



OPERATIONAL **STATUS REPORT**

NV712-GISAS POWER (ZEETUG30)

Report date: 01.01.2023

Designer & Builder

NAVTEK
NAVTEK NAVAL TECHNOLOGIES INC.

Environment Friendly Particulars

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

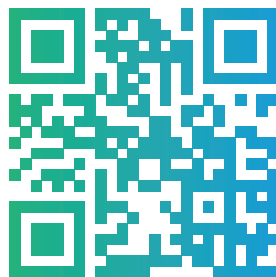
They are designed with the perspective of optimization of different aspects; operational efficiency and easiness, environmental effects, providing healthy working conditions for the crew by means of erasing air and noise pollutions which are also detrimental for environment.

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

1010 DAYS in operation

World's first Zero-emissions, full-electric
Harbor Tugboat GISAS POWER (ZEETUG30)
has completed 1010 days in operation.

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



www.zeetug.com

Basic Information



Keel Laying
10 January 2018

Delivery (in service)
27 March 2020

First class annual survey
03 March 2021

Last port state inspection
23 May 2022



Total time in operation
1010 days

Total actual operational days
920 days

Total operation number (sortie)
2749

Total motor run time
4241 hours

Total time off (of maintenance and/or repair)
543 hours



Total charging
788.162 kWh

Efficiency Figures



Operational Days / Total calendar days

93%

Av. Daily operation number (sortie)

2.99 per day

Non-working hours / Working hours

4.25

Stoppage quantity

30 (total 543 hours)

Class annual survey stoppage

4 hours

Class annual survey required works

None

Li-Io batteries state of health

99%

Av. Discharge Rate

1.55

Av. Charge Rate

0.65



Saved CO₂ (MDO vs Electric)

560.6 t

Saved CO₂ (MDO vs Electric)

207.9 t per annum

Saved NO_x (MDO vs Electric)

1.59 t

Saved NO_x (MDO vs Electric)

0.59 t per annum

Total Fuel (Energy)

OPEX savings (MDO vs Electric)

28%

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First in the World
Zero Emission
Clean Operation





www.zeetug.com

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