ENGINEERING PARTNER ALL OVER THE WORLD

EFES MARINE

www.marineindustry.net



Our Expertise

- I. Consultancy & Port Engineering & Reporting
- II. Shipyard Selection & Tendering
- III. Dry Dock Planning & Management & Assistance
- **IV.** Coating & Structural Inspections
- V. Engineering Calculations
- VI. Blasting & Coating & Cleaning Execution (in Turkey)
- VII. BWTS Prefabrication & 3D Scanning



Reference Companies

AMERICAN EAGLE TANKERS	10 Project 2014 – 2018 Shipyard Coating – Repair Consultancy	Abu Shahjalal <u>asjalal@aet-tankers.com</u>
MINERVA MARINE Inc.	9 Project 2018 - 2019 Shipyard Coating Turkey – Danmark Inspections	Vasilis Tatakis tatakis@minervamarine.com
REEDEREI JENS & WALLER	7 Project 2014 – 2018 Turnkey Ship Repair – Floating Repair – Coating	Ulf Jens ulf.jens@reederei-jenswaller.de
DFDS DFDS GROUP	2 Project 2017 – 2018 Ballast Tank Coating	Burak Lok bulok@dfds.com
XXX REFEMARINE RMK MARINE - SHIPYARD	2 Project – 2019 BWTS Design, 3D Scanning	Rustem EKICI rusteme@rmkmarine.com.tr

What Do We Offer

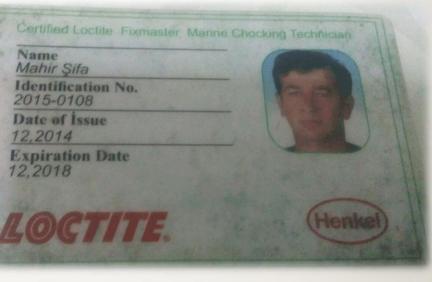
Repair Project Planning & Port Engineering Assistance Services

Task Name Resource Names Duration/Start Finish Sun 3 May Tue 5 May Thu 7 May 1 MV"
Image: Normal State Network Coating PLAN
A RA 500M - 1000 m² Cleaner[4] 4 hrs 4 May 08:00 4 May 12:00 A Gleaner[4] Cleaner[4] Cleaner[2] 2 hrs 4 May 12:00 4 May 12:00 Cleaner[2] Cl
4 No: PS Staging Cleaner[2] 2 hrs 4 May 12:00 4 May 14:00 Cleaner[2]
r No: PS Mechanical Surface Preservices Mechanical Cl. 4 hrs. 4 May 18:00
5 No: PS Mechanical Surface Preperation Mechanical Cl 4 hrs 4 May 14:00 4 May 18:00 [Mechanical Cleaner[2]
6 No: PS Removal of Loose Scales and Coatings From The Waterjet 12 hrs 4 May 18:00 5 May 06:00 Waterjet (~750 bar) Waterjet App.[2]
7 No: PS Removal of the Water From the Tank Cleaner[3] 4 hrs 5 May 06:00 5 May 10:00 [Cleaner[3]
8 No.: PS First Coat Paint Application (RS 500P Rust & Wet Paint 6 hrs 5 May 10:00 5 May 16:00 Paint Applicator[4] Paint Applicator[4]
Operation of the second s
10 No: PS Final Coat (RA 500M - Glassflake Epoxy) Paint Applicate 8 hrs 5 May 22:00 6 May 06:00
11 No PS Restaging and Tank Cleaning Cleaner[4] 4 hrs 6 May 12:00 6 May 16:00
12 No PS Ballasting of the Tank Captain 2 hrs 6 May 20:00 6 May 22:00 Captain
13 No: STBD Ballast Tank Coating Renewal with Chemco RS 66 hrs 4 May 12:00 7 May 06:00
14 No: STBD Mud & Loose Scale Cleaning of Tank Cleaner[2] 8 hrs 4 May 12:00 4 May 20:00
No: STBD Staging Cleaner[2] 2 hrs 4 May 20:00 4 May 22:00 Cleaner[2]
16 No STBD Mechanical Surface Preparation Mechanical Cl 4 hrs 4 May 22:00 5 May 02:00 Mechanical Cleaner[2]
17 No: STBD Removal of Loose Scales and Coatings From The Waterjet 12 hrs 5 May 02:00 5 May 14:00 [Waterjet (750 bar) Waterjet (750 bar) [Waterjet App.[2]
18 No: STBD Removal of the Water from the tank Cleaner[3] 4 hrs 5 May 14:00 5 May 18:00 [Cleaner[3]
19 No STBD First Coat Paint Application (RS 500P Rust & Wet Paint 6 hrs 5 May 18:00 6 May 00:00 Paint Applicator[4]
20 No STBD Stripe Coat (RA 500M - Wet tolerant - VS 100% Paint 6 hrs 6 May 00:00 6 May 00:00 F Paint Applicator[4] Paint Applicator[4]
21 No: STBD Final Coat (RA 500M - Glassflake Epoxy) Paint Applicate 8 hrs 6 May 06:00 6 May 14:00
22 No: STBD Restaging and Tark Cleaning Cleaner[4] 4 hrs 6 May 20:00 7 May 00:00
23 No: STBD Ballasting of the Tank Captain 2 hrs 7 May 04:00 7 May 06:00 Captain
Task External Milestone Manual Summary Rollup
Split Inactive Task Manual Summary
roject: MV
Summary Inactive Summary Finish-only
Project Summary Manual Task Deadline O
External Tasks Duration-only Progress

What Do We Offer

- Engineering Company (Ship Repair)
 - Ship Repair Projects Pre-Purchasing Inspections
 - Naval Architecture & Stability Calculations
 - Chockfast Orange Loctite Application (In Turkey only)





Our Team

TECHNICAL TEAM

No:	Title	Duty	Working Concept
1.	Naval Arc. & Marine Eng.	Surveyor, Inspector, Project M PMP (#2)	Repair Projects, Coating Applications, Consultancy
2.	Naval Arc.	Design, Project E. (#3)	BWTS, Coating Applications Scrubber Design (Just started).
3.	Workshop Team (TR)	Workers (#6) (Pipe #350 Corporate Partner)	Workshop (Blasting & Painting) Pipe Works
4.	Application Team	Workers (#8 - #40)	Project Based (Tank Cleaning, Coating, Piping etc.) (Can be increased)
5.	Mechanical Team	Technician (#6)	Waterjet Repairs, Chocking compounds

Our Office



Deck Coating in Anchorage – Eagle Tucson



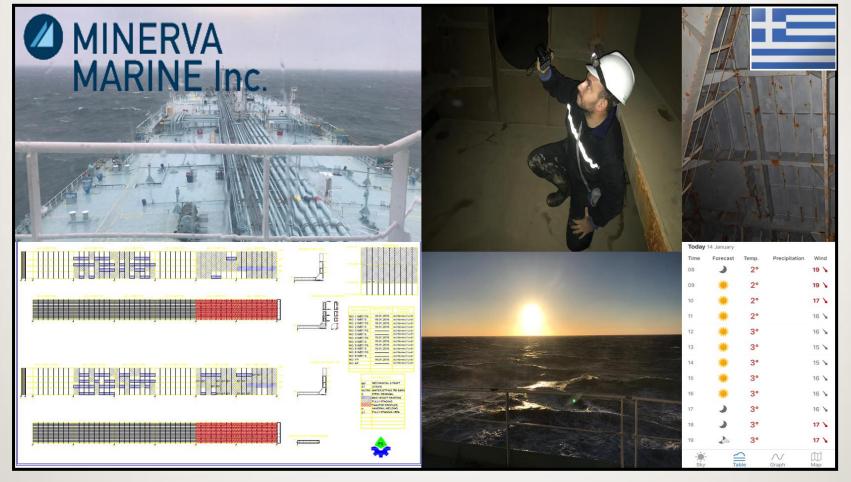


 ~ 30 – 48 hours all main deck washing and painting can be completed.

* MT EAGLE TUCSON – 30 hours ~14.000 m² washing and 1 final coat application. (Make up application after docking).



Tank Inspections – Danmark (Skagen) – Minerva Zoe



Cement Carrier Inspection – Haiti – MV Turbocem



Pre-purchasing inspection completed in 36 hours included engine room, cargo operations, tanks and accommodation.

Blasting and Painting – MV TRANSPORTER (Livestock Carrier)



SA2 grid blasting and 2 coat painting of decks – **15.500 m²** (6 deck) **in 9 days**



Ballast Tank Coating – 1000 bars WJ – Minerva Helen





Local washing and painting application carried out.



Ballast Tank Coating – 1000 bars WJ – Minerva Concert





Local washing and painting application carried out.



Anchorage Repairs – Rope Access Painting – MV NADA



Cleaning Services For Vessels – MT Valle Bianca



Cleaning Services For Vessels



VESSEL NAM	E MT		DATE		
TANK NAME	SI.	y Part	WORK SCOPE	51.0	Clours
	1.510		LINFORMATION	- TOASE	THE PROPERTY
Item	Description	n Comment	Item	Description	Comment
Initial Training	1		Initial Inspection		1
Washing		1	Lightening		1
Prewash	1	/	Ventilation		1
Salt Water			Air Temperature *C	1	1
Use Chemical	1	/	Sea Temperature °C	1	V
Salt Water		/	Slops m*	17	1
Fresh Water			Tank Volume mª	1	
DONE D	NOT DON	E: ND	NO NEEDED NN	NOT APPLIC	ABLE: N/A
Collection of cu transferring the	amulated sludg bags from tar	ge inside the tar ok top to main de	nk with plastic bags and ack level.	m ³	-54,50
			-	-	7
				/	
				1	
			/		
NOTES/CO	s cald	bamasa	(Enerded) d	SING5	ludga
.Warmerso					

Bulk Carrier – Container – Turnkey Yard Repair – MV PAUL



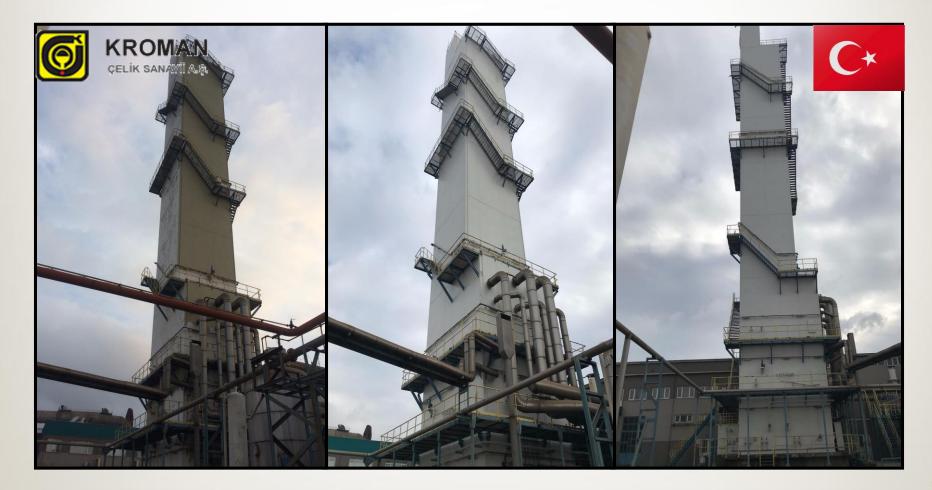
Note: Photos are related with same company vessel (MV TINGHIR) and MV PAGADDER tank coating application.

RoRo Vessel – Ballast Tank Coating – Un Karadeniz



2.000 m² - Waterjetting & Mechanical

Height: 58 m. – Nitrogen Tank Coating Application



Blasting Workshop (Repairs And Applications – Stand By)



- Working in Both Marine & Industrial Projects
 - Floor Epoxy Application,
 - Non Skid Composit Deck Application,
 - Industrial System Coating Application.





We Represent

REPRESENTATIVE & TECHNICAL SERVICE OF



Class Approved Tank Coating Solutions <u>www.chemcoint.com</u>

We Represent

- Solvent free epoxy system,
- Wet & rust tolerant system (surface tolerant),
- Class approved system,
- Can apply on hull, cargo tanks holds, fresh water tanks,
- Scrubber System, BWTS coatings.







We Represent

REPRESENTATIVE & TECHNICAL SERVICE OF

micro

technologies

myt

Waterjetting Equipments Nozzle Manufacturer www.mvt.ch

Coating Application Company – Consultancy

- Blasting & Painting Works With Our Own Equipments (in Turkey),
 - 132 Atlas Copco Compressor 2 pcs.,
 - ➤ 3 pcs 75 KW Vacuum Cleaner, Silos.
 - Dehumidifier 2 pcs.
 - Paint Pumps 12 pcs. Graco Wiwa
 - Tank Heater 3 pcs,





Coating Application Company (in Turkey)

- Waterjetting & Painting
 - > 8 pcs. 1400 bars 60 liter (Tritan) Diesel,
 - > 2 pcs. 1000 bars (Combijet) Electrical,
 - ▶ 1 pc. 800 bars,
 - > 1 pc. 750 bars Woma,
 - ➤ 3 pcs. 400 500 bars,
 - > 1 pc. 250 bars hot water wash.





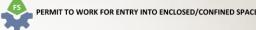




Tank Cleaning

- Ex-proof Systems
 - > 35 pcs. Ex-proof headlamps
 - ➤ 4 pcs. Ex-proof crane,
 - ▶ 12 pcs. pump ,
 - ➢ 8 pcs. Ex-proof ventilation fan,
 - > 8 pcs. Ex-proof projector,
 - ➢ IBC tanks etc..





VESSEL NAME	DATE/HOURS	
IMO NUMBER	LOCATION	
VESSEL MASTER	WORK DEFINITION	
RESPONSIBLE PERSON FROM CLEANING TEAM	CHIEF OFFICER	

Checklist Items:	Confirm	Comment
Space thoroughly ventilated		
Atmosphere tested and found safe Oxygen % vol (21%) Hydrocarbon % LFL (less than 1%) Toxic gases ppm (less than 50% OEL of the specific gas)		
Space secured for entry		
Rescue and resuscitation entrance		
Testing equipment available for regular checks (Gases Dedectors etc.)		
Responsible person in attendance at entrance		
Communication arrangements made between person at entrance and those entering		
Access and illumination adequate		
All equipment to be used is of appropriate type (Exproof etc.)		
Personal protective equipment to be used (Boiler Suits, Helmet etc.)		
Hard hat, safety harness as necessary		
When breathing apparatus is being used		
(i) Familiarity of user with apparatus is confirmed		
(ii) Apparatus has been tested and found to be satisfactory		
	Space thoroughly ventilated Atmosphere tested and found safe Orygen Xvo (21%) Hydrocarbon % IFL (less than 1%) Toxic gases pom (less than 5%) OEL of the specific gas) Space secured for entry Rescue and resuscitation entrance Testing equipment available for regular checks (Gases Dedectors etc.) Responsible person in attendance at entrance Communication arrangements made between person at entrance and those entering Access and illumination adequate All equipment to be used (solier Suits, Helmet etc.) Hard hat, safety harness as necessary When breathing apparatus is being used (i) Familiarity of user with apparatus is confirmed	Space thoroughly ventilated Atmosphere tested and found safe Oregren XV (2136) Atmosphere tested and found safe Oregren XV (2136) Hydrocarbon % EL (less than 5%) Toxic gases porn (less than 50% OEL of the specific gas) Space secured for entry Rescue and resourcitation entrance Image: Communication arrangements made between person at entrance and those entering Access and Illumination adequate Atl equipment to be used is of appropriate type (Exproof etc.) Personal protective equipment to be used (Boiler Suits, Helmet etc.) Image: Communication shows and communication shows and communication shows and communication shows and communications is being used (i) familiarity of user with apparatus is confirmed Image: Confirmed

NOTES / COMMENTS:

VESSEL	CLEANING TEAM
SIGNATURE	SIGNATURE

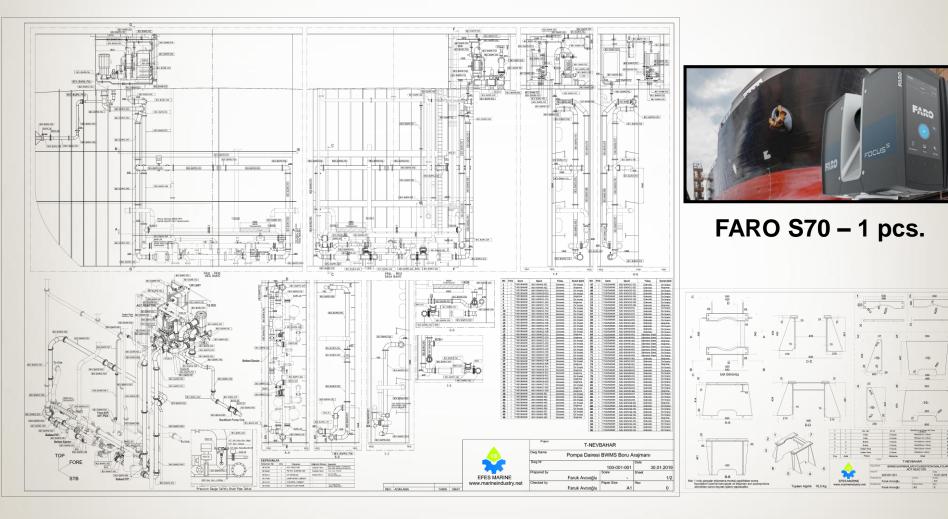
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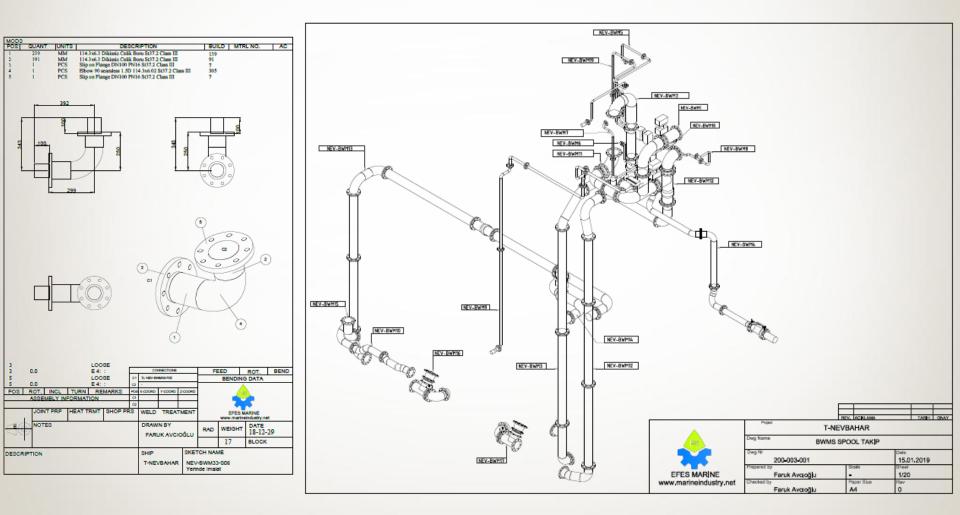


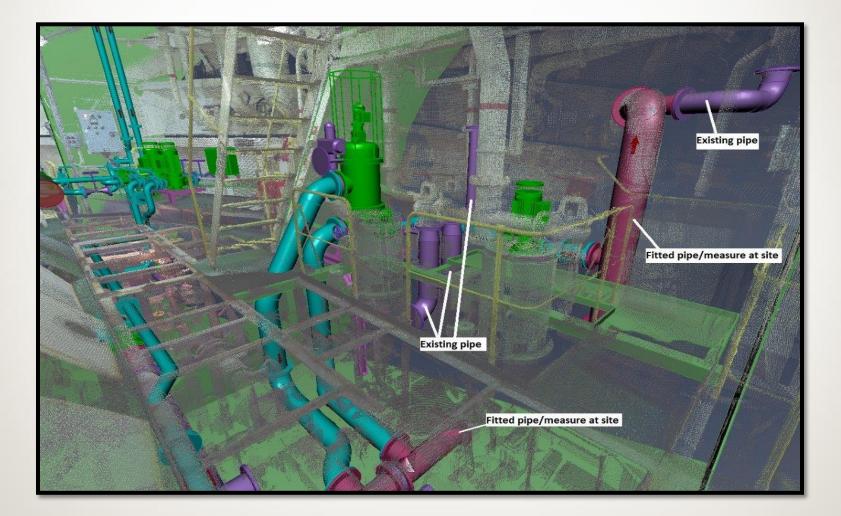


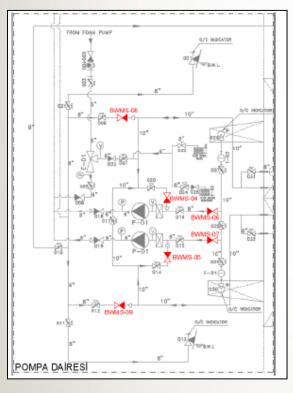


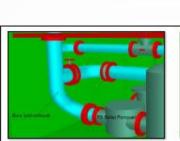










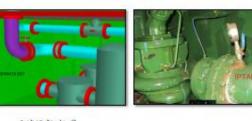








Şekîl 12. (Boru söküldükten sonra)



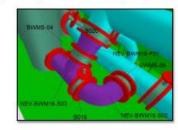
Şekil 13. (Yeni hali)





Şekil 1. (Mevcut Hali)

Şekil 2. (Boru söküldükten sonra)



Şekil 3. (Yeni hali)



Prefabrication Workshop

CORPORATE PARTNER

		DDV-GL Artificate Re: Description This is to certify: Tata Tata / Jatanbul, Turkey Description Regressed Ref: Welling Mice Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Welling Mice Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Welling Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Welling Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Mice Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Mice Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Mice Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Mice Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Mice Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Mice Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Mice Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Mice Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Mice Sprengerations Strift.CP-0523 - Approval of manufacturers - Manufacture of Mice Sprengerations Strift.CP-0523 - Approval of Mice Sprengerations Sp
Total Area	2300 m ² Workshop (3 Hold) 800 m ² Office (New Facility)	and the following particulars Mandracturer(a) sproved by this certificate are accepted to deliver according to DRV GL_DRV and GL Rules.
Fabrications (Pipe& Outfitting)	Stainless Steel Pipe (700 m ²) - Steel Pipe (1600 m ²)	Weiding supervisor: Coskun Albayrak Deputy weiding supervisor: Metlu Yavuz Issued at Namburg on 2016-07-04 Metlu Yavuz This Conflicter is value unit 2022-07-03. DIV GL local station: Istembul Metlu Yavuz Approval Engineer: Gordon Stieb Metlu Yavuz Hereit of Section Metlu Yavuz
Crane Capacity	10 Ton x 4 pcs. + 7 Ton x 2 pcs.	Norm code: WELD 221 Revision: 2016-12 www.dmgd.com Page 1 of 1 B DW GL.2014. DW GL.and the Intrinsin Garde are trademarks of DW GL.AS.
Approvals	DNV Workshop - BV	Here the Education and Training Hering met the Education and Training Interfaces and the examination for the Education for the Education for the Education for the Education for the the major method for the Education for the education for the Education for the Education for the education of the Education for the Education for the Name Acc - School Cold Unity
Engineering Skills	Level 3 UTM, Welding Engineer, Design, 3D Scannig, Coating Inspectors	Due of time December 34" 1979 (Conv. 1434-242204) (Conv. 1434-24204) (Conv. 1434-24204
Workers	~350 pipe welder – fitter – forman	the Patients and and a set of the member of

Note: New workshop will be fully open around 15.08.2019 due to facility equipment transfers.

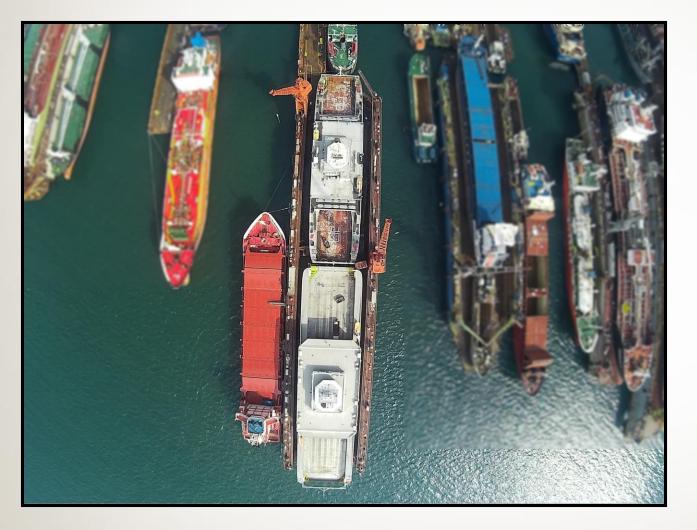
Prefabrication Workshop – Installation



- Workshop fabrications as per izometric drawings,
- Onboard installations and class deliveries for new building repair conversion projects

GISAN SHIPYARD - TUZLA

CORPORATE PARTNER





GISAN SHIPYARD - TUZLA

CORPORATE PARTNER

Shipyard Name	GISAN SHIPYARD	Location	Tuzla
Proficiency	Repair & Conversions	Grid Blasting Capacity	?? nozzles DD
Engineering Skills and Vision	8/10	Waterjetting	Up to 1000 bars – Rental project
Docking Capacity	156x26 m Floating D.	Painting	2 coat/day in Floating docks
Speciality	Container Bulk Carrier		<u>www.gisanshipyard.c</u> <u>om</u>
opeciality	Tankers	Economy/Payments	8/10
Major Customers			

GISAN SHIPYARD - TUZLA

CORPORATE PARTNER

Shipyard Name	GISAN SHIPYARD	Nearby Hotels Accomodation	In 5 km range 5 hotel Estimated drive time: 15 minutes
Mechanical Works Workshop	7	Pipe Works	8.5
Special Repairs Safety For General	8 8	Steel Works	8.5
Ballast Water / Scrubber Works	8	Final Bill Workdones	As per actual values
Design Capacity	8	Quotation / Prices	~5% less than average
On time deliveries	9	Speed & Quality for Tank Coating	8
Permissions to outside workshops	As per agreement, can be	Airport Deliveries	20 min. to Sabiha 90 min. Atatürk

TERSAN SHIPYARD – TUZLA – YALOVA



DNV·GL

APPROVAL OF MANUFACTURER ANTIHODODITU

his is to certify: het fersan Tersanecilii

er ersan Tersanecilik Sanayi ve Ticaret A.S. lova. Turkey In appendit John

n scordance with DRV GL rules for classification - Bhips Customer specification 'L-BKH-269-04 Rev.

rocess Re-metaling procedure of bush ning materials Tim based white metal emerks Approval issued as a voluntary class servi

TERSAN SHIPYARD – TUZLA – YALOVA

Shipyard Name	Tersan Shipyards	Location	Yalova
Proficiency	Repair & Conversions	Grid Blasting Capacity	50 nozzles/Dock
Engineering Skills and Vision	8/10	Waterjetting	Water jetting
Docking Capacity	130x22 m FD 180x29 m FD 282x51 m FD	Painting	2 coat/day in Floating docks
	Container Bulk Carrier Tankers	Web	<u>www.tersanshipyard.</u> <u>com</u>
Speciality		Economy/Payments	8.5/10
Major Customers	•••••		

TERSAN SHIPYARD – TUZLA – YALOVA

Shipyard Name	Tersan Shipyards	Nearby Hotels Accomodation	In 10 km range 1 hotel Estimated drive time: 30 – 75 minutes
Mechanical Works Workshop	9.5	Pipe Works	9
Special Repairs Safety For General	8.5 7.5	Steel Works	9
Ballast Water / Scrubber Works	8	Final Bill Workdones	???
Design Capacity	8.5	Quotation / Prices	~ 5% Cheaper
On time deliveries	8	Speed & Quality for Tank Coating	8
Permissions to outside workshops	As per agreement, can be	Airport Deliveries	50 min. to Sabiha 180 min. Atatürk



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