PAST PROJECT REFERENCE

“EAST-WEST ENGINEERING” LLC

Professional Engineering Services
for Civil & Industrial Projects

07.2019

OOO “EAST-WEST ENGINEERING”
107, Amir Temur street, 100084
Tashkent, Uzbekistan
International Trading Center, Block “A”,
2-nd floor

BUSINESS DESCRIPTION

One of the pioneering engineering companies' active in Civil & Industrial Engineering sectors based on the territory of former Soviet Union and focused on innovative engineering approach. Founded in 2011, today the company is performing project design and project management activities for the largest customers in various major projects in the Central Asian region, where currently some of the most complex engineering projects are being implemented. The main focus of the engineering activities is the design of downstream Oil & Gas and Energy infrastructure, with particularly strong capabilities of designing natural gas infrastructure, such as booster compressor stations, gas processing plants etc. However, our strong capabilities in Civil Engineering & advanced knowledge of local norms and design standards allow us to participate in engineering projects in virtually all spheres of modern economy.

Among others the projects previously executed belong to LUKOIL (Russia), Gazprom (Russia), HYUNDAI Engineering (Korea), SAMSUNG Engineering (Korea) NHC "Uzbekneftegaz"(Uzbekistan), JSC "Uzbekenergo"(Uzbekistan), Technip (Italy), KNM Processing Systems (Malaysia), Technoconsult (Venezuella), Petronas (Malaysia).

The company possesses the entire range of required licenses to perform project design activity on the territory of Republic of Uzbekistan.

The company works in strict compliance with international management standard ISO 9001:2008 and capable to execute projects with application of both API and GOST standards.

Many of the 75 currently employed professional engineers working in the company are bilingual with a good knowledge of English. A dedicated project management is available to coordinate all project design activities both locally and internationally with full bilingual English/Russian capacity. The business is well structures and all internal processes are well organized and professionally managed on all company levels.

LIST OF OUR CUSTOMERS 2019

COMPLETED & ONGOING PROJECTS

EXTERNAL WATER SUPPLY TO THE FIELDS OF ADAMTASH, GUMBULAK, DZHARKUDUK-YANGI KYZYLCHA

The project is implemented under the contract with KNM for technical assistance in front-end engineering design and conformance with the End User of a local working project "External water supply to the fields of Adamtash, Gumbulak, Dzharkuduk-Yangi Kyzylcha".

Customer: "LUKOIL Uzbekistan Operating Company" LLC.

Contractor: KNM PROCESS SYSTEMS SDN. BHD. (Malaysia).

Scope of work:

- Provision of written comments in terms of project documentation for facility "External water supply to Adamtash, Gumbulak and Djarkuduk-Yangi Kyzylcha fields" developed by OJSC "Uzsuvloyiha".

- Provision of technical and engineering services in order to bring the project documentation in compliance with Customer requirements.

- Provision of technical and engineering services in order to bring the project documentation in compliance with the normative documents and regulations of the Republic of Uzbekistan, and the requirements of "LUKOIL Uzbekistan Operating Company" LLC.

Terms of project execution: 2011

CONSTRUCTION OF A BOOSTER COMPRESSOR STAITON AT NAVOI TPP

The first successful application of Project Management solution in Uzbekistan.

Customer: State Joint Stock Company "Uzbekenergo"

General Contractor: None

Term of object realization: 8 months from the date of signing the contract for Project Management.

Project: Construction of Booster Compression Station (BCS) to provide steam-gas plant-478 MW with fuel gas and auxiliary equipment and infrastructure. The capacity is 90,000 nm3/hour. 2 centrifugal compressor units with electrical drive.

Scope of work: During the project implementation, the active application of project management scheme allowed the Customer to refrain from the scheme of project transferring to a single general contractor, as well as significantly reducing the project cycle. Considering average duration of similar projects in Uzbekistan of 24 months, "Uzbekenergo" has completed the whole project in 8 months from the date of engagement of "East-West Engineering" LLC in the project. Basic and detailed design was fully done by the company in Uzbekistan.

Date of project execution: 2011-2012

"UTILIZATION OF LOW-PRESSURE GASES OF SOUTH KEMACHI, KRUK, WESTERN KRUK, NORTHERN URTABULAK AND UMID FIELDS" PROJECT, WITH THE CONSTRUCTION OF BCS "SOUTH KEMACHI"

End Customer: JV of GAZPROM in Uzbekistan

General Contractor: "Enter Engineering PTE" Ltd. (Singapore)

Project purpose: Construction of low-pressure gases' gathering system and booster compressor station (BCS) for utilization of associated petroleum gases in the volume of 2.6 million m3/day (0.955 billion m3/year), extracted from the active flare systems of oil and condensate degassing on Western Kruk, Kruk, Northern Urtabulak, Umid fields and separated gas of CGPU Southern Kemachi followed by supply of compressed gas to CGPU Southern Kemachi to treat it for further transport to CPF for processing.

Scope of work: Development of Technical Specifications (TS) on turnkey terms, Feasibility Study for the project and development of the detailed design documentation:

Stage – 1. Development of technical conditions for construction of the facility "Utilization of low-pressure associated gases on Southern Kemachi, Kruk, Western Kruk, Northern Urtabulak, Umid fields" on turnkey terms.

Stage – 2. Development of the TEO (FEED) for the project.

Stage – 3. Development of the Basic Design.

Stage – 4. Development of detailed design documentation in complete set and in the volume, required for the implementation of the facility construction.

Stage – 5. Field supervision on construction works.

Terms of project execution: 2013-2015

CONSTRUCTION OF BOOSTER COMPRESSION STATION (BCS) AT THE NORTHERN NISHAN FIELD, UZBEKISTAN

Customer: JV of Gazprom in Uzbekistan

Project purpose: Construction of the booster - compressor station at the Northern Nishan field on a turnkey basis for the purpose of pressure maintenance at the inlet of gas treatment facilities during formation pressure depletion. BCS will supply gas compression coming from gas condensate fields in volume of 6.02 million m3 per day with output pressure equal to 31.5 bar (g) in the start of operation (2014) and 1.6 milln.m3 per day with input pressure of 5,0 bar in the end of operation period (2033). Output pressure from BCS is 80.0 bar.

Scope of work:

Stage-1: Development of TEO (FEED) and support during endorsement in State agencies.

Stage-2: The elaboration of the Basic design of BCS, which includes issuance of basic design solutions. At this stage the main engineering solutions were released covering all sections of the project, technological calculations, technological schemes, data sheets, specifications and equipment lists.

Terms of project execution: 2013

CONSTRUCTION OF A PLANT FOR THE PRODUCTION OF SYNTHETIC FUEL (GAS-TO-LIQUID) GTL IN UZBEKISTAN

End Customer: “OltinYol GTL”, Uzbekistan

Scope of work for 2012:

General contractor: Technip (Italy)

Development of FEED2 stage. The role of SCATRA Limited during the development of FEED2 stage is the conceptual design of the main buildings, as well as the detailed design of building structures of technological equipment and pipe racks.

Scope of work for 2014:

End Customer: “OltinYol GTL”, Uzbekistan

General contractor: "Hyundai Engineering Co.," Ltd. (Korea)

- Revision of design documentation of fire protection for the compliance with requirements of the Republic of Uzbekistan in the frames of Uzbekistan GTL project;

- Rendering consultative services on fire safety in the frame of the project on production of liquefied synthetic fuel GTL (GAS-TO-LIQUID) in the Republic of Uzbekistan;

- Revision of design documentation of fire protection for the compliance with norms and rules effective on the territory of the Republic of Uzbekistan;

- Performance of Category Calculations of premises, buildings and external installations of CPF and Kandym group of fields on explosion and fire safety as per ShNK 2.01.19 in the frame of the project “Construction of a plant on production of liquefied synthetic fuel GTL (GAS-TO-LIQUID) in Uzbekistan.

CONSTRUCTION OF CENTRAL PROCESSING FACILITY (CPF) AND DEVELOPMENT OF KANDYM GROUP OF FIELDS IN THE REPUBLIC OF UZBEKISTAN

Customer: "LUKOIL Uzbekistan Operating Company" LLC.

General Contractor: "Hyundai Engineering Co.," Ltd. (Korea)

Project purpose: Development of gas fields (Kandym, Accum, Parsankul, Hodge and Western Hodge) located in Karakul area of Bukhara region of the Republic of Uzbekistan.

The plans of development of Kandym group of fields include execution work package on creation of the unique production facility that will include:

- more than 100 producing gas wells;
- gas gathering system, pipelines of more than 400 km length;
- gas processing plant with capacity of 8.1 billion m3 per year;
- export gas pipeline of 70 km length;
- railway line of 56 km length;
- the offsite motor roads of 120 km length;
- water supply facilities, including pipelines of 90 km length;
- external power supply facilities (220 kV HV line, n/s 220/110/35 kV);
- gas turbine power station with capacity exceeding 80 MW;
- camp for 1380 people;
- central support base;

- commodity park and products loading terminal;
- treatment facilities;
- booster compressor stations.

Scope of work for 2013:

The role of work at development of FEED stage is the design documentation adaptation to the norms and regulations currently in force in the Republic of Uzbekistan, as well as support in obtainment of necessary permits and approvals during project implementation.

Scope of work for 2014:

Scope of work included following list of works:

- Performance of category calculations of premises, buildings and external installations of CPF and Kandym group of fields on explosion and fire safety as per ShNK 2.01.19 in the frame of the project "Construction of CPF complex and development of Kandym group of fields";

- Revision of design documentation for the compliance with norms effective on the territory of the Republic of Uzbekistan;

- Development of the industrial safety declaration of the hazardous production facility "Construction of CPF complex and development of Kandym group of fields" of project documentation developed at FEED stage.

Scope of work for 2015:

- Performance of detailed design of non-process elements for CPF and Kandym group of fields on Gas Gathering System from the wells up to the CPF, including motor-roads, 10kV-35Kv high-voltage lines, civil structures, optical cables, external water supply pipelines etc.

Scope of work for 2016:

Scope of work included following list of works:

- Development of a summary resource registry for wells

- Development of the Design Documentation for 10kV Power Supply to Pig Receiver of Export Gas Pipe Line

- Development of Design Documentation (rack, condensate loading system, diesel fuel and methanol receiving area)

- Site Supervision

Scope of work for 2017:

Scope of work included following list of works:

- Site Supervision

"EARLY GAS OF KANDYM GROUP OF FIELDS AND DEVELOPMENT OF THE NORTHERN PART OF SHADY AREA". KUVACHI ALAT FIELD. 1ST START-UP COMPLEX.

End Customer: “LUKOIL Uzbekistan Operating Company”.

General contractor: “HYUNDAI Engineering” (Korea)

Project purpose: Development of Kuvachi-Alat field located in Karakul district of Bukhara province of the Republic of Uzbekistan, for extraction of natural gas and associated condensate in the volume of 1.86 billion m3/year. 12 production wells are located on the contract site. Development of the northern part of Shady area, located in Alat district of Bukhara province of the Republic of Uzbekistan, for extraction of natural gas and associated condensate in the volume of 0.7 billion m3/year. 9 production wells are located on the contract site.

Scope of work:

- Development FEED designs documentation.

- Development of detailed design documentation for the facilities of “Kuvachi Alat” and Northern Shady field, as well as authorized supervision for construction period, namely:

- Development of the wells;

- Gas flow lines from wells to the gas gathering station;

- Gas collector pipeline from GGS to PGPU;

- Metered gas collector pipeline from GGS to PGPU;

- Overhead line 10 kW;

- Cathodic protection and power supply system for CP means and gas flow lines;

- 55 km gas pipeline from Kuvachi Alat PGPU to Northern Shady PGPU;

- Automobile road with total length of 100 km;

- Development of plot plans for wells, GGS, water intake facility and PGPU;

- Development of buildings and structures at the PGPU.

Terms of project execution: 2014-2015

DEVELOPMENT AND ADAPTATION OF DETAILED DESIGN FOR THE FACILITY "FIELD SUPPORT BASE ON THE FIELD DJARKUDUK-YANGI KIZILCHA"

End Customer: "LUKOIL Uzbekistan Operating Company" LLC.

General contractor: "Enter Engineering PTE" Ltd. (Singapore)

Scope of Works included development and correction of the documentation. Design documentation is developed as per approval part of the detailed design.

Terms of project execution: 2014

CONSTRUCTION OF THE BOOSTER COMPRESSOR STATION ON ALAN FIELD

End Customer: "Mubarekneftegaz" USC.

General contractor: KMPO Motor Ltd (Russia)

Project purpose: BCS is used for compression of the gas in the volume of 5 billion m3/a year.

Scope of work: Development of basic and detailed design, as well as authorized supervision.

Stage - 1. Development of main technical solutions for all disciplines, process calculations, development of process flow diagrams (P&ID), data sheets.

Stage - 2. Development of design documentation in complete set and in the volume, required for the implementation of the facility construction.

Stage - 3. Provision of field construction supervision.

Terms of project execution: 2014-2015

CONSTRUCTION OF THE BOOSTER COMPRESSOR STATION (BCS) – 2 ON THE SHURTAN FIELD

Customer: "Shurtanneftergaz" USC.

General contractor: KMPO Motor Ltd. (Russia)

Project purpose: "Booster compressor station–2 at Shurtan field" is used for compression of the gas with falling inlet pressure from 2.0 to 0.5 MPa, which is compressed up to 3.6 MPa in order to provide effective work of existing BCS-1 Shurtan.

The gas compressing capacity of the BCS is expected to be 25.8 million m3/a day in the year 2015 and 6.1milln.m3/ a day in the year 2030. The gas for BCS-2 input is provided from the outlet of the preliminary gas-processing unit PGPU- 1, 2 Shurtan and from Shurtan group of fields.

Scope of work: Development of basic and detailed design, as well as authorized supervision.

Stage - 1. Development of main technical solutions for all disciplines, process calculations, development of process flow diagrams (P&ID), data sheets, specifications and list of equipment

Stage - 2. Development of design documentation in complete set and in the volume, required for the implementation of the facility construction.

Stage - 3. Provision of designer supervision of construction works.

Terms of project execution: 2014-2015

CONSTRUCTION OF USTYURT GAS CHEMICAL COMPLEX

End Customer: "Uz-Kor Gas Chemical " LLC.

General contractor: Samsung Engineering Co.Ltd., Hyundai Engineering Co.Ltd., GS E&C

Project: Construction of Ustyurt Gas Chemical Complex

Scope of Works: Provision of engineering services to UGCC

Terms of project realization: 2013-2016

CONSTRUCTION OF CAUSTIC DISSOLVING UNIT AT UGCC

Customer: Bernet LTD.

Project: DETAIL PROJECT Development of Caustic Dissolving unit Unit at Ustyurt Gas Chemical Complex

Scope of Works:

- Adaptation of design documentation,

- DD documentation development,

- Provision of technological solutions, design supervision

Terms of project realization: 2013-2016

EXPANSION OF NAVOI TPP AND CONSTRUCTION OF THE SECOND CCPP WITH CAPACITY OF 450MW

End Customer: State Joint Stock Company "Uzbekenergo"

General contractor: Mitsubishi Corporation и Mitsubishi Hitachi Power Systems (MHPS)

Customer: Çalık Enerji A.Ş.

Project: Construction of CCCP-2 with capacity 450MW

Scope of Works:

- Perform works on determination of categories on fire and explosion safety of the premises, building and exterior installation in accordance with ShNK – construction regulations no 2.01.19-09 under the project “Expansion of Navoi TPP with Construction of the second combined cycle gas turbine with capacity of 450 MW (CPP Navoi-2)” and its approval in the respective state authorities of RUz.

- Review of detailed design and requirements of the legislation of RUz and issuance of recommendations to developed detailed design in a form of comment in English.

- Development and approval of the detail design documentation for installation of an additional pipeline-receiver in the fuel gas supply line of CCP-2 and Navoiy TPP.

Term of project realization: 2016 - 2020

CONSTRUCTION OF CCCP TURAKURGAN

End Customer: State Joint Stock Company "Uzbekenergo"

General contractor: Mitsubishi Corporation

Customer: Çalık Enerji A.Ş.

Term of object realization: 3 years

Project: Construction of CCCP with capacity 2x450MW

Scope of Works: Perform works on determination of categories on fire and explosion safety of the premises, building and exterior installation in accordance with ShNK – construction regulations no 2.01.19-09 and its approval in the respective state authorities of RUz.

Review of detailed design and requirements of the legislation of RUz and issuance of recommendations to developed detailed design in a form of comment in English.

Term of project realization: 2016 – 2019

CONSTRUCTION OF UZBEKISTAN NAVOIY FERTILIZER

End Customer: State Joint Stock Company "Navoiazot"

General contractor: Mitsubishi Corporation и Mitsubishi Hitachi Power Systems (MHPS)

Customer: Mitsubishi Heavy Industries

Project: Construction of Uzbekistan Navoiy Fertilizer

Scope of Works: certain Professional Engineering Services including design work and design review, technical consultancy while construction and firefighting system installation, market research for implementation of applicable equipment in the project, delivery, mounting and start-up and commissioning of the firefighting equipment; installation and technical maintenance of the CCTV systems; delivery and mounting of illumination devices; delivery and mounting of the electric power supply systems for HVAC; organization of an independent CCTV system; start-up and commissioning of the firefighting system.

Term of project realization: 2017 – 2020

EXTERNAL BATTERY LIMITS FOR UZBEKISTAN GAS-TO-LIQUID PROJECT

End Customer: OLTIN YO'L GTL

General contractor: JV Hyundai Engineering & Construction Co., Ltd.

Customer: JV Hyundai Engineering & Construction Co., Ltd.

Project: UZBEKISTAN GAS-TO-LIQUID PROJECT

Scope of Works: External Battery Limit (EBL) design, support services to obtain permit from State Bodies.

ID-OBL-EBL-005 Ethylene Supply System

ID-OBL-EBL-006 Effluent Water Drainage System

ID-OBL-EBL-012 Emergency Exit and Construction Access Road

ID-OBL-EBL-016/017 Communication System from/ to SGCC (ESD/DCS)

Term of project realization: 2017 – 2019

CONSTRUCTION OF BOOSTER COMPRESSOR STATION (BCS) AT SURGIL FIELD

End Customer: JV «Uz Kor Gas Chemical» LLC

General contractor: As per bid results

Customer: JV «Uz Kor Gas Chemical» LLC

Project: Construction of Booster Compressor Station (BCS) At Surgil Field"

Scope of Works: Elaboration of the technical part of bidding documents under the project "Construction of Booster Compressor Station (BCS) at Surgil field" to select EPC Contractor.

Term of project realization: 2019 - 2020

CONSTRUCTION OF THE FACILITY "ON-SPEC CONDENSATE LOADING UNIT TO RAIL CARS AT KANDYM CPF. POL AND METHANOL RECEIVING AND STORAGE AREAS AT NON-PROCESS AREA"

End Customer: "LUKOIL Uzbekistan Operating Company" LLC.

General contractor: SC Kashkadaryo Neft-Gaz Qurilish va Tamirlash

Customer: SC Kashkadaryo Neft-Gaz Qurilish va Tamirlash

Project:

- Development of Detail design documentation and modification of detail design as per the results of equipment manufacturer allocation,

- Design supervision while construction

Term of project realization: 2019 – 2020

CONSTRUCTION OF A MULTIFUNCTION COMPLEX NEST ONE ON THE TERRITORY OF IBC TASHKENT CITY

End Customer: MURAD BUILDINGS

Customer: OZGUVEN TASARIM MIMARLIK INSAAT SANAYI VE TICARET A.S.

Project:

- Development of the Special technical conditions (STC) for the Project together with the Customer and providing it for the revision and approval of the Minstroy (Ministry of Construction), as well as approval and technical support of the Customer during the approval process;

- Development of additional calculations for the STC, if required;

- Revision of the detail design documentation for the compliance with the norms and requirements of the legislation of RUz and provision of the recommendations to the developed detail design documentation in the form of comments in English;

- Support during development of detailed design and analysis of design solutions used by the Customer;

- Consultation of the Customer during development of the documentation up to the Approved For Construction (AFC) revision, required for construction activities in Uzbekistan, providing timely advise and instructions on data submission and documents customization and formatting in accordance with the legislation of RUz.

- Support during expert review of detailed design developed under the Project in Minstroy; Timely provision of information on the status and comments received from Minstroy;

- Design of all the connections to the external communications (connection to the gas, water and electric supply networks, etc.).

Term of project realization: 2019 – 2020