ZEETUG®
Zero Emission Electric Tugboat

OPERATIONAL
STATUS REPORT

ZEETUG FLEET | 3x ZEETUG30 and 1x ZEETUG45

Designer & Builder
NAVTEK
NAVTEK NAVAL TECHNOLOGIES INC.

Report date: 31.03.2025

Environment Friendly Particulars

ZEETUGs are the marine vessels that completely eliminates GHG emission which is harmful to both human and enviroment, reduces noise pollution to its minimum level, having low heat emission.

They are designed with the perpespective of optimization of different aspects; operational efficiency and easiness, environmental effects, providing healthy working conditions for the crew by means of erasing air and noise pollutions which are also detrimental for enviroment.

- Zero GHG Emission
- Zero Particle Emission
- ZEETUG has %23 less noise than her equivelant with diesel engine.
- No waste heat of exhaust.
- Waste heat stemming from coolant is %85 less.

Awards

FOR HELPING THE ENVIRONMENT WINNER 2020

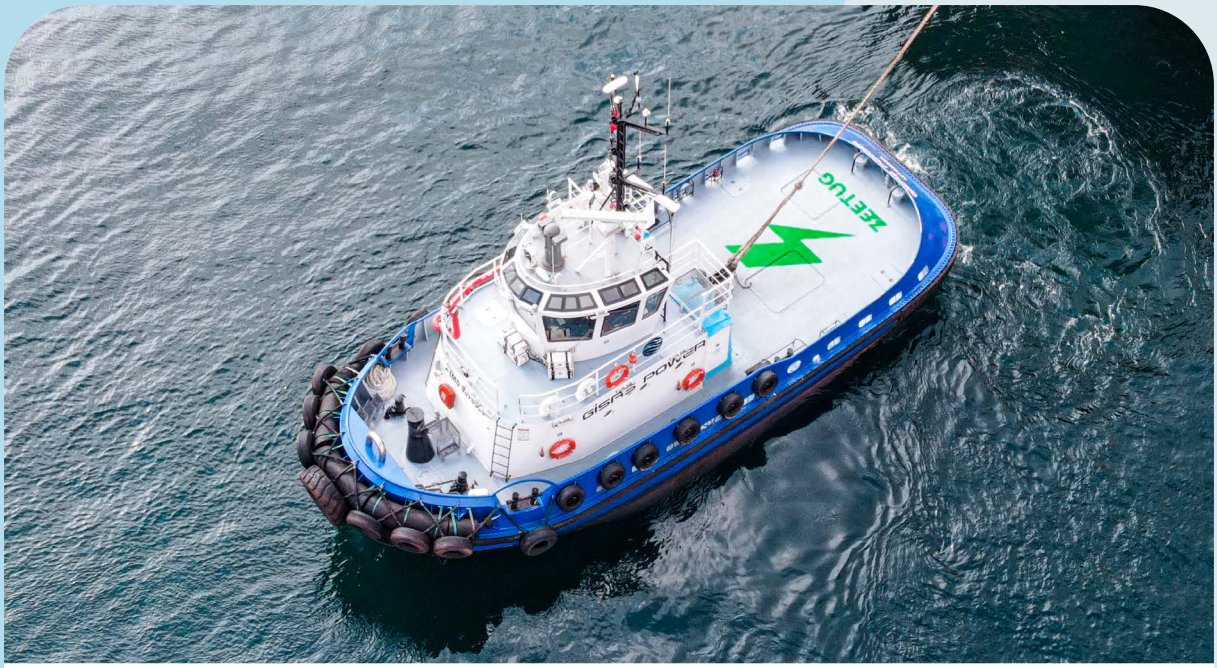
TUG OF THE YEAR WINNER 2021

GREEN WORLD AWARDS 2021

EXISTING SOLUTIONS ZERO EMISSION @BERTH RUNNER UP 2022

THE BEST INVENTIONS REDUCING MARITIME EMISSIONS 2023

www.zeetug.com



NV712-ZEETUG30

1830 DAYS
in operation

World's first Zero-emissions, full-electric Harbor Tugboat GISAS POWER (ZEETUG30) has completed 1830 days in operation.

This report indicates the important figures within this period that explains the total efficiency of the project.

www.zeetug.com

NV712-GİSAŞ POWER (ZEETUG30)

Basic Information

ZEETUG®
www.zeetug.com

Keel Laying
10 January 2018

Delivery (in service)
27 March 2020

First class annual survey
03 March 2021

Last port state inspection
31 May 2024

Total time in operation
1830 days

Total actual operational days
1633 days

Total operation number (sortie)
4584

Total e-motor run time
7936 hours

Total time off (of maintenance and/or repair)
784 hours (2,0%)

Total charging
1.487.547 kWh

Designer & Builder
NAVTEK
NAVTEK NAVAL TECHNOLOGIES INC.

NV712-GİSAŞ POWER (ZEETUG30)

Efficiency Figures

ZEETUG®
www.zeetug.com

Saved CO_2 (MDO vs Electric)
1057.7 t

Saved CO_2 (MDO vs Electric)
210.9 t per annum

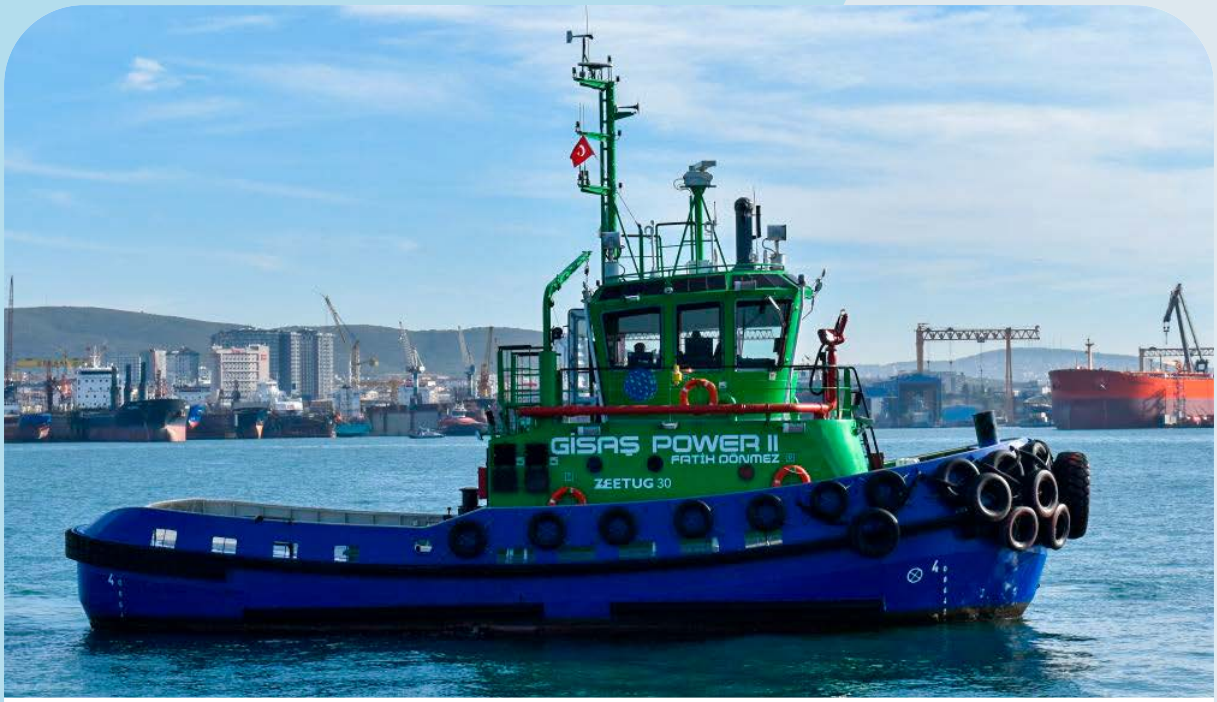
Saved NO_X (MDO vs Electric)
3.1 t

Saved NO_X (MDO vs Electric)
0.6 t per annum

Total Fuel Cost (Energy) OPEX savings (MDO vs Electric)
30%

Total Maintenance & Repair Cost OPEX savings (MDO vs Electric)
85%

Designer & Builder
NAVTEK NAVAL TECHNOLOGIES INC.



NV717-ZEETUG30

712 DAYS in operation

Zero-emissions, full-electric
Harbor Tugboat GISAS POWER II (ZEETUG30)
has completed 712 days in operation.

This report indicates the important figures within this period that explains the total efficiency of the project.

www.zeetug.com

NV717-GİSAŞ POWER II (ZEETUG30)

Basic Information

ZEETUG®
www.zeetug.com

Keel Laying
04 December 2021

Delivery (in service)
19 April 2023

First class annual survey
11 March 2024

Last port state inspection
05 July 2024

Total time in operation
712 days

Total actual operational days
429 days

Total operation number (sortie)
1100

Total e-motor run time
1850 hours

Total time off (of maintenance and/or repair)
277 hours (2,6%)

Total charging
332.735 kWh

Designer & Builder
NAVTEK
NAVTEK NAVAL TECHNOLOGIES INC.

NV717-GİSAŞ POWER II (ZEETUG30)

Efficiency Figures

ZEETUG®
www.zeetug.com

Saved CO_2 (MDO vs Electric)
236.6 t

Saved CO_2 (MDO vs Electric)
121.2 t per annum

Saved NO_X (MDO vs Electric)
0.67 t

Saved NO_X (MDO vs Electric)
0.34 t per annum

Total Fuel Cost (Energy) OPEX savings (MDO vs Electric)
30%

Total Maintenance & Repair Cost OPEX savings (MDO vs Electric)
85%

Designer & Builder
NAVTEK
NAVTEK NAVAL TECHNOLOGIES INC.

NV720-ZEETUG30

636 DAYS in operation

Zero-emissions, full-electric
Harbor Tugboat GISAS POWER III (ZEETUG30)
has completed 636 days in operation.

This report indicates the important figures within this
period that explains the total efficiency
of the project.

www.zeetug.com

NV720-GİSAŞ POWER III (ZEETUG30)

Basic Information

ZEETUG®
www.zeetug.com

Keel Laying
30 December 2021

Delivery (in service)
04 July 2023

First class annual survey
18 April 2024

Last port state inspection
01 October 2024

Total time in operation
636 days

Total actual operational days
497 days

Total operation number (sortie)
1341

Total e-motor run time
2507 hours

Total time off (of maintenance and/or repair)
253 hours (2,1%)

Total charging
454.696 kWh

Designer & Builder
NAVTEK
NAVTEK NAVAL TECHNOLOGIES INC.

NV720-GİSAŞ POWER III (ZEETUG30)

Efficiency Figures

ZEETUG®
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Saved CO_2 (MDO vs Electric)
323.3 t

Saved CO_2 (MDO vs Electric)
185.5 t per annum

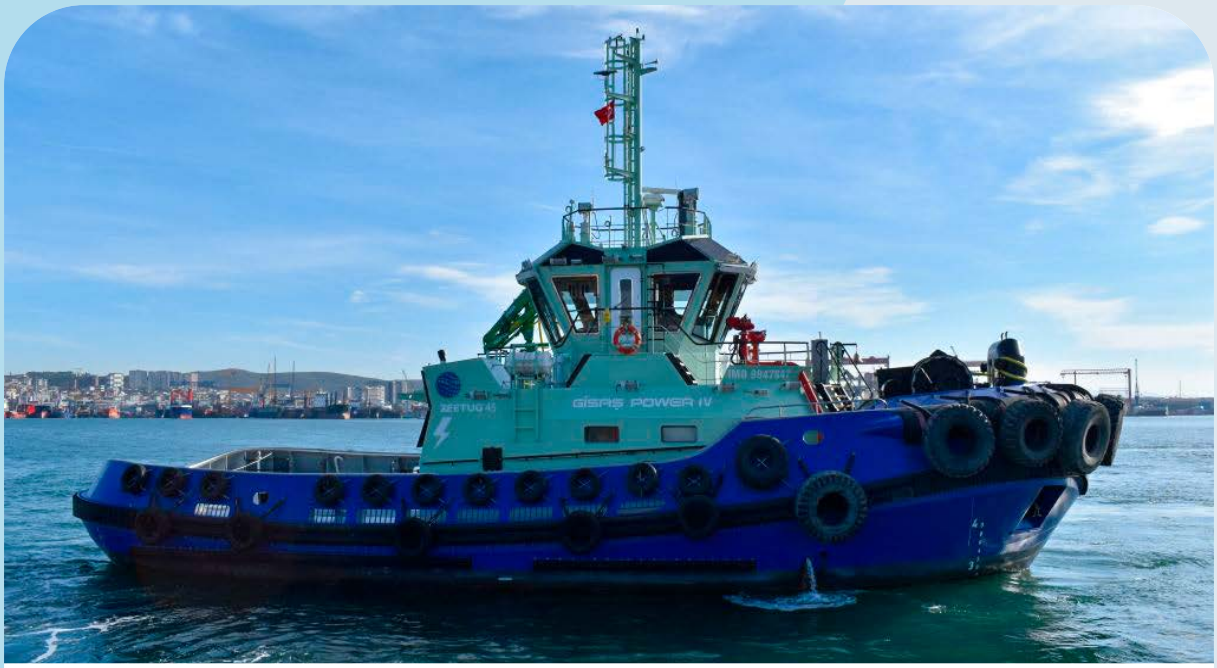
Saved NO_X (MDO vs Electric)
0.92 t

Saved NO_X (MDO vs Electric)
0.52 t per annum

Total Fuel Cost (Energy) OPEX savings (MDO vs Electric)
30%

Total Maintenance & Repair Cost OPEX savings (MDO vs Electric)
85%

Designer & Builder
NAVTEK NAVAL TECHNOLOGIES INC.



NV719-ZEETUG45

532 DAYS
in operation

Zero-emissions, full-electric
Harbor Tugboat GISAS POWER IV (ZEETUG45)
has completed 532 days in operation.

This report indicates the important figures within this
period that explains the total efficiency
of the project.

www.zeetug.com

NV719-GİSAŞ POWER IV (ZEETUG45)

Basic Information

ZEETUG®
www.zeetug.com

Keel Laying
28 February 2022

Delivery (in service)
16 October 2023

First class annual survey
10 October 2024

Last port state inspection
25 December 2024

Total time in operation
532 days

Total actual operational days
460 days

Total operation number (sortie)
1133

Total e-motor run time
1360 hours

Total time off (of maintenance and/or repair)
274 hours (2,4%)

Total charging
360.176 kWh

Designer & Builder
NAVTEK
NAVTEK NAVAL TECHNOLOGIES INC.

NV719-GİSAŞ POWER IV (ZEETUG45)

Efficiency Figures

ZEETUG®
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Saved CO_2 (MDO vs Electric)
256.1 t

Saved CO_2 (MDO vs Electric)
175.7 t per annum

Saved NO_X (MDO vs Electric)
0.72 t

Saved NO_X (MDO vs Electric)
0.50 t per annum

Total Fuel Cost (Energy) OPEX savings (MDO vs Electric)
30%

Total Maintenance & Repair Cost OPEX savings (MDO vs Electric)
85%

Designer & Builder
NAVTEK
NAVTEK NAVAL TECHNOLOGIES INC.

ZEETUG®

Zero Emission Electric Tugboat

www.zeetug.com

Designer & Builder

NAVTEK

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