DEHA TECH

COMPLETED PROJECT

EPC SPHERICAL TANKS PROJECT FOR TN MALEIK PETROKIMYA

LOCATION:
KOCAELI, TÜRKİYE

CLIENT:
TN MALEIK PETROKIMYA

COMPLETION:
2023

ENGINEERED TO PERFORM | BUILT TO LAST | DELIVERED GLOBALLY

Project Overview

The TN Maleik Petrokimya project in Kocaeli is a completed spherical pressure vessel package for N-Butane storage. The project scope highlights two major spherical vessels with a total package of 2 × 2,500 m^3.

2023	Completed	Kocaeli
Project Date	Status	Location

SERVICE

Fabrication & Procurement

Project Scope

- **V-2012 N-BUTANE SPHERICAL TANK**
- **V-2020 N-BUTANE SPHERICAL TANK**
- **2 PCS × 2,500 M^3 SPHERICAL VESSEL**

N-butane Storage; Large-scale spherical tank systems are used for pressurized storage where capacity, structural integrity and safe operation are critical.

Engineering

Design, calculations and engineering documentation.

Procurement

Procurement of certified materials and equipment.

Manufacturing

Fabrication and shop assembly of LPG spheres.

Construction

Site erection, piping integration and installation.

Testin & QA/QC

NDT, hydrostatic testing and quality inspections.

Documentation & Certification

Final documentation, certification and project handover.

Execution Flow

From package definition to completed site integration

01 Procurement

Material and package sourcing aligned with project requirements.

02 Fabrication

Controlled fabrication of spherical vessel components and support items.

03 Assembly Support

Site coordination for erection, alignment and system integration.

04 Final Completion

Inspection, documentation and completed project handover.

Engineering Highlights

Design basis and technical assurance.

The project was engineered in accordance with internationally recognized design codes and client specifications. Deha Tech performed the complete engineering process, including design calculations, structural verification, technical documentation, and multidisciplinary design coordination to ensure safe, reliable, and fully compliant execution.

Codes & Standards
Design performed in accordance with **ASME Section VIII Div.1, API 620, EN 13445, PED 2014/68/EU**, and applicable international standards.

Engineering & Design
Complete engineering for LPG spherical storage tanks, including design calculations, fabrication drawings, nozzle arrangements, support structures, and engineering documentation.

Analysis & Verification
Structural analysis, load calculations, stress verification, seismic and wind load assessments, and design validation in accordance with applicable engineering codes.

Documentation & Review
Preparation and review of engineering drawings, calculation reports, material specifications, inspection documents, quality dossiers, and final as-built documentation.

Manufacturing & Fabrication

Precision manufacturing under strict quality control.

Every stage of fabrication was performed at Deha Tech's manufacturing facility under controlled workshop conditions. The production process was executed in accordance with international quality standards, supported by continuous inspections, certified welding procedures, and comprehensive non-destructive testing to ensure the highest level of product reliability.

Fabrication Process

Material — Cutting — Fit-up — Welding — NDT — Painting — Assembly

Logistics & Transportation

From fabrication to destination.

The LPG spherical storage tanks were fabricated at Deha Tech's manufacturing facility in Kocaeli, Türkiye, and transported by heavy-duty road transport to the project site in the Gebze industrial region. The logistics operation included route planning, oversized cargo transportation, lifting coordination, and safe on-site delivery, ensuring timely execution in compliance with all applicable transportation regulations.

Item	Details
Fabrication	Deha Tech Manufacturing Facility, Kocaeli, Türkiye
Transportation Method	Heavy-Duty Road Transportation
Origin	Kocaeli, Türkiye
Destination	Gebze, Kocaeli, Türkiye
Final Delivery	Safe delivery to the project site for installation

Construction & Site Activities

Site Execution

Installation of two LPG spherical storage tanks, including structural assembly, piping integration, mechanical completion, hydrotesting, painting, insulation, and pre-commissioning activities, executed in full compliance with international EPC standards.

Safety Focus

The project was executed under strict HSE procedures, including controlled lifting operations, work-at-height management, permit-to-work implementation, continuous safety supervision, and zero-compromise safety practices throughout the construction phase.

Technical Configuration

Key technical elements

- Spherical pressure vessel geometry for efficient pressurized storage
- Leg-supported tank configuration with bracing
- Top access platforms and stair systems
- Integration with process piping corridors and plant utilities
- Coated exterior surfaces for long-term asset protection

Designed for high-capacity pressurized N-Butane storage in an industrial petrochemical environment.

Technical Data & KPIs

2 × 2,500 m^3 Capacity	**ASME / API** Design Code	**Project-specific** Material
Design value Pressure	**Total tons** Weight	**NDT / Hydrotest** Testing

Comparison Layout

BEFORE / OPTION A

AFTER / OPTION B

Project Journey

Engineering confidence through execution.

This project marked Deha Tech's first EPC spherical storage tank project and represented a significant milestone in the company's journey within the oil, gas, and petrochemical sectors. The successful execution of these large-scale spherical vessels demonstrated Deha Tech's capability to engineer, fabricate, and erect one of the industry's most technically demanding storage systems in full compliance with international standards. This achievement laid the foundation for numerous subsequent spherical tank projects and established Deha Tech as a trusted EPC contractor for large-scale pressurized storage solutions in the global energy and process industries..

Client -Focused Approach

Engineering Excellence

Multidisciplinary engineering for complex industrial systems.

Manufacturing Power

Fabrication capability for tanks, vessels, steel structures and equipment.

Quality Discipline

QA/QC, documentation, inspections and international project controls.

Global Delivery

Project execution across multiple sectors, geographies and client requirements.

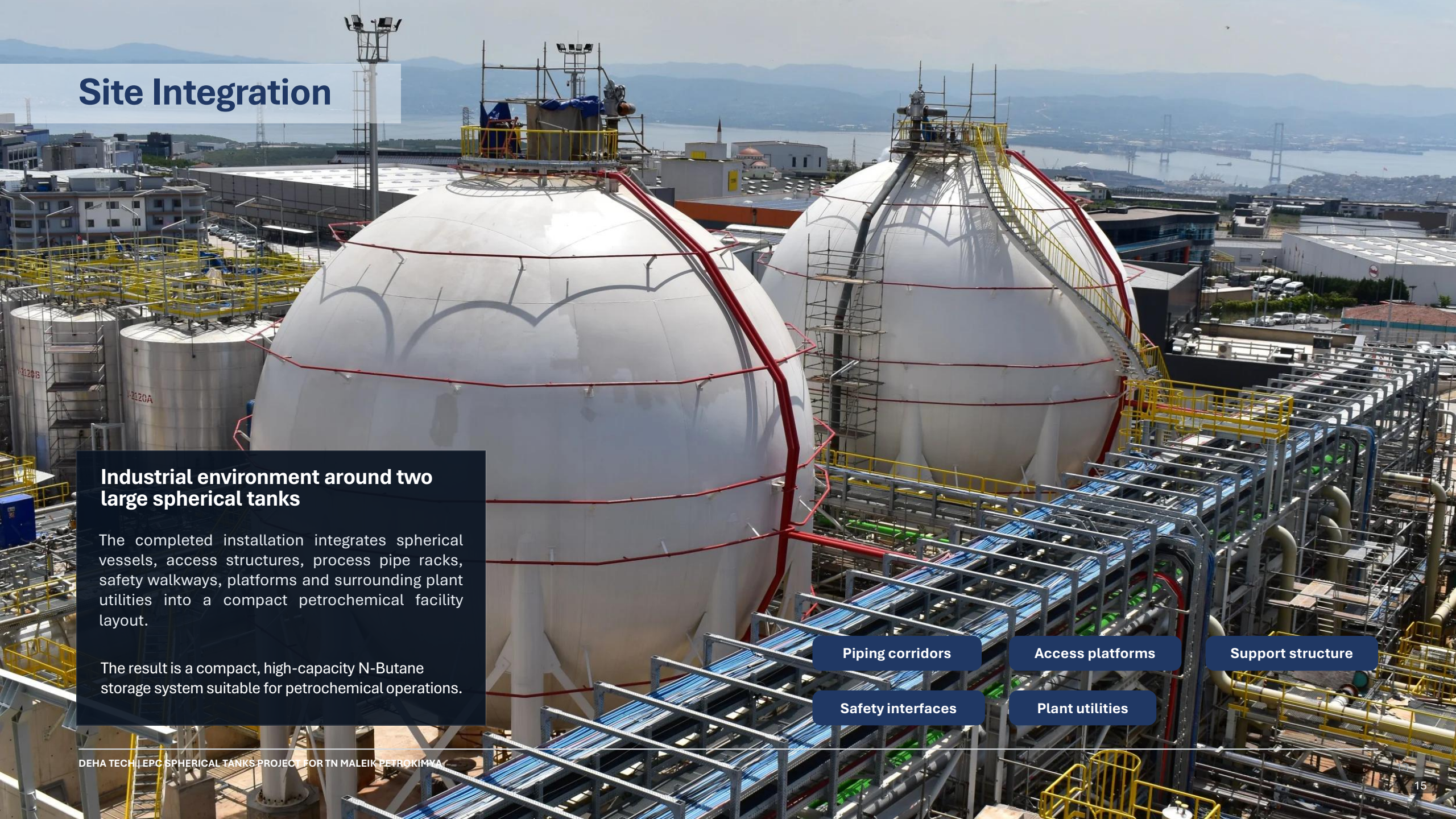
Country Reference Map

A standardized reference slide showcasing Deha Tech's project locations, market presence, and international project delivery experience, designed for consistent reuse across corporate presentations.

- Türkiye
- Spain
- USA
- Iraq
- Senegal
- Kazakhstan
- Germany
- Ghana
- Brazil
- Libya
- Uzbekistan
- Turkmenistan

Photo Gallery

Site Integration



Industrial environment around two large spherical tanks

The completed installation integrates spherical vessels, access structures, process pipe racks, safety walkways, platforms and surrounding plant utilities into a compact petrochemical facility layout.

The result is a compact, high-capacity N-Butane storage system suitable for petrochemical operations.

Piping corridors

Access platforms

Support structure

Safety interfaces

Plant utilities

SPHERE TANK

ENGINEERING • PROCUREMENT • CONSTRUCTION

THANK YOU

FOR YOUR TIME AND ATTENTION

> *Delivering safe, reliable and efficient storage solutions for a better tomorrow.*

SAFETY | QUALITY | COLLABORATION | EXCELLENCE

BUILT TO LAST.
ENGINEERED FOR THE FUTURE.