ZİRA PORT

MARINE INDUSTRIAL COMPLEX

GENERAL INFORMATION

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Zira Marine and Industrial Complex

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ADO-G Group is completing Zira Marine and Industrial Complex at Zira settlement, 50 km away from Baku, Azerbaijan. Currently, we are completing the construction of a railroad branch and an 80-ton STS crane on site. We expect to complete all necessary works for full transportation capacity until the summer of 2023.

The Port also provides services to the oil and gas exploration operations in the Caspian Sea to companies like BP, SOCAR, Total, etc.

Zira Marine and Industrial Center specializes in the following activities:

Port services
Logistics base for supporting offshore activities and trade-transport operations
Pool service, service/maintenance of oilfield equipment
Steel structure fabrication
Manufacturing of threaded pipes for oil and gas operations

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Location of Zira Marine and Industrial Complex

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Zira sea port provides services for various marine companies in the Caspian Sea. The area of the facility is sufficient for the construction of the Cargo Terminal, Passenger Terminal, and Storage Area. The center is close to the main highways via internal roads. The main railway is also fairly close by and accessible.

Figure 1: This figure shows where the center is constructed and nearby existing structures.

General specification of the facility

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General Specifications

General specifications of the facility
General specifications

Total area	38	hectares
Land area	12.98	hectares
Wavebreaker sea area	16	hectares
Pier area	2.2	hectares
Open fabrication area	60,000	square meters
Closed fabrication area	27,320	square meters
Mooring area	1,320	meters
Berth space length with minimum 8 meters	350	meters
Depth from open water to the port and quayside area	8-9	meters
Port approach channel width	90	meters
Bollards along the quayside to be minimum	25	meters
Height of the quayside from sea water to be minimum	3	meters

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Advantages

Advantages of Zira Seaport

Zira Seaport offers numerous advantages, highlighted by its strategic location and comprehensive technical specifications:

General Technical Characteristics:

- Total Area: 33.46 hectares
- Land Area: 17.46 hectares
- Water Area: 16 hectares
- Pier Area: 2.2 hectares
- Open Production Area: 60,000 sq. m
- Indoor Production Area: 27,320 sq. m
- Mooring Area: 1320 meters
- Length of Berth: 350 meters
- Depth of Canal and Seaport: 8-11 meters
- Channel Width: 90 meters
- Bollard Safe Working Load (SWL): 25 & 200 tons
- Height of Coast Above Sea Water: 3 meters

Shah Deniz Oil Fields:

- Independence: 23 miles (37 km)
- Shah Deniz: 25 miles (40 km)
- Heydar Aliyev: 30 miles (48 km)

Azeri, Chirag, Guneshli Oil Fields:

- DWG: 47 miles (75 km)
- West Chirag: 49 miles (78 km)
- Chirag: 51 miles (82 km)
- West Azeri: 53 miles (85 km)
- Central Azeri: 56 miles (90 km)
- East Azeri: 61 miles (98 km)

These specifications underscore Zira Seaport's capacity for handling diverse industrial operations, providing efficient logistics and substantial operational advantages for marine activities in the Caspian Sea region.

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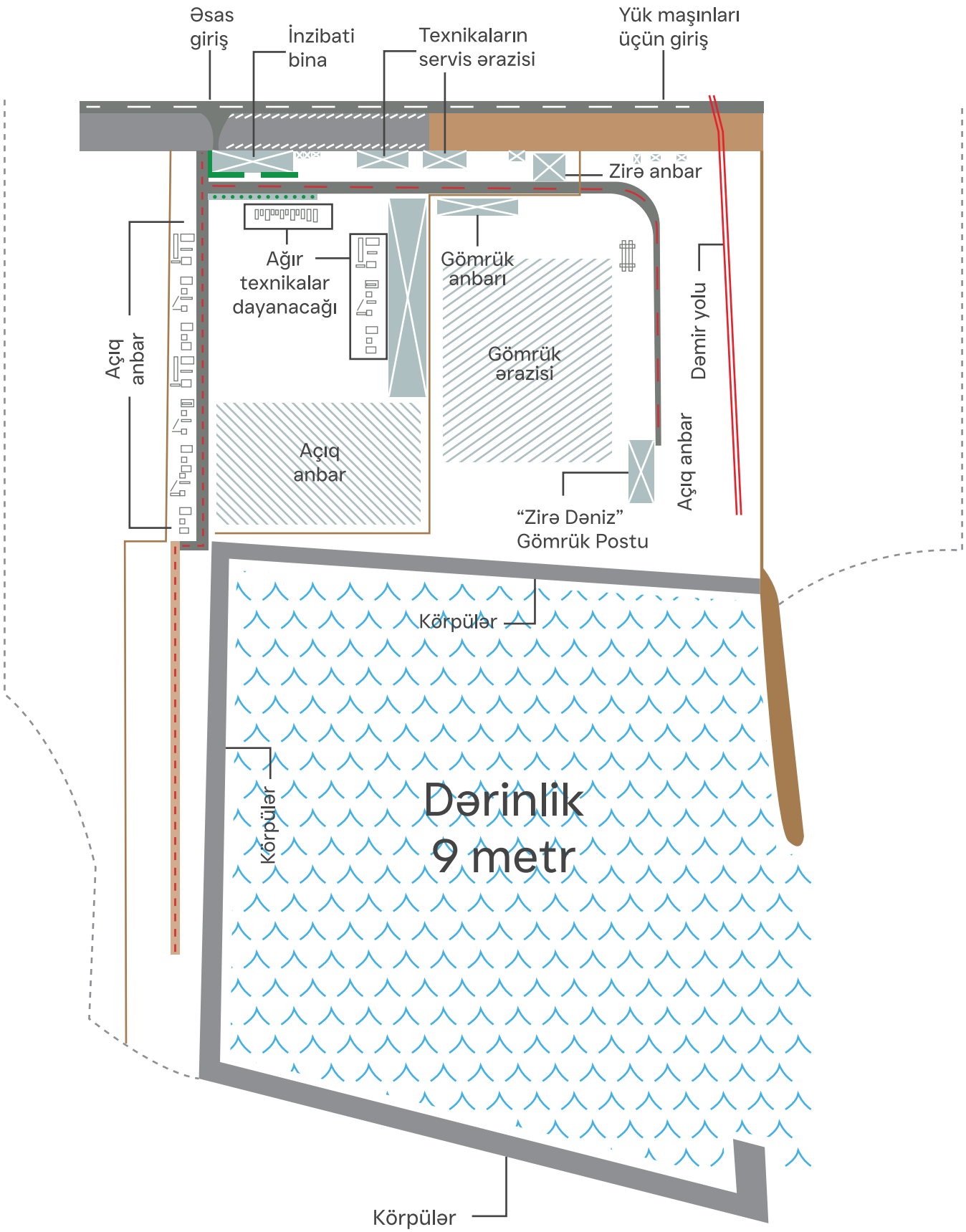

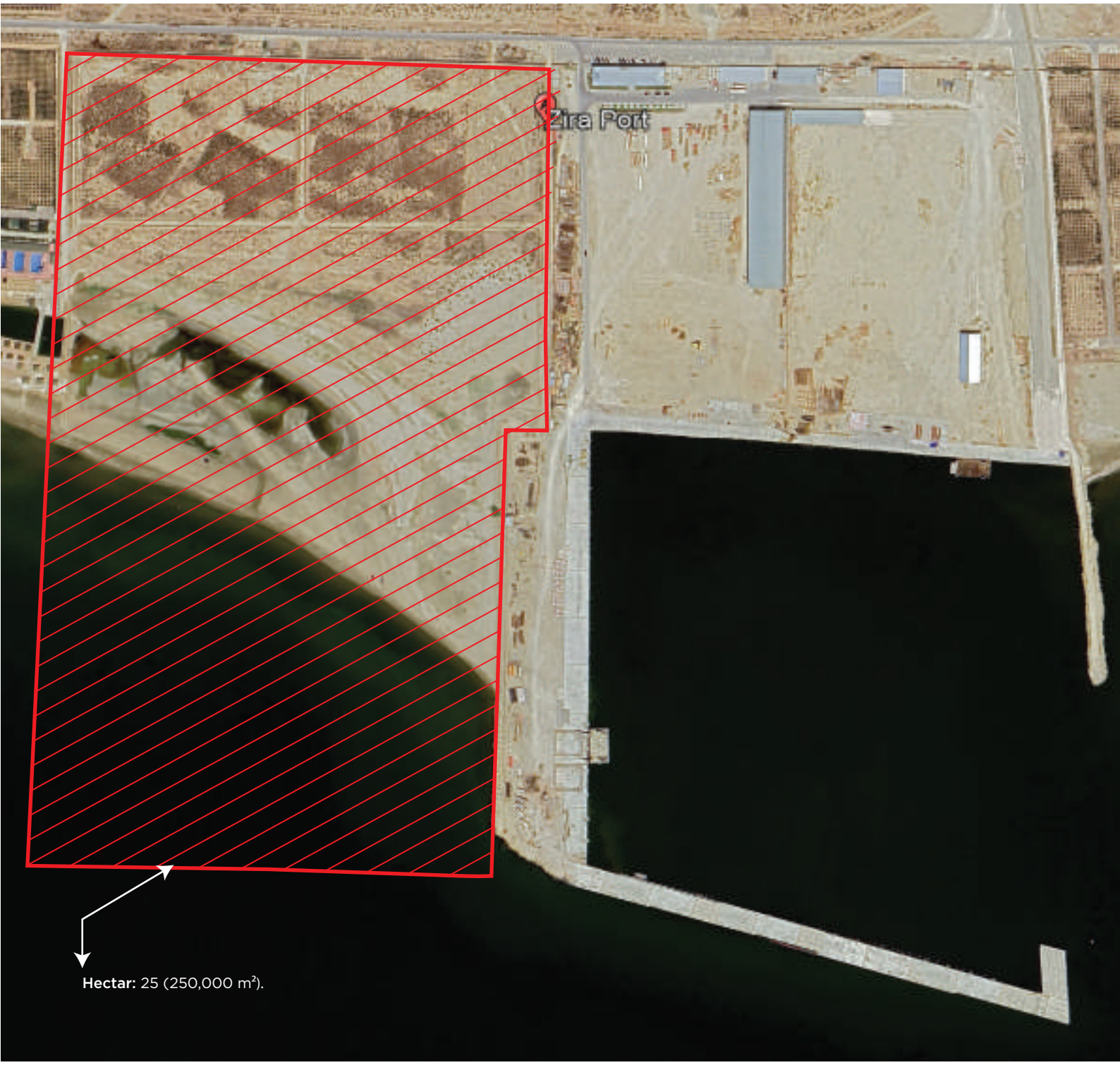

Plan for expanding the warehouse area in the future.

WAREHOUSE AREA

Hectar: 25 (250,000 m²).

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Future planned total area of ZiraPort:

68 hectares (680 000 m²)

1. Increased storage capacity
The additional 16 hectares of warehouse area will significantly enhance the port's overall loading and unloading operations, increasing both flexibility and efficiency. It will enable handling of various types of cargo (breakbulk, general cargo, project cargo) simultaneously.

2. Expansion of customer portfolio
Having a larger warehouse area allows the port to attract more clients. Customers prioritize the secure and long-term storage of their cargo, which this expansion will ensure.

3. Readiness for project cargo operations
The additional area provides strategic advantages in handling the growing volume of construction, energy, and project cargo in the South Caspian region.

4. Increased transit potential
More area means higher cargo intake capacity, leading to increased transit revenue. It positions ZiraPort to effectively accommodate the rising transit flows from Central Asia and CIS countries.

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FABRICATION WORKSHOP

Existing conditions at the Zira Sea Port

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Components of the facility

ADO-G has developed the following areas to provide higher quality services:

Cargo Terminal

The Cargo Terminal had been designed for the transportation of dry and containerized liquid cargos in the Caspian Sea. Currently, cargo is unloaded on the east side of the jetty area using STS cranes. Unloaded goods are identified, labeled, listed, documented, and transported to the designated storage areas. The Cargo Terminal is currently operative, and the transportation of the cargos is mostly managed through the countryside highways. Construction of an 18 km railway will increase the current transportation capacity up to 1 million tons a year. The railway will be linked to the premises and will significantly accelerate the cargo delivery.

Components of the facility

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Administrative Building

The administrative building is located on the north end of the premises and offers office spaces for the operator company as well as other logistics companies working with the port. The building has a canteen space with a capacity of 180 seats, resting areas, office rooms, a doctor's office, and bedrooms for the working contingent of the port. The admin building supports the port authorities in managing issues regarding the growing number of passengers and improving the quality of services provided.

Components of the facility

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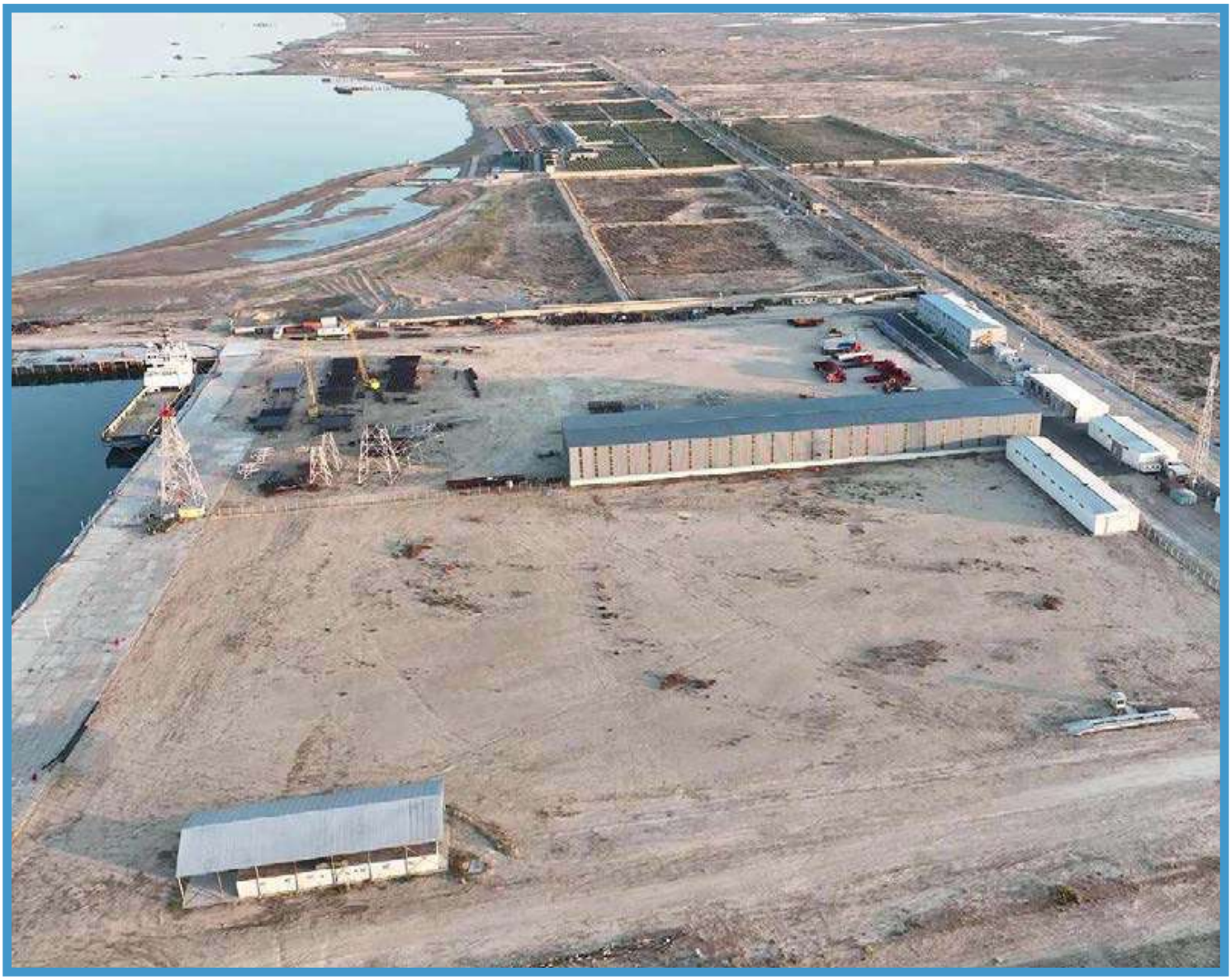
Construction of Storage Area

Short-term storage area is designated for storing and handling of containerized loads as well as cargos in various shapes and weights.
The facility includes several open and closed storage areas. The total area of open storage is approximately 30,000 m² and is projected for storing various bulk materials and containers.
If demanded, the open storage area may be increased in the future. The 6,000 m² closed storage is used for storing and protecting precious materials, equipment, and flammable substances from weather conditions and external effects.
The construction of 320 m² of closed storage has been completed.



Internal circulation and infrastructure of Zira Sea Port

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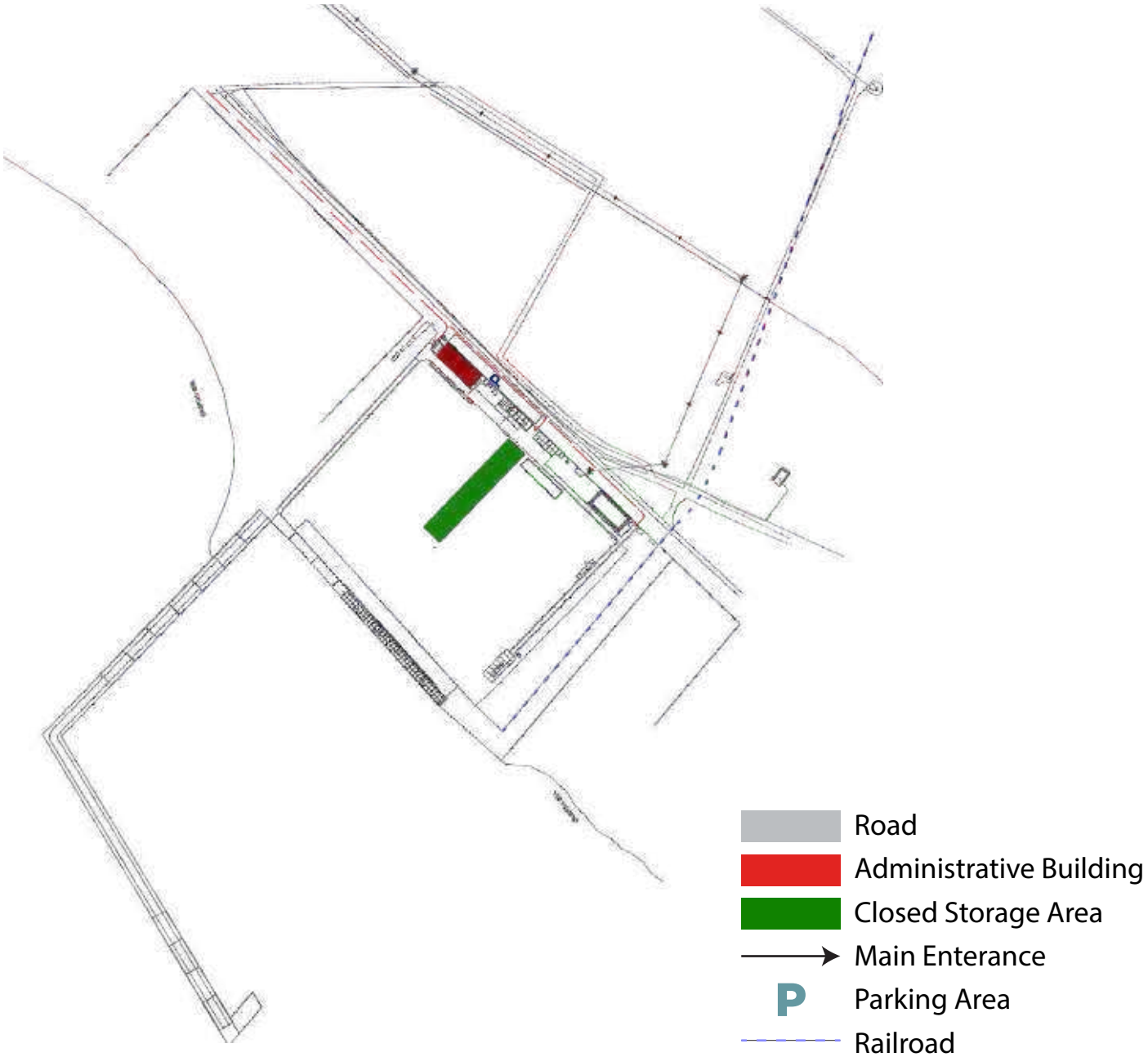
Figure 3. This figure describes the internal logistics of the Zira yard. The lines indicate the movement of traffic for specific operations such as boarding.



Transportation of cables

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Leading cable manufacturers in the local market, such as STP factories, use Zira Port to transport produced cables to Turkmenistan for isolation and surfacing. Current volume is around 150,000 tons of goods per year, with the ability to increase the volume up to 500,000 tons.

Closed Storage Areas

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Zira port houses 4 main warehouses on its premises. The main warehouse is around 6000 m² and stores high-value metals and other valuable assets and commodities. 3 auxiliary warehouses are intended for garage, yard operations, and customs service. There are suitable conditions for the storage of all conventional goods. The number of storage areas may be increased in the future depending on the demand.

STS/LHM110 crane

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LHM110

Lhm 110 is a mobile material handling crane equipped with 10m3 clamshell bucket, intended for quick and accurate handling of bulk material from vessel to terminal and vice versa. Capacity of the crane is 400-600 m3 of material per hour. The crane uses an excavator like long reach arm mitigating the wind sway usually occuring in cable deployed systems. This model is currently the largest of its type in the country.

STS crane

STS crane (ship to shore) is the industry standard crane used for handling cobtainirzed cargo from ship to terminal and between other modes of transport. The crane is designed for quick and safe handling of containers. Its currently the only sts crane in the country. Handling capacity is around 30-40 containers per hour.

Terminals

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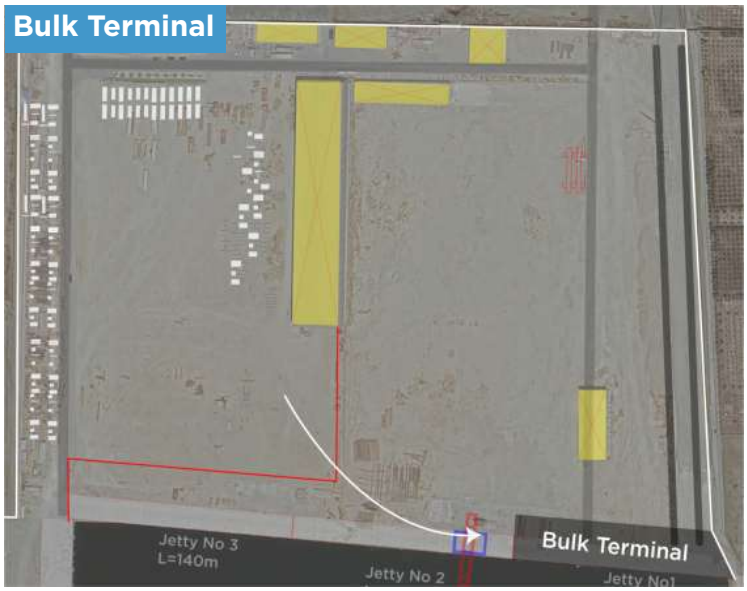
General Cargo & BreakBulk Terminal

Cargo Terminal had been designed for the transportation of dry and containerized liquid cargos in the Caspian Sea. Cargo will be unloaded on the east side of the jetty area by 4 port cranes. Each container is then identified, listed, documented and transported to the far north e nd of the premises to be stored. Cargo terminal is currently operative and the transportation of the cargos is mostly managed through the countryside highways. Our future plan to construct a 13 km railway
will increase the current transportation capacity up to 1 million tons a year. The railway will be linked to the premises and will significantly accelerate the cargo delivery

Container Terminal

A container terminal on a marine port is the bustling heart of global trade, where enormous vessels dock to load and unload containers filled with goods from every corner of the world. These terminals are intricate logistical hubs, finely tuned to handle the seamless transfer of containers between ships, trucks, and trains. Towering cranes dance along the waterfront, deftly lifting containers with precision, while a symphony of activity plays out as cargo is sorted, stacked, and dispatched. These terminals are the nexus of efficiency and organization, where cutting-edge technology harmonizes with the expertise of skilled workers to ensure the smooth flow of goods, powering economies and connecting nations across the seas

Bulk Terminal



Clinker, cement, minerals and other dry bulk commodities can be discharged directly from vessels to railcars or trucks at the Bulk Terminal of Zira Port.. This facility can also be used to load vessels when special handling is required.
Bulk Terminal, which is operated by the Zira Port Authority, is located in the Inner Harbor of Zira Port. Road access has been separated for safe reliable operations. A certified rail track scale is located convenient to the Bulk Terminal for accurate
weighing of railcars. Rail service is provided by the ADY. This terminal is designed to ensure high throughput capacity of dry bulk cargo and to utilize at the same time the best available technologies in environmental protection.

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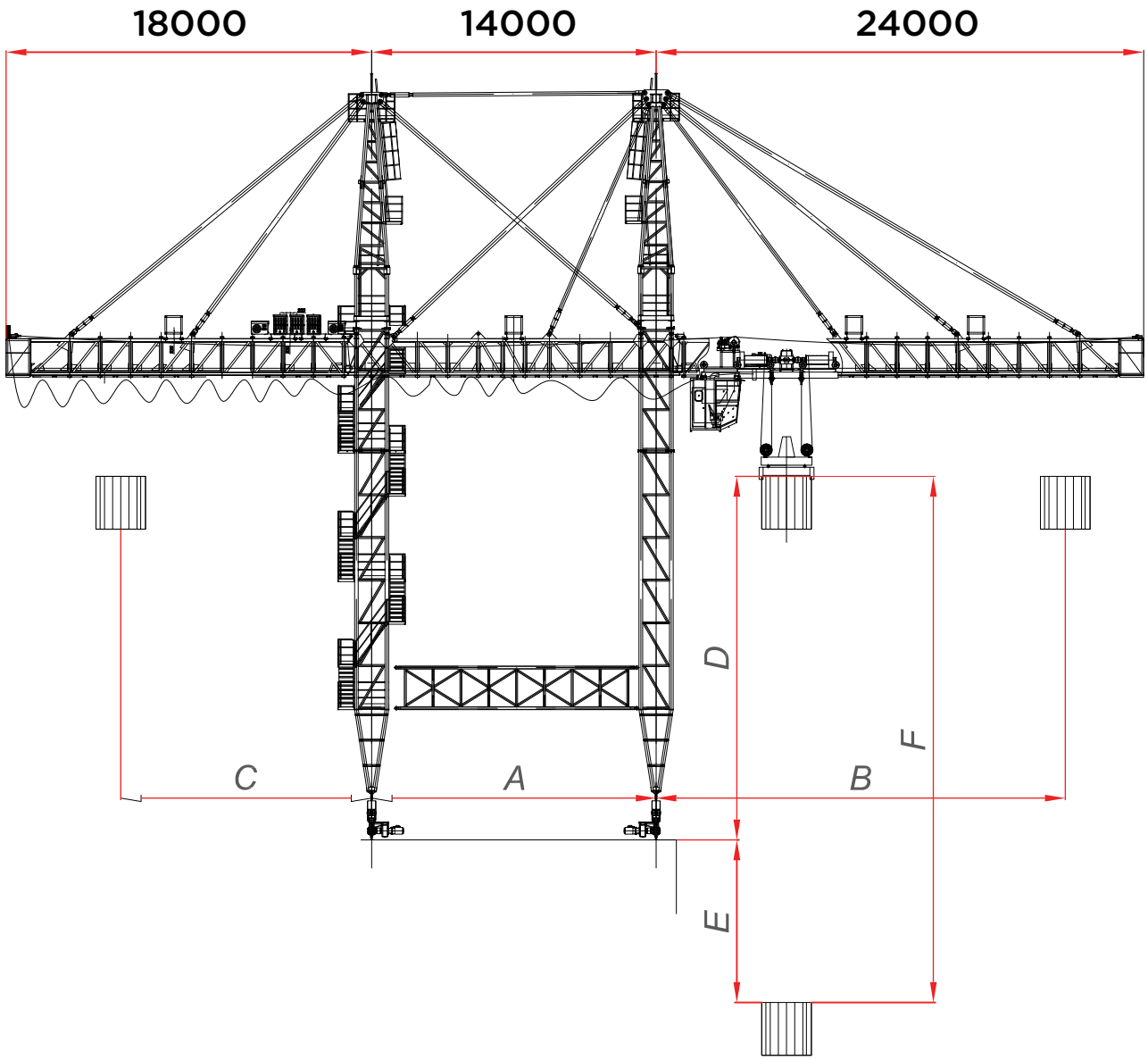
Technical Description
Ship to Shore Gantry Cranes
STS

Summary Specification



A: Span - 14 m

B: Outreach on Seaside (from seaside rail centre) - 20 m

C: Outreach on Landside (from landside rail centre) - 12 m

D: Spreader Height above Seaside Rail - 18 m

E: Lowest point of Spreader below Seaside Rail - 8 m

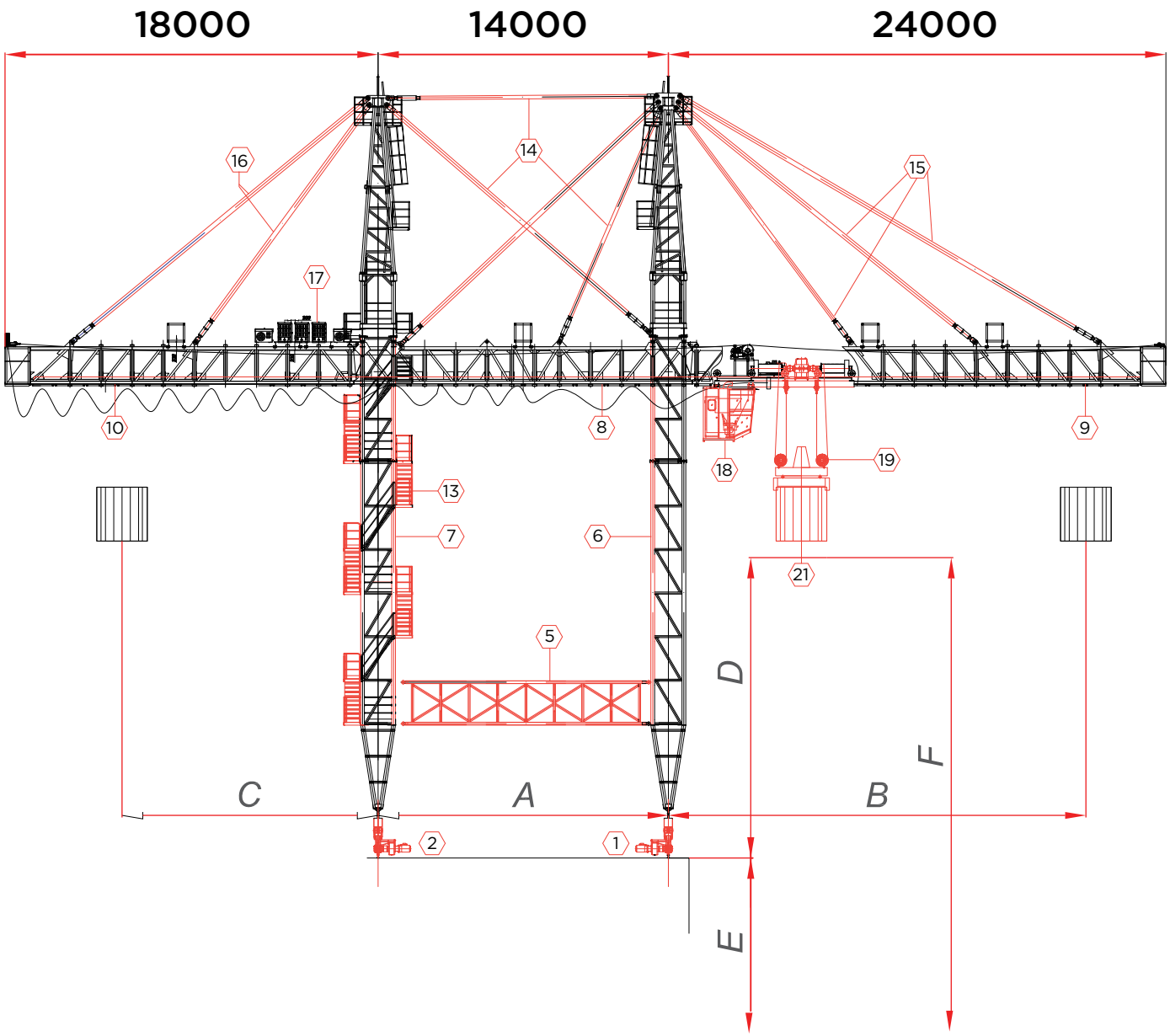
F: Total Spreader Hoisting / Lowering Path - 26 m

G: Seaside Rail - 10 m

H: Landside Rail - 10 m

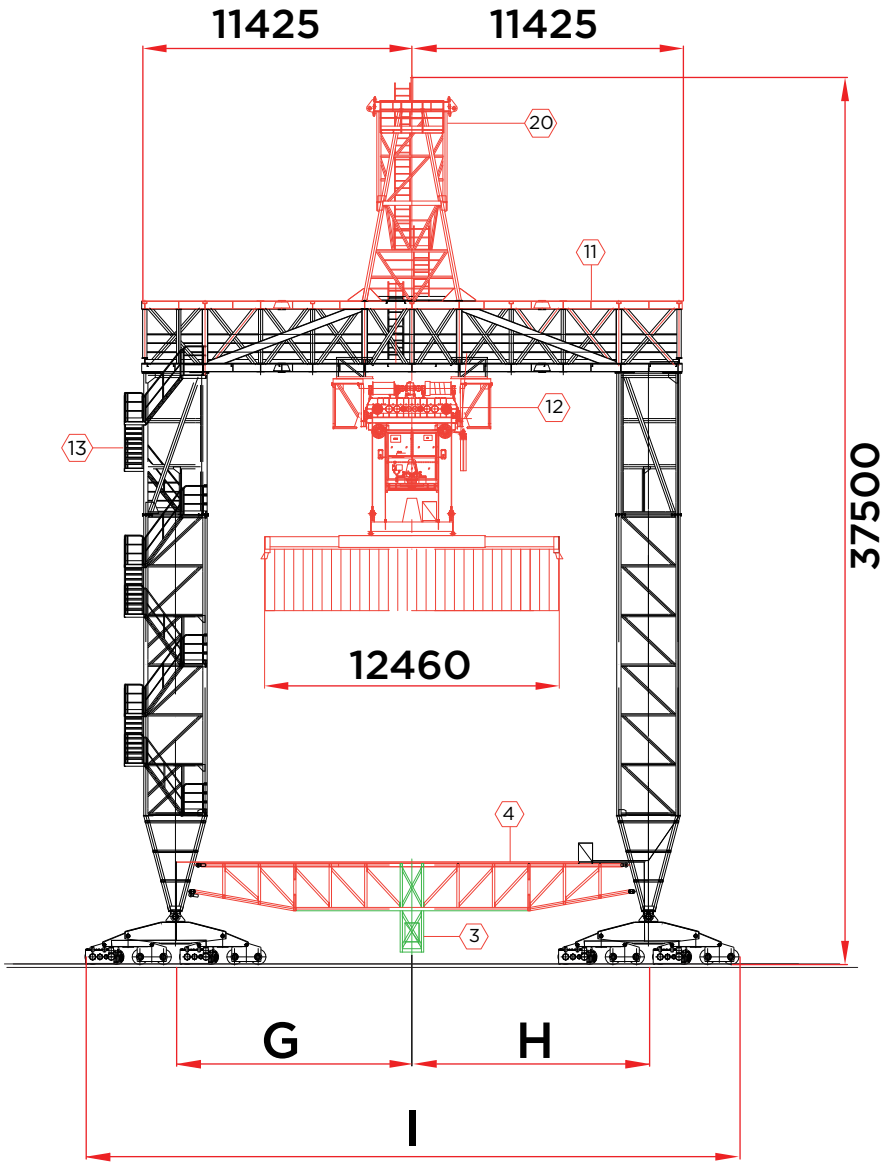
I: Overall Length Buffer to Buffer (buffers uncompressed) - 28 m

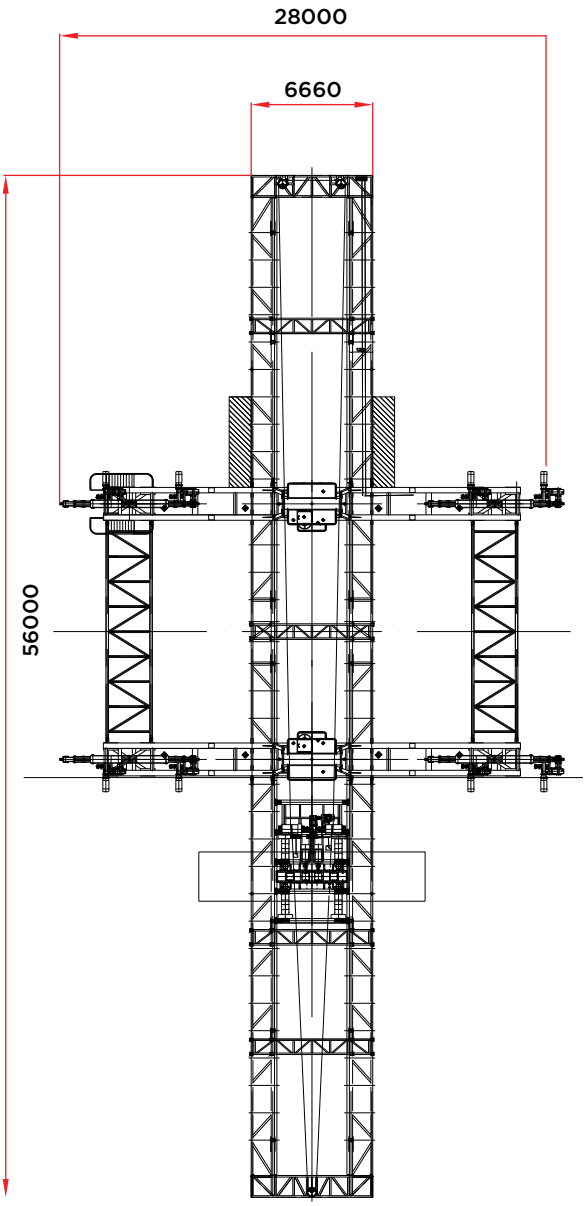
Summary Specification



1. **TRAVEL UNIT SEASIDE LEG -** 2 pcs
2. **TRAVEL UNIT LANDSIDE LEG -** 2 pcs
3. **RAIL BRAKES AND STORM ANCHORS -** 2 pcs
4. **LOWER PYLON -** 2 pcs
5. **SILL BEAM -** 2 pcs
6. **SEASIDE LEG -** 2 pcs
7. **LANDSIDE LEG -** 2 pcs
8. **MIDDLE BOOM -** 16.2 m
9. **SEASIDE BOOM -** 22.9 m
10. **LANDSIDE BOOM -** 16.9 m
11. **UPPER PYLON -** 2 pcs

Summary Specification





12. GUY TOWER - 2 pcs	**17. MACHINARY/ELECTRICAL HOUSE**
13. LADDER - On one leg	**18. OPERATOR'S CABIN**
14. MIDDLE BRACES - 6 pcs, pipe	**19. SPREADER -** For 20' and 40"
15. SEASIDE BRACES - 6 pcs, pipe	**20. TROLLEY -** Rope guide
16. LANDSIDE BRACES - 4 pcs, pipe	**21. CONTAINER -** 20' and 40"

2. MAIN PARTICULAS

2.1. TECHNICAL DATA

2.1.1. Lifting capacities up to a given outreach
Hoisting capacity total – 67 t
Under spreader – 40 t

2.1.2. Hoisting heights
Hoisting height and lowering depth measured from the crane tract level
hoisting height - 18 m
lowering depth – 6 m
rail span – 14m
outreach from seaside rail – 22 m
outreach from land side rail – 12 m

2.1.3. Performing speeds Main hoist
full load – 30 m/min
without load – 40 m/min
traversing speed – 40 m/min
crane travelling – 30 m/min
full cycle duration – 3 min

2.1.4. Crane rail
Rail size (A 100)
Rail span – 12 m
Track length – 100 m
Power supply - 3ph, 380V (±5%), 50 Hz

2.1.6. Voltages
Converters - 3ph, 500V AC
Motors approximately - 3ph, 500V AC
Auxiliary appliances - 3ph, 460V AC
Control voltage - 115V AC
Floodlights - 460V AC
Lighting- 115V AC
Sockets for tools and hand lamp - 115V AC
Outlet sockets for welding - 460V AC

2.2. POWER REQUIREMEENTS FOR MAIN DRIVES

Main hoist – 1 units ca. 300 kW – ED-60%
Trolley travelling – 4 units ca. 18.5 kW– ED-60%
Gantry travelling - 8 units ca. 11 kW– ED-40%

2.3. DESIGN CRITERIA AND CLASSIFICATION

2.3.1. Climate conditions
Min. temperature – (- 20 °C)
Max. temperature – (+ 45 °C)
Wind speeds,
crane in service - 20 mm/s
crane out of service - 46 mm/s
Relative humidity - 10...90 %

2.3.2. Design rules
FEM/I 3.rd Edition 11998.10.01
Classification and loading on structures and mechanisms
Calculating the stress in structures
Calculating for fatigue and selecting of mechanism components
Electrical equipment
Stability and safety against movement by the wind - Safety rules
DIN 4114 Structural stability
ISO R/15 Antifriction bearings
ISO 4308 Steel wire ropes
IEC Electrical

2.3.3. Classifications, FEM/I
Group classification of the crane - Q2 - U6:A6
Group classification of machineries
main hoist - T5 - L3:M6
trolley travelling - T5 - L3:M6
boom hoisting - T5 - L2:M5
gantry travelling - T4 - L3:M4

STS Crane and Loading Unloading Capabilities

- STS crane 20 containers per hour 40 ft
- Boom length 53 m (23 m over sea 18 m over terminal)
- Automation Zira team assembly
- Schneider Electric
- Clinker cement mineral 600 tons per hour
- Open bulk 500 tons per hour
- Big bags 2500 tons per day
- Railcar 5000 tons
- Truck 1500 tons
- Under railcar hopper screw conveyor upper hopper truck or big bag

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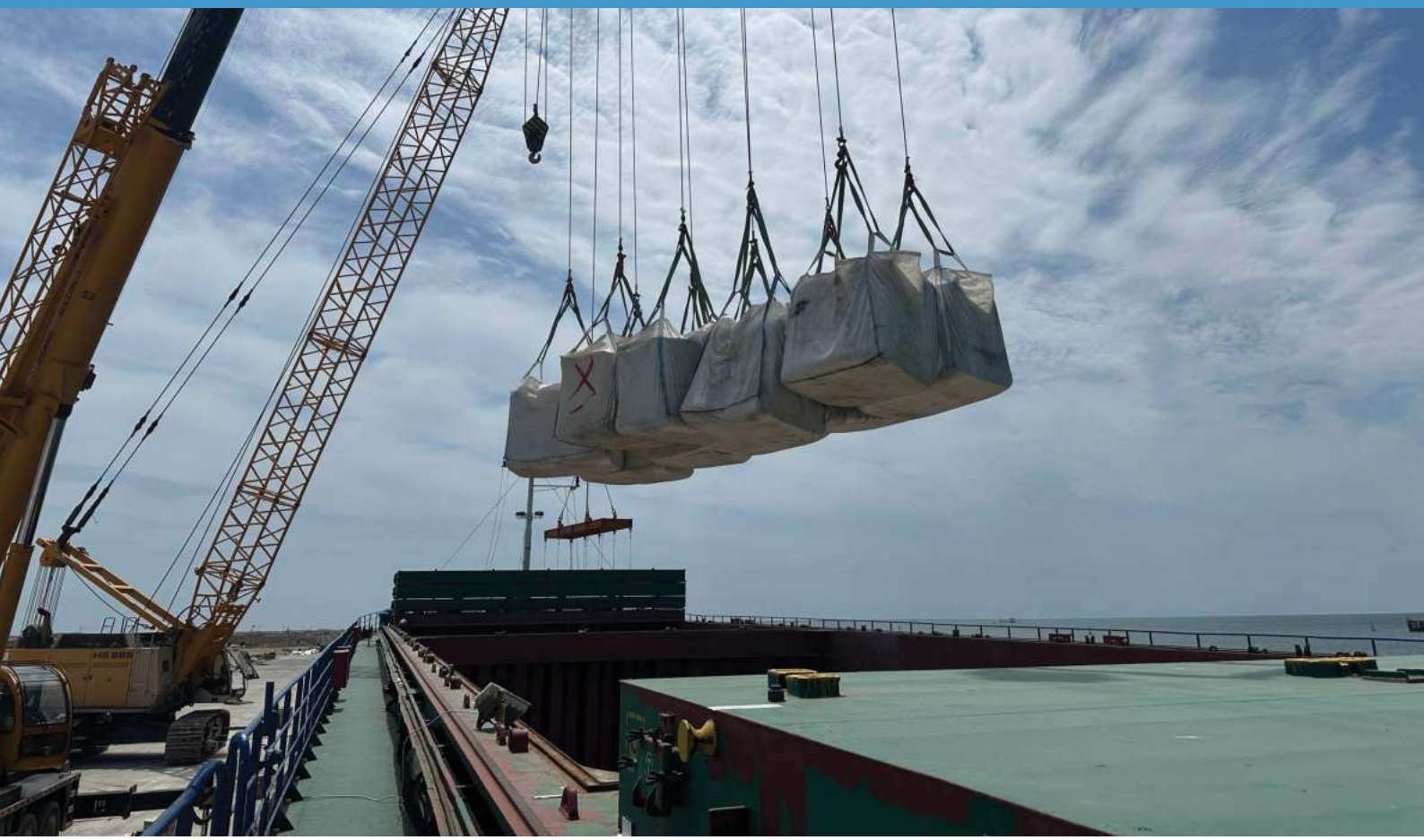

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24M MULTI-TUG VESSEL

ADO-G tərəfindən inşa olunmuş
çoxfunksiyalı iş gəmisi

Multi-functional workboat built by ADO-G
for inland and Caspian Sea operations.

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GƏMİNİN ÜMUMİ XÜSUSİYYƏTLƏRİ

Parametr: Dəyər
Gəminin tipi: Tug / Special Service – Workboat
İstifadə sahəsi: Daxili sular və Xəzər dənizi
Ümumi uzunluq: (LOA) 23.98 m
LWL (Su səviyyəsində uzunluq): 23.30 m
LBP: 22.12 m
Eni (Beam): 10.00 m
Dərinlik (Depth): 3.00 m
Layihə oturumu (Draught): 1.90 m
Skantlinq oturumu: 2.00 m
Sürət (maksimum): 12 düyün (knots)
Bollard Pull: 13 ton
GRT (Gross tonnage): 202
DWT (Deadweight): 210 ton
Yerləşmə: 12 heyət + 18 sərnişin = 30 nəfər
Korpus materialı: AH36 polad (0°C - 45°C)

GENERAL SPECIFICATIONS

Parameter: Value
Vessel Type: Tug / Special Service – Workboat
Operation Area: Inland Waterways and Caspian Sea
Length Overall: (LOA) 23.98 m
Length Waterline: (LWL) 23.30 m
LBP: 22.12 m
Beam: 10.00 m
Depth: 3.00 m
Design Draught: 1.90 m
Scantling Draught: 2.00 m
Max Speed: 12 knots
Bollard Pull: 13 tons
Gross Tonnage (GRT): 202
Deadweight (DWT): 210 tons
Accommodation: 12 crew + 18 passengers = 30 persons
Hull Material: AH36 Steel (0°C – 45°C)

ADO-G tərəfindən inşa olunmuş çoxfunksiyalı iş gəmisi

Multi-functional workboat built by ADO-G for inland and Caspian Sea operations.

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MEXANİKİ VƏ ENERJİ SİSTEMİ

Əsas mühərriklər: 2 × 800 HP (Reduksiya nisbəti 4:1)
Pervanələr: 2 × 1340 mm, nozzle içində 4 qanadlı
Generator: 1 × 40 kW
Göyərtə yükgötürmə gücü: 5 t/m²

MECHANICAL & POWER SYSTEM

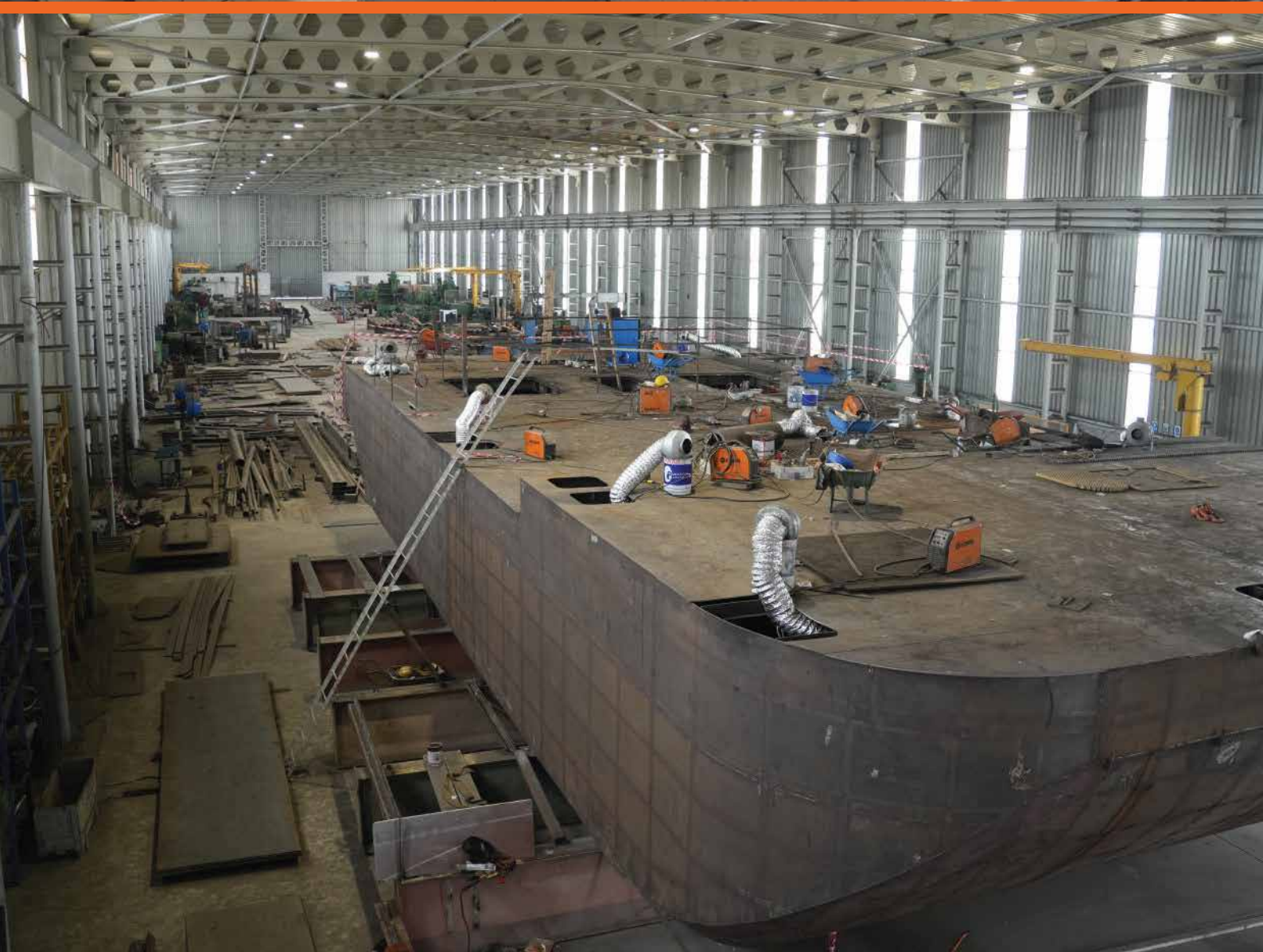
Main Engines: 2 × 800 HP (4:1 Reduction Ratio)
Propellers: 2 × 1340 mm, 4-bladed in nozzle
Generator: 1 × 40 kW
Deck Load Capacity: 5 t/m²

TANK TUTUMLARI

Tank Növü: Həcm (m³)
Yük yanacaq tankları: 116.62
Yük suyu tankları: 93.28
Ballast tankları: 71.34
Dizel yağı: (D/O) 6.46
Təmiz su: (F/W) 3.75
Qara su (B/W): 1.88
Lənətli su (Bilge): 3.75
Çirkli yağ (Dirty Oil): 1.25
Slaj (Sludge): 2.50

TANK CAPACITIES

Tank Type: Volume (m³)
Cargo Fuel Tanks: 116.62
Cargo Water Tanks: 93.28
Ballast Tanks: 71.34
Diesel Oil (D/O): 6.46
Fresh Water (F/W): 3.75
Black Water (B/W): 1.88
Bilge Water: 3.75
Dirty Oil: 1.25
Sludge: 2.50



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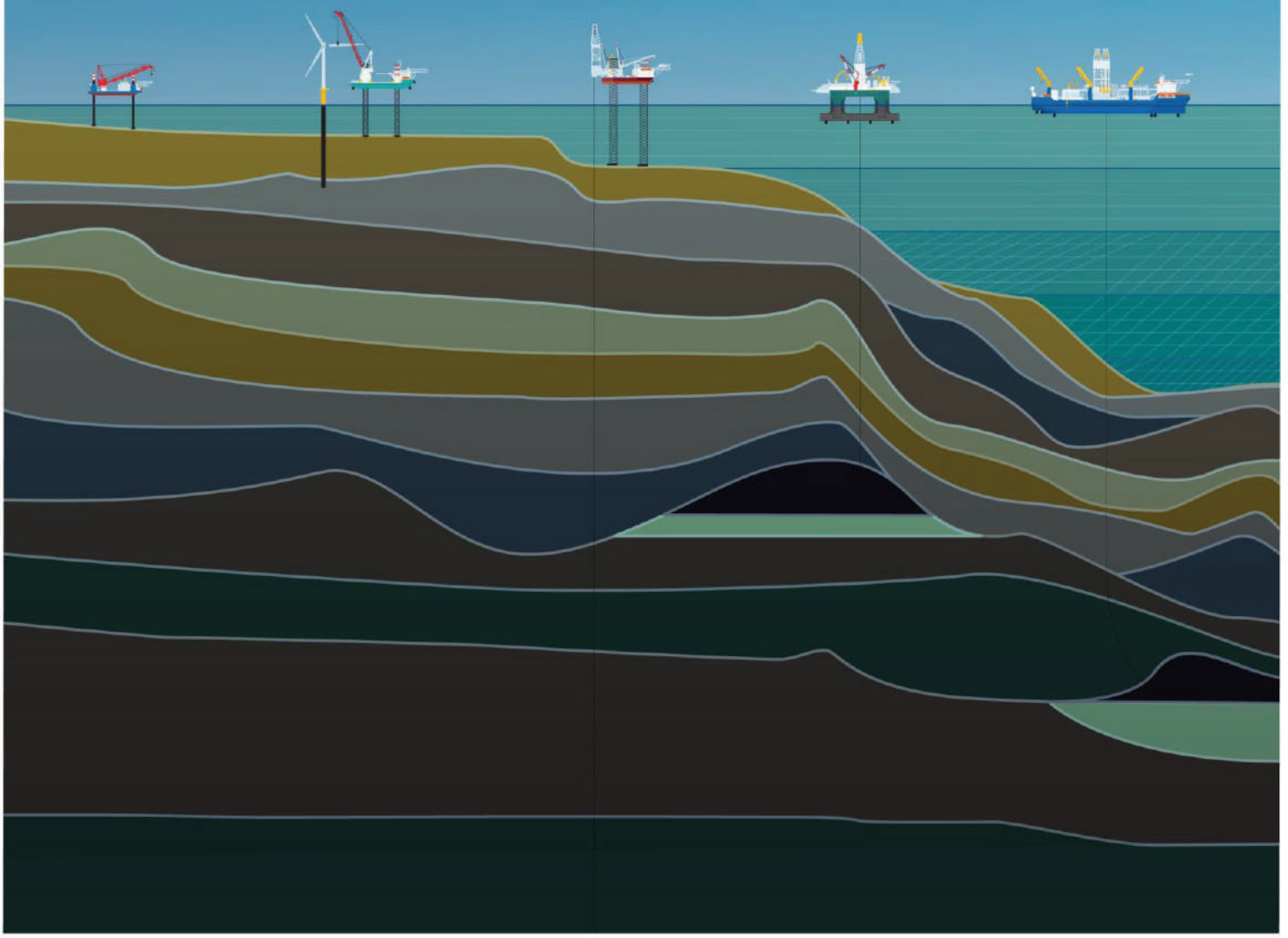
Basic Specification of a Cantilever Drilling Jack Up Type GustoMSC CJ70 X150 B



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This document provides a general description of one of ZiraPort's upcoming projects – the GustoMSC CJ70-X150-B jack-up unit. This rig is designed to provide accommodation space and support equipment for drilling operations in a standard configuration.

The CJ70-X150-B is one of the latest versions of the GustoMSC CJ-series cantilever drilling jack-ups, equipped with an X-Y cantilever.

The design of this rig combines the field-proven jack-up technology of the CJ series with the latest ideas in layout and outfitting of drilling jack-ups. By implementing this project, ZirəPort aims to further expand its high-level offshore services in the Caspian region.

The presented rig specification is intended as an initial version in relation to the current concept proposal. In the next phase, client-specific comments and requirements will be incorporated to optimise both the intended performance and the overall cost of the rig.

THANK YOU