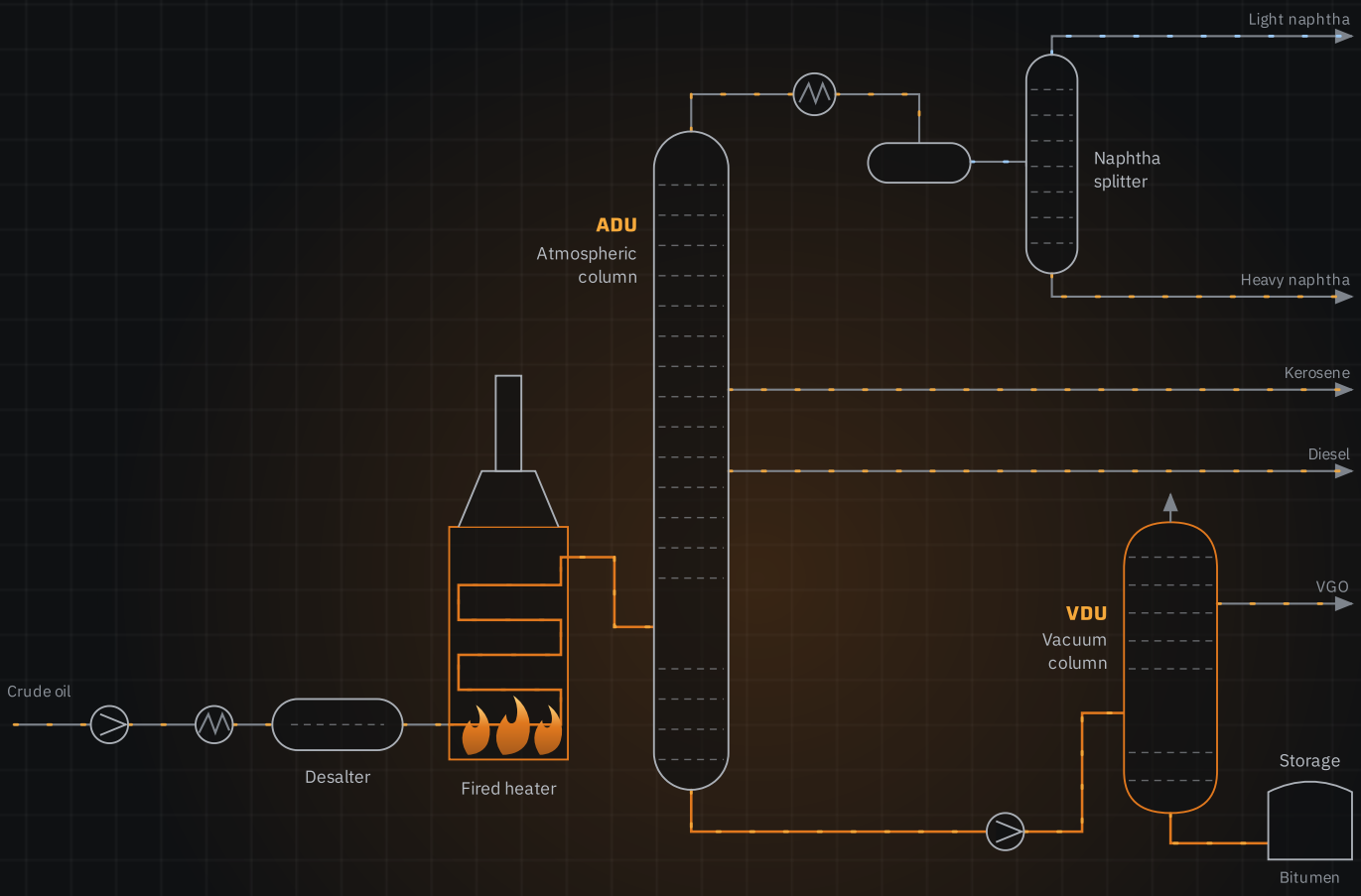
ALSHIMAL
TECHNOLOGY



Company Profile

Refinery and process engineering, EPC: design, fabrication, construction and commissioning for Iraq’s oil and energy sector.

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www.alshimal-tech.net

Who we are

One team for the whole process line.

ALSHIMAL TECHNOLOGY is an Iraqi engineering company founded in 2019 and headquartered in Baghdad, with a second office in Kirkuk. We design, deliver and manage industrial and oil projects, from complete mini refineries to individual process units and the equipment inside them.

Process engineering and mechanical engineering sit under one roof, so the decisions made in the process model are understood by the teams who fabricate, install and commission the plant.

Our Research & Development department produces detailed drawings, 3D models, calculation reports and bills of materials to ASME, ASTM, API and TEMA. Our site teams then fabricate, install, inspect and start up the unit, and we can operate mini refineries through SCADA control systems.

2019
Founded in Iraq

2,000 t/d
Largest unit capacity delivered

6
Reference projects

6
Governorates: Karbala, Basra, Najaf, Salah al-Din, Diyala, Diwaniyah

Our vision

Building Iraq’s energy industry with Iraqi expertise.

Our vision is to become the engineering partner Iraq relies on to build and modernise its refining industry. We want every project we touch to add lasting capacity to the country, and to show that world-class refinery engineering can be designed, built and run by Iraqi teams.

For investors

A project engineered from feasibility to start-up, so capital turns into production on schedule and returns can be planned with confidence.

For companies & contractors

A technical partner that brings design, fabrication and commissioning under one roof and keeps its commitments on quality and time.

For the public and private sectors

Engineering capacity ready to serve state companies and private industry alike, because Iraq’s energy sector grows fastest when both build together.

What we engineer

The whole refinery, not one unit.

Crude distillation (ADU)

Atmospheric units that fractionate crude into naphtha, kerosene, diesel and residue.

Vacuum distillation (VDU)

Vacuum columns that recover gas oils from atmospheric residue.

Naphtha splitting

Splitter columns that separate light and heavy naphtha to product specification.

Bitumen & asphalt oxidation

Air-blown oxidation units producing paving and industrial grades.

Fired heaters & heat exchange

Furnaces, preheat trains and air coolers sized from the process model.

Storage tanks & terminals

API 650 tanks, loading and unloading stations, and transfer pumping.

Services

Process engineering & simulation

- Process simulation of refinery units
- Heat & material balances
- Computational fluid dynamics (CFD)
- Atmospheric & vacuum distillation design

Mechanical design & analysis

- Mechanical analysis
- Shell-and-tube heat exchangers
- Air coolers
- Pressure vessels & columns

Detailed engineering & R&D

- 3D modelling
- Detailed fabrication drawings
- Project & plot layout
- Calculation reports

Procurement & fabrication

- Global procurement services
- Materials management
- Logistics optimisation & management
- Subcontract management

Construction, inspection & commissioning

- Project & site management, supervision
- Welding: TIG, MIG, SMAW
- Manufacture & field erection of process equipment
- Pump installation, alignment & maintenance

How we deliver

From simulation to start-up.

Simulate

Process model, heat & material balance, CFD.

Design

Equipment sizing and mechanical design to code.

Detail

3D model, drawings, calculations, BOM.

Procure & fabricate

Materials sourced; shop and field fabrication.

Construct

Erection, welding, NDT and hydrotests.

Commission

Start-up to SOP, then SCADA operation.

Equipment we design and build

Shell-and-tube heat exchangers	Thermal & mechanical design, drawings, fabrication	**TEMA · ASME**
Air coolers	Design, drawings, fabrication	**API · ASME**
Pressure vessels & columns	Mechanical design, calculation report, fabrication	**ASME**
Fired heaters	Design, drawings, field erection	**API**
Storage tanks	Design, fabrication, installation, lining	**API 650**
Piping systems	Shop & field fabrication, hydrotesting	**ASME**
Steel structures	Design, fabrication, erection	**ASTM**

Standards

ASME
Pressure vessels, piping and fabrication

API 650
Welded steel storage tanks

TEMA
Shell-and-tube heat exchangers

ASTM
Material specifications and testing



Reference projects

Units on stream across Iraq.

Bitumen plant

2,000 t/d

Integrated bitumen production plant

Location	Karbala Governorate
Client	Iraq Energy Co. (Iraq Altaqa) & Harlow International
Our role	Process design, supervision & QA/QC, start-up and operation

Marine fuel

• Under execution

Bunker fuel

Marine fuel production project

Location	Port of Basra Free Zone
Our role	Installation of the critical process equipment

Refinery

Refinery

Golden Refinery

Location	Najaf Governorate
Our role	Execution: construction and installation works

VDU + oxidation

2,000 t/d

Vacuum distillation & asphalt oxidation

Location	Salah al-Din Governorate
Client	Al-Manafith Al-Dawliya Co.
Note	Expanded from 500 t/d

VDU + oxidation

500 t/d

Vacuum distillation & asphalt oxidation

Location	Khanaqin, Diyala
Client	Al-Kahaf Co.

VDU + oxidation

500 t/d

Vacuum distillation & asphalt oxidation

Location	Diwaniyah Governorate
Client	Tareeq Al-Khibra Co.

Pump station

Port terminal

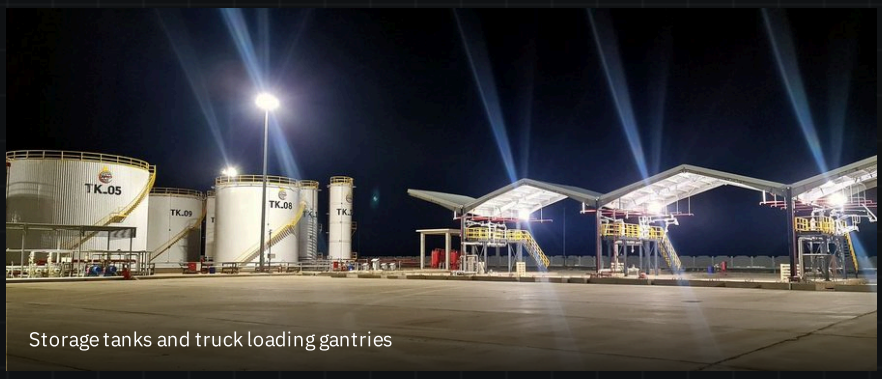
Loading & unloading pump station

Location	Umm Qasr port, Basra
Client	Janat Al-Firdaws Co.

On site

From the drawing board to the site.

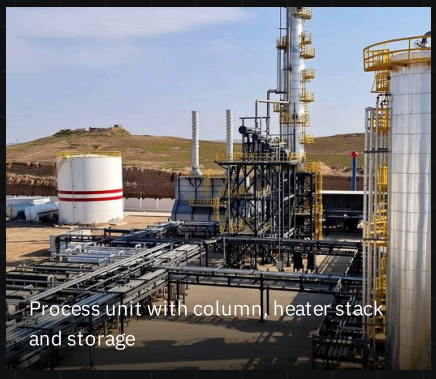
The same teams that design our units build, test and start them up.

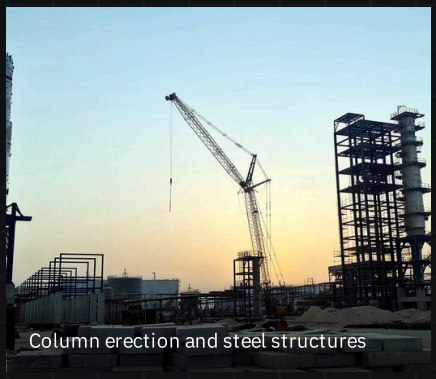


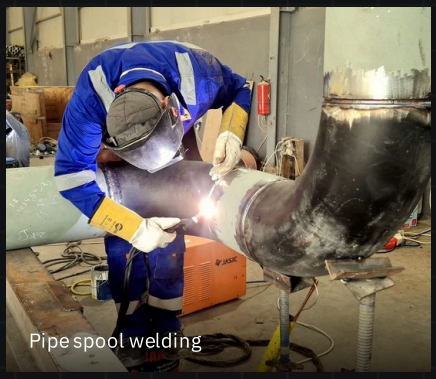
Storage tanks and truck loading gantries

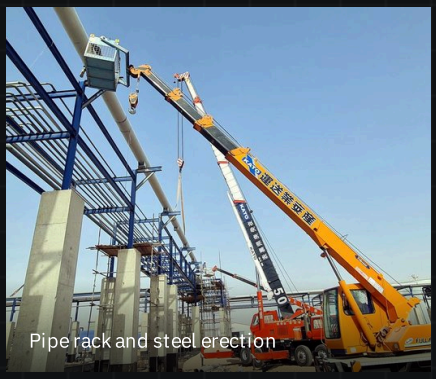

Distillation column and pipe racks


Iraq Al taqa project - Karbalaa


Process unit with column, heater stack and storage


Column erection and steel structures


Pipe spool welding


Pipe rack and steel erection

Leadership

The people responsible for your unit.

TW

Thaer Khider Wali

Chief Executive Officer & Founder

AJ

Ali Jameel

Head of Supervision & Follow-up

AS

Alaadeen H. Saleh

Head of Research & Development

OA

Omran Abd

Head of Inspection

Contact

Tell us about your unit.

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