

OIL SERVICES & GENERAL CONTRACTS

This Manual highlights the nature of DACO works in Iraq. It includes the full information about the company, background, the company management system, fields of work, capacities, equipments, staffers, the projects and a reference to the official documents of the company



((Introduction))

continuously energy demand combined with increasingly limited natural resources are challenging energy suppliers, industry as well as consumers to re-think how we produce and use energy. Energy efficiency, smart energy use, and energy savings are keys to meeting this challenge in a sustainable way.

Energy efficiency involves the entire chain of energy conversion – from effective generation to transmission and distribution of electrical energy to economical use in industry transportation, buildings and other consumers. Especially in the hot and sunny countries.







Dya'a AL Anwar Co. is Iraq leader with 8 years experience in providing the oil and industry with a wide range of EPC oil and Gas services using state techniques proven technologies.

Dya'a AL Anwar Co. is indigenous Iraq multi- discipline Oil field solutions provider operating under international standards while continuously raising the benchmark of customer satisfaction. Dya'a AL Anwar Co. provides engineering procurement and construction services for the Oil & Gas fields development. Dya'a AL Anwar Co. headquarters are located in Iraq-Baghdad with branches in different parts of Iraq and the operational bases are strategically located in Baghdad with local support infrastructure positioned to provide rapid response to clients operational requirement.

Dya'a AL Anwar Co .has provided equipment and service support, to cover the widest and sophisticated services, always with the highest regard to health, safety and the environment





To accelerate our growth profitably and sustainable by strengthening our commitment to our client and ensuring that we provide them with innovative cost effective, safe and accident free service

Our Visions

To become a leading provider of oil field services in Iraq.



Our values

We have more them 750 employees at 5 different locations in Iraq, representin g different cultures, we are the staff of DYA'A AL-ANWAR Co. guided by the following values

Customer satisfaction

We believe that key to our success is the customer's satisfaction. We are dedicated to satisfying customers ; we strive to exceed their expectation in afford ability ,quality and on time delivery

Team spirit

Our team spirit binds us together, surpassing geographic boundaries. We fully grasp the another in recognition that our effort will translate into excellent solutions and services

Integrity

We are committed to conduct ourselves in a manner coherent with the utmost standards of behavior including honesty and fairness. We keep our word deliver on our promises, and recognize our mistakes. Business behavior ensures that we are a company, worthy of trust







Engineering, procurement and construction, EPC is method of project delivery in which one entity executes a single contract with the operator to provide for complete hydro-carbon facilities.

During the past decade the use and interest in EPC has greatly accelerated, with EPC the operator is able to focus on scope project needs, and timely decision-making rather than on coordination between the parties









Pre construction

The construction process consists of three distinct phases, pre-construction, construction, and post construction. We offer you a single source of responsibility for the entire project. This allows you one person to go to for every question or issue associated with the project. The result is streamlined communication which helps us strengthen our relationship with our clients and produces a quality facility meeting their expectations. The pre-construction phase is one of the most important parts of the construction process. Without proper planning preparation, we cannot ensure a successful project. The time spent on the front end of a project not only impacts the feasibility & success of the project, but also saves you time. The greatest opportunity for cost savings occurs during the pre-construction















Construction

Once construction begins, we continue to make it easy for you to keep up with the construction process. We keep you informed on a regular basis with progress photo books, weekly project up-dates and project coordination meetings as frequently as you desire. We consistently communicate proactively with your staff to avoid unnecessary interruption due to the construction process. In addition, we emphasize safety, job site cleanliness and overly job organization .after construction, we will provide you with a complete set of record documents for the entire project. This will allow you a quick reference for any of the components relating to maintenance or operation of the facility. We will also make a series of warranty or follow-up visits to ensure your total satisfaction





Supplying

DACo. Offering for supplying and supporting oil/gas projects as the following items: 1- LSA (life support area):

Living cabinets with fresh and suitable furniture

Internet and communication Service

•Restrant with professional staff. Iraqis, Turkish, Indians & Philippines.

•Fuels with full response and Authorized by Governments.

Power generation starting from 25KVA up toEtc.

•Technician staff and service laborious, Iraqis, Indians.

2- Project assistance tools and equipments:

•<u>Generators : all kind and manufacture as required</u> and any capacity that have to be needed.

• <u>Project equipments:</u> (4x4 Pickup all kind and latest Model),(Shovels, Graders, Excavators, Compactors, Trailers / Lowry, Loaders, Cranes (25T- 500T), Pile Driving Machines, Pile Drilling Machines, Sheet Piles, Forklift, Man lift. Scaffolding), (Elec. welding Machine ESAB, Elec, Cutters...Etc).

• <u>Manpower</u>: Fitters, Welders, Grinders, Helpers, Carpenters, Electrician, Mechanical Technician, laborious (Iraqis, Turkish, Iranian, Indian)

•Transportation: all Equipments, tools and Materials the port to the Site.

3- Materials:

•<u>Civil Materials</u>: Reinforcement Steel Bars, Anchor Bolts, Wooden Board, Wooden Thin Bar, Cements, Grouting Materials, Spacers, Sheet piles, Chemical hardness, SBR, steel and wooden Molds.

•<u>Mechanical Materials</u>: (CS, SS, RTRP, UPVC, PVC, HD) Pipes, Valves, Pumps, Elbows, T-Sections, Gages, Pigging Scraper & foam, Steel Plates, Coating and warping Materials, Climb Shoes.

•<u>Electrical Materials</u>: Generators , Transformer, ATS, Penal Boards, overhead steel structure, Cables & wires, PVC& Galvanize conduits, Cable tray, Terminals/accessories, lights....Etc.









Construction Management

To deliver major project on time and on budget while keeping costs and administrative burdens to minimum the DACO. construction management team provide

any or all the following services

Design	coordination and	review
Value	naineering and co	act analys

- *Construct ability reviews and assessments *Construction planning ,scheduling and contractor
- cooraination
- *Budgeting and cost control
- *0
- *Contract administration
- *Community and agency relations

DACO offers CM services in various forms, depending client preference and project needs on an "agency" basis, we serve as the owners representative to optimize cost, time and quality or we will handle CM on at risk basis, providing a guaranteed maximum price for cost of construction of the project and taking

on the dual role of construction ager and contractor. Construction management is provided as part of overall project program management which besides CM services described above, includes procurement and coordination of engineering and design. Our services described above, includes developing approving criteria for materials and equipment, developing bidding lists, evaluating bids and making recommendations to the owner, placing orders planning deliveries and making site inspections







General contracting

DACO. is reputation among operators and developers is a company offering top-quality work, integrity and reliable performance. For optimal performance the DACo. has focused on the development of strong professional staff and sophisticated system of support. Our quality associates along with our proven expertise in subcontractor management enable us to execute each construction contract with the highest degree of performance. We will control all element most critical to a project's quality, schedule and cost. Our commitment to quality extends to our subcontractors and suppliers. We have devised a system for qualifying, selecting and managing subcontractors and suppliers to assure top

performance within the framework of competitive bidding. To assure quality project delivery we:

-Pre qualify subcontractors and vendors.

-Include specific requirements for safety and quality in our bid documents.

-Inspect all materials upon receipt and continually monitor performance.

To obtain timely and reliable progress information, we use automated systems for estimating scheduling, reporting and cost control that promote effective management of general contracting opportunities





Our experience in the oil field development will cover the following services

CPF & WELL PAD CONSTRUCTION

Are you looking to enter to or expand into the natural gas & oil field CPF/ Wells market if so, can help. We have experience in the fields and services, engineering and site contracting services, crushed stone quarries and concrete in the asphalt batch plant, Steel Structure fireproofing, AG/UG Piping. Our services focus on safety for your site, primarily and we will provide the latest technology and services to ensure there are on leaks or accidents associated with your job site. Since ventures is a company dedicated to preserving the environment, as well as careful use of natural resources, we will make a perfect partnership when it comes to constructing your natural gas or oil well pad. Provides a full line of engineering, materials and construction services when we undertake your project. Our theme is design to done all you have left to do is drill! Engineering includes

Soil Investigation & Surveying
 Erosion and sediment planning
 Site civil and take-off planning

- Pre/ post construction erosion
- control monitoring

Construction materials include:

- Crushed stone/ Base Corse
- Concrete mix, concrete piles, Concrete T-walls
- Asphalt
- Fill material

Site construction includes:

- Land clearing
- Excavating and grading
- Pile driven
- Road construction
- Pipeline and utilities installation
- Pad construction
- Sump hole excavation
- Hydro seeding and soil
- stabilization





Speed of pipeline construction

The speed at which pipeline are built is one of the more serious constraints in preventing impacts. Most bog infrastructure takes many years to plan and build.

Completion of pipelines on the other hand often takes 24 to 36 months. This means it is even more important for the ESA of pipelines to begin as soon as the pre feasibility planning begins. Route selection, the main means of reducing impacts is often one of the first items planning by the engineers, we offer these to help services both turn –key-from design to done and individually, so whatever your level of need we are here to help you gat drilling, quickly and painlessly.

We would be glad to discuss any natural Gas and crude well pad and X –MAS tree construction opportunities with you.





• Pipe line layout :

Has the basic concepts on experience in this field by offering a fleet of machineries& equipment with high skilled manpower.

that

route

• Route selection :

Our experience show

selection is the first and most effective means of preventing impacts pipeline from the 3 environmental assessments of pipelines are neither new, nor setting. precedent The environmental assessment of pipeline impacts on vulnerable minorities, biodiversity, ethnic conservation units, and spill risks is standard practice in other projects by now. Of course each pipelines is different, but the methodologies and the types of impacts to be aware of have long since become standard.

As route selection most important means of reducing environmental social impacts, it needs to be the centerpiece of the ESA. Route selection is normally expected in the "Analysis of alternatives. Starting from one fixed point- the oil or gas reserve - there is major scope for directional drilling. For example, if a hydrocarbon reserve is located inside a "sensitive area" (e.g., indigenous peoples, а densely populated town, rich biodiversity, old growth forest, directional can avoid damage to these native area by drilling laterally as far as possible. Directional drilling technology is improving annually and needs to be fully exploited before contemplating any sensitive





Access roads:

The impacts from construction of access roads can and often dose the impacts of the pipelines right of -way (ROW). Routing the pipeline to minimize the length of access roads can be effective. Formal agreements to deactivate access roads and bridges immediately following construction helps reduce impacts greatly. Ensuring that the ROW cannot be used for transport or unplanned settlement, also major. Monitoring and prevents maintenance nowadays is increasingly feasible by helicopter, which greatly reduces the impacts of the project. Traffic accidents sustain ability demands zero loss of life or serious injuries. Planning for vehicular traffic is the first step. Wellknow accident reduction need to be emphasized. Proponent safety (seat belts, hard hats, visible clothing boots and signal) already is effective in better run project.

The impact of traffic the impact of converting a quiet country lane into a major highway with 50 heavy trucks a day is severe.

Pipeline construction traffic magnified into hundreds of heavy trucks every day. One of the most frequent complaints was that the rumbling trucks caused cracks in the old dwellings usually sited adjacent to the road. Such dwellings were made of wattleand –daub, log-and mud, mud bricks or low quality fired bricks so such cracking is expected. In this case best practice is to upgrade the dirt road into a sealed blacktop highway of the same width to avoid any resettlement. For the proponent to send in teams of lawyers to dispute the causes of the cracks engenders ill- will and is regressive.





Buried Vs. above- ground

pipelines were built above ground even when on harsh terrain such as permafrost muskeg. Associated brines may not been stripped off leading to rapid corrosion of the steel piping, many Siberian of oil pipelines are old leak but not enough to

warrant repair. Modern pipelines are buried, welds thoroughly inspected beforehand. Inner and cuter pipeline coatings are increasingly in improving protection and longevity of the steel pipe. Corrosion of steel is prevented by removal of water and salts. Catholic is becoming standard. Fiber – optics detect eve n minor very early leak or rupture. Trenching for buried pipelines is a dear impact but burial restoration helps land use to revert to normal, reducing long- term impacts, and the risk of sabotage, ruptures from traffic crashes or even drunken. Above- ground pipelines can impede passage of humans sheep flocks vehicles and wildlife and removes the often 50m-wide ROW from other land- use





Methodology :

There are two models through which we engage with project

- Plant piping projects with material
- Only labor with consumable, wherein the customer provides the pipes

and accessories

The approach of company to projects, is extremely pro- active, we plan and only then execute. We offer the services of 3D design of the plant and piping layout. This offers an indication, whether the piping design is in sync with the actual plant. If there are hindrances, then according the piping layout is changed so as to suit actual plant upon completion of layout design every project is divided in multiple phases according to the layout or size of pipes etc. the project manger then decides the phase-wise time lines of execution of project this helps them manage the project will. The teams are decided based on the phases and time line for execution. These operational efficiencies enable us to complete the project on time every time



Personnel:

The company has experienced professionals having worked extensively on pipe line projects and SS welding & fabrication. they have a experiences from anywhere between 10-35 years. Their experiences in respective filed helps company achieve timely execution with high degree of quality. From the above team the company assigns a project manager or project team, depending on the project size. Their rich experience helps the entire site crew to understand the project obligations& technical issues which in turn generate high level perform with perfection& guality. The company has a pool of experienced welders, pipe fitters riggers, helpers, etc. which facilitates the smart execution of the projects. The necessary workforce is deployed from this pool fd**r gac**i such project.



Welding technology :

Professional engineering skills are applied to customer requirements resulting in innovations to technical problems. The company's skilled workforce experienced engineering

Department and extensive service team are backed up with a range of in-house test and diagnostic facilities. Advantages of electron beam welding include a high power density with very low overall heat input and therefore minimum distortion. Electron beam welded parts require a minimum of post weld machining and heat treatment and unlike other fusion welding processes electron beam requires no shielding gases.

The weld quality is exceptional the process is extremely efficient (typically 95%) all the process parameters are carefully controlled and the process full automated. All electron beam welding machines are tested in accordance with BS EN ISO 14744 parts 1-6 acceptance inspection of electron beam welding machines.



Characteristics of electron beam welds include:

- Deep penetration
- Narrow fusion zone
- Inert atmosphere (vacuum)
- Near parent metal strength
- Minimum component distortion



The processing of components through a vacuum furnace can offer many advantages over conventional thermal. No surface oxidation or discoloration

Minimal distortion

- •No post cleaning operations
- Near finished, machined shape
- prior treatment
- •Flux free brazing
- •Combined
- vacuum/atmosphere
- processing
- Repeatable quality
- •Environmentally acceptable furnaces
- ·Clean, safe, quiet and efficient

 Parts are 100% dense and structurally sound moulds or tooling
 Intricate complex geometries can be made in a single operation whilst minimizing scrap and manufacturing
 Motal food stock can be wire fod

• Metal feed stock can be wire fed or powder





This layer- additive process is used to build using a controlled high energy electron beam to melt a pool on the substrate whilst metal feedstock adds material to build up the required part.

Electron beam out performs lasers with higher integrity coupling and better deposition rates
Thick section capability in a single pass

•Far less constraints compared with normal high vacuum FB welding •High process tolerance

- Robust system with high reliability
 Local application of vacuum can be very cost effective
- •Many application and materials •Can be fully automated





Welding Quality Management System

BD WELDING TECHNOLOGY quality system can identify all welds in any structure, when a weld was performed by whom and with which WPS, the material DI, etc. it can issue ND requisitions as registrations of NDT results with reports. Reports such as weld summary lists remaining welds and NDT extent and defect rate can be generated.

The application provides full traceability of all welds all activities on these during the whole production process

BD WELDING TECHNOLOGY quality system benefits include:

control and traceability in the whole production process

fulfillment of customer requirements

updated requirements from international standards

New and innovative IT technology

Re- use existing information

Easy re- certification tool

Effective compilation and recycling of welding procedures

Final as- built documentation can be printed as a complete package containing weld summary lists.







Welding personnel certificate and database :

- 1. BD WELDING TECHNOLOGY includes for personnel certificates and qualification which supports most international standards. The system automatically calculates range of certificates and has extensive search capabilities with options to print single certificates (batch print) certificate are covered – BD WELDING TECHNOLOGY, can find weld references for updating of welds certificates will greatly your control a prolongation (renewal)) tool will help you find welder certificates that in expire in a given time period along with production welds that be used as references for updating these certificates. The system will automatically find certificates that need six- month or two- years updates.
- 2. BD WELDING TECHNOLOGY contains pop-up menus to speed up data entry for values welding processes welding positions joint filler material etc
- 3. BD WELDING TECHNOLOGY personal and qualification database include





Catholic protection services and transformer rectifiers:

Has been providing successful catholic protection solutions to the oil, gas petrochemical water and power industries for over 20 years. Specific applications include:

- 1- CS, SS Pipeline for Oil/Gas /water Products.
- 2- AG/UG Storage Tanks.
- 3- Well Casing.
- 4- Sheet and Cylindrical piling .
- 5- Plant piping network.
- 6- Compressor Stations.
- 7- Concrete structure_ Bridge and pipeline
- 8- Cooling pipes for power stations







<u>Ground storage tank location and</u> foundation :

A storage tank is a container, usually liquids sometimes for compressed gases (gas tank). The term can be used for reservoirs (artificial lakes and ponds) and for manufactured containers. Storage tanks operate under no (or very little) pressure, distinguishing them from pressure vessels. Storage tanks are often cylindrical in shape perpendicular to the ground with flat bottoms and fixed or floating roof.

There are usually many environmental regulations to the design of storage tanks, often depending on the natural of the fluid contained within. Above ground storage tanks (AST) differ from underground (UST)storage in the kinds of regulation.

That are applied. Reservoirs can be covered in which case they may be called covered or underground storage tanks or reservoirs.

Covered water tanks are common in urban areas. Storage tanks are available in many shapes: vertical and horizontal cylindrical: open top and :flat bottom, slope bottom and dish bottom. Large tanks and to be vertical cylindrical, or to have rounded corners transition from vertical side well to bottom profile, to easier withstand hydraulic hydrostatically induced pressure of contained liquid. Most container tanks for handing during transportation are designed to handle varying degrees of pressure.





1- Flood support for diameter tanks:

Floor support, required with large diameter tanks can be provided without the need to cut holes in the tanks floor. The system can be used on any size tank, is safe and does not require hot work to be performed. This allows tanks which contain residue, have leaked or have not been gas freed to be safely lifted.

DACO. has lift technology creates the least possible in the tank by spreading loads over a considerable length of the tank shell. Foundation stresses are low and do not exceed the stresses generated under normal tanks operations.



Has experience in successfully and safely relocating tanks. Prior to any tank lift or relocation we perform a series of extensive engineering calculations on the tank into account not only the stress to the tank but also local conditions such as wind and seismic activity.

Tank relocation is a valuable tool for tank farm owners and operators allowing cost effective and time saving solutions to reclaim unused land or consolidate assets. This technology is now accepted around the world







25



3- Tank foundations:

We use an elevated compacted crushed rock foundation with a corrosion prevention asphalt cap (built like a road) for tank foundation. This raised foundation has been put test and has lived up to its design flawlessly after years of use.

The quality of our tank foundations is becoming widely accepted by many GULF and IRAQI companies as the industry standard. When built on good foundations tanks have 50 years or more.









DYA'A AL ANWAR COMPANY (DACO)

FOR OIL SERVICES & GENERAL CONTRACTING

No.	Equipments Name	Model/Capacity	Unit	QTY.
1				Trail
1]	Concrete patch Plant	120 m3/h	NOS.	4
2	Concrete Truck Mixer	Mercedes/Man	NOS.	12
3	Concrete Pump Truck	(28,36 & 42) m3	NOS.	6
4	Pile Driving Machine/Pile Drilling	Diff. Size	NOS.	3
5	Dozer	D-8 & D-7	NOS.	6
6	Shovel	Kawasaki & Komatsu	NOS.	9
7	Grader	Komatsu	NOS.	6
8	Excavator	Poclane	NOS.	8
9	Asphalt Paving Plant	160 m3/h	NOS.	2
10	(Steel roller & Sheep Foot)Compactor	Komatsu	NOS.	8
11	Dumper	Six Wheel	NOS.	10
12	Loader	Mercedes	NOS.	6
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No.	Equipments Name	Model/Capacity	Unit	QTY.
1	A STATE AND A STATE AND A	The last		ATT TOTAL
13	Side Boom	Caterpillar (D-283; 271)	NOS.	8
14	Cold Bend Machine	CRC	NOS.	3
15	Internal /External pipe Clamp	Global(10"36")	NOS.	9
16	Boring Machine	CRC	NOS.	2
17	Sand Blasting Machine	Airman	NOS.	6
18	NDE Equipments	Diff. Type	NOS.	12
19	Electrical Welding Machine	ESAB & LINCOLIN	NOS.	30
20	Diesel Welding Machine	LINCOLIN Sae-400	NOS.	25
21	Bay Welder	Caterpillar	NOS.	12
22	Generator	Diff. Size and Model	NOS.	30
23	Pipe Carrier Trailer	Mercedes	NOS.	6
24	Beveling Machine	Mech. & Manual Gas	NOS.	10
25	Consumable Welding Equipments	Diff. Type	SET	50
26	Man Lift	Diff. Size	NOS.	6
27	Fork lift	Diff. Size	NOS.	12
28	Tractor	Diff. Type	NOS.	30
29	Lighting portable Generator	Diff. Size	NOS.	12





Contact Persons:

Name	Job Title	Phone	E-Mail Address
Abas Atheeb	General Manager	00964- 7801545769	abas_daco@yahoo.com
Ridha Atheeb	Managing Director	00964- 7801070578	redhaatheeb@yahoo.co m
Ali Atheeb	Projects Manager	00964- 7801800860	ali_daco@yahoo.com

Typical Project Key Persons:

No	Positions	Name	Education	Tota l Exp. Year	Total Exp. In this occupat ion
1	Director Manager	Ridha AL Zerkani	B.Sc. Mech. Piping Eng.	10	10
2	General Manager	Abas A.Mohammed	M.Sc. Adminstation	20	12
3	Projects Manager	Ali A. Mohammed	B. Sc. Civil Eng.	12	8
4	Executive Manager	Hamza . Al Zerkani	B.Sc. Mech. Eng.	8	8
5	Construction Manager	Tha'ar Bashar	B. Sc. Mech. Eng	6	5
6	QA/QC Manager	Thu Alfakar Adnan	B.Sc. Man. Eng.	10	8
7	HSSE manager	Haider Ali Bilal Ibraheim	B.Sc. Elec. Eng B.Sc. Neu. Eng.	8 10	8 10
8	Civil Manager	Maher Abd	M.Sc. Civil Eng.	6	6
9	Mechanical Manager	Ridha Mohammed	M.Sc. Mech. Eng.	6	6
10	Electrical Manager	Haider Nsaif	M.Sc. Elect. Eng.	10	10
11	Piping Manager	Ahmed Amana	B.Sc. Welding Eng.	5	5



DYA'A ALANWAR COM IPANY

Address: First Branch : Karada - Baghdad -Iraq Second Branch: AL Mashrua-Kut - Wasit -Iraq **Third Branch** : AL Jassa'aer-Basra – Iraq

redhaatheeb@yahoo.com **Email Address:** redhaatheeb@daco-

aq.com elephone: (+964) - 0-7904754213) (+964) - 0-7801070578) (+964) - 0-7801800860)

Veb Site: www.daco-iraq.com