Date : 26/06/2014



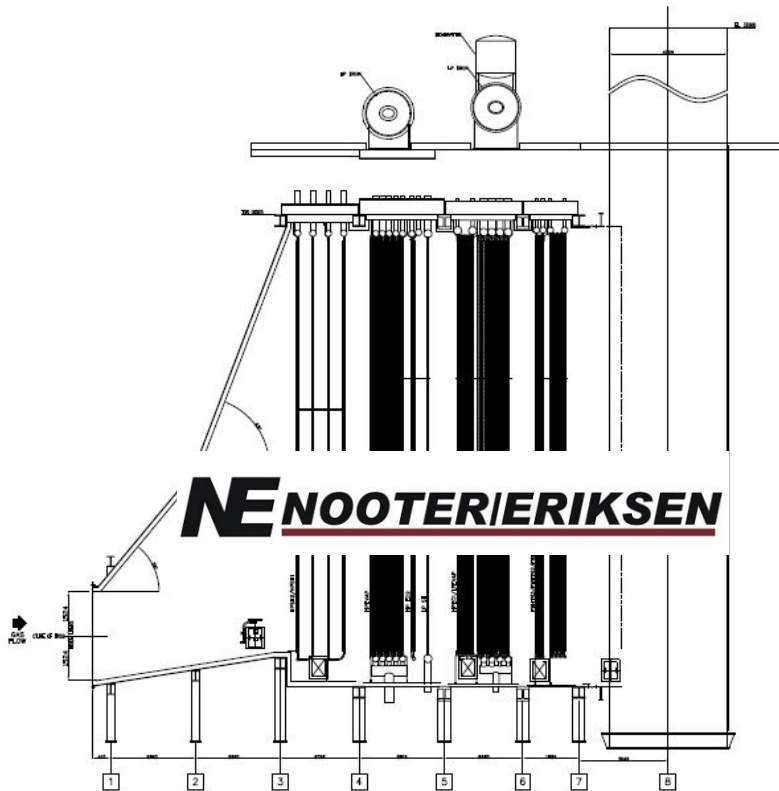
GENERAL SYSTEMS DESIGN INC.



Completed EPC Project

KAYALI Energy, 75 MWe CCPP

GSD has undertaken one HRSG and boiler island engineering, fabrication, field construction and commissioning works.



Completed Project

Gardabani 230 MWe CC Power Plant

Çalık Enerji is the EPC of this CCPP. Gardabani is the 1st natural gas based power plant of Georgia. It is critical for frequency control of the national grid.

GSD has undertaken two HRSGs engineering, fabrication, field construction and commissioning works. GSD has completed the project successfully.



NENOOTERIERIKSEN

Completed EPC Project

2006
2009



PROJECT	HP SH Co-Generation Plant - 130 MWe
LOCATION	Mersin, Turkey
GAS TURBINE	GE Frame 9E
HRSG	Nooter Eriksen (385 t/h/41 bar/440 C)
EPC Turnkey	Completed in 22 months



Completed EPC Project

2013



PROJECT	Combined Cycle Power Plant - 120 MWe
LOCATION	Bursa, Turkey
GAS TURBINE	LM 6000 PC Sprint
HRSG	GSD (HP SH/LP SH)
EPC Turnkey	Completed in 21 months

PERFECTION IN INDUSTRIAL CONTRACTING & AUTOMATION

GENERAL
SYSTEMS
DESIGN INC.

NENOOTERIERIKSEN



Completed EPC Project

2014



- **PROJECT** : Combined Cycle Power Plant 120MWe
- **LOCATION** : Hereke, Turkey
- **GAS TURBINE** : LM 6000 PC (Sprint)
- **HRSG** : GSD (HPSH / LP SH)
- **EPC Turnkey** : Completed in 22 months

After Sales Service Operation of the Industrial Plants

An in-house control system and testing equipment are used to provide support to customers with a maintenance contract. GSD also holds copies of software for all of the control systems installed.

This allows GSD to simulate any problem that GSD's customers might have and also carry out modifications and upgrades to their systems off-site.

The Service Operation also provides man-power to make unscheduled site visits, technical support, emergency parts handling and repairs administration for mechanical and all industrial plants including instrumentation and valves.



Factory Machinery Capacity

Travel Lift ▶ Working Capacity 12 tons

Radial Drilling Machine ▶ Working Distance 15000mm x 1500mm

Profile Bending ▶ Working Distance NPI 200

Pressing Machine ▶ Working Capacity 400 tons

Blasting – Painting Outdoor Unit

Blasting Unit Indoor Unit

Hydraulic Cylinder ▶ Working Area 3100mm x 45mm

Head Drilling ▶ Working Area 4000mm

Guillotine Cutting Machine ▶ Working Distance 3000mm x 16mm

CNC Plasma Machine ▶ Working Distance 3600mm x 20000mm

Paint Side

Painting Unit

Aymaksan Saw Working Distance 2200mm x x600mm

Angle Band Saw ▶ Working Distance 500mm

Press Brake Machine ▶ Working Distance 3000mm x x12mm