Quite Propeller In Ship

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Abstract- *The proposal concept is to replace the propeller into the nozzle propeller . we know that the number of commercial ships are employed to causes the vibration effects and sound pollution.Using the "Quite Propeller" to prevent the environmental causes and increases the efficiency.*

I. INTRODUCTION

1. Quite propeller are the marine propeller fitted with a non rotating nozzle.

2. It is used to improve the efficiency of the propeller and is used to heavily loaded commercial ships

II. LITERATURE REVIEW

[1] Ghose J.P., Gokarn R.P.; ”Basic Ship Propulsion”; Allied Publishers Pvt. Limited, 2004.

[2] Taketani T., Kimura K., Ishii N., Matsuura M. andTamura T. “Advanced Design of a ducted propeller withHigh Bollard Pull Performance”, First International Symposium on Marine Propulsors smp’09, Trondheim, Norway, June 2009.

[3] TadeusKoronowicz , Zbigniew Krzemianowski andTeresa Tuszkowska; “A complete design of ducted propellers using the new computer system”; Polish Maritime Research, 2(60) Vol 16; pp. 34-39. 2009.

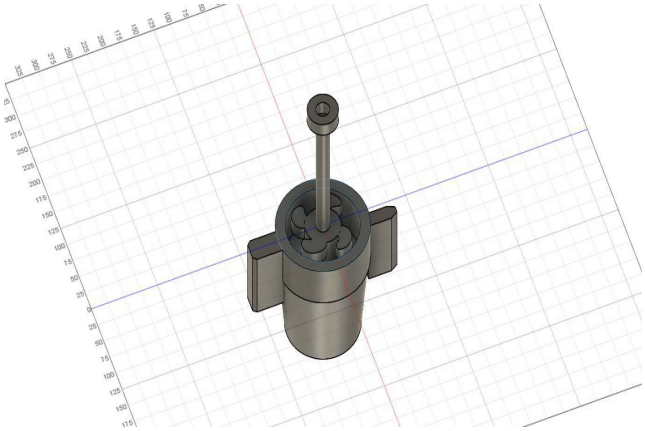
[4] Celik F., Donguland A. Arikan Y.;”Investigation ofoptimum duct geometry for a passenger ferry”; IX HSMV Naples; May 2011

WHY WE USE QUITE PROPELLER IN SHIP

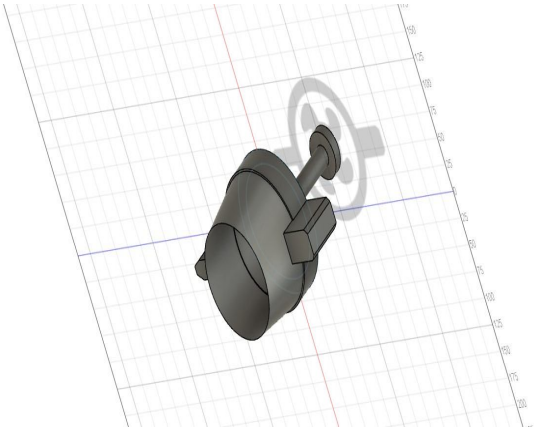
- In the commercial ships are produce the vibration effects and sound pollution.
- Vibration effects lead to hull deformation and decreases the efficiency.
- Sound pollution lead to not kill the animal directly but can disrupt their ability to find food, mates and avoids predators.

ALREADY EXISTING PROPELLER

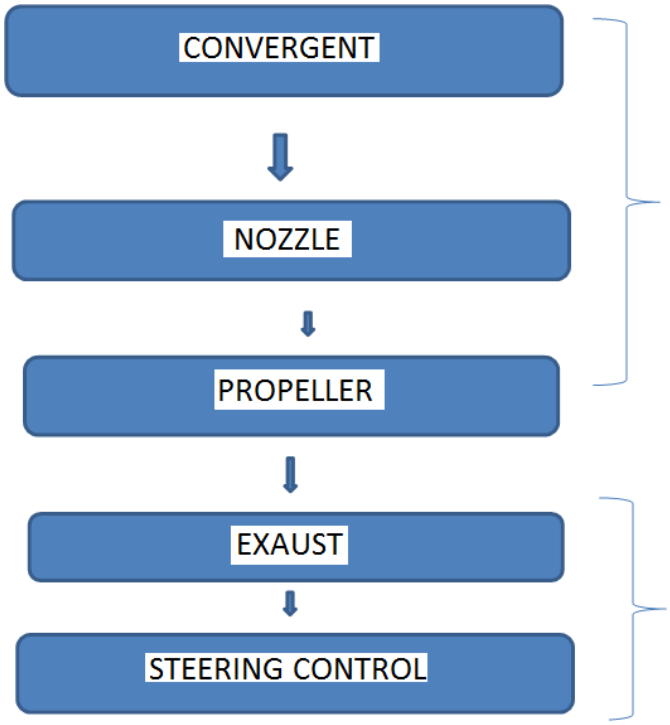
III. PROPOSED DESIGN



PROPOSED DESIGN



IV. FLOWCHART



V. DESIGN CALCULATION

ALREADY EXISTING PROPELLER

Exhaust velocity of the ship is e.g. =25km\hr

IN THE QUIET PROPELLER

Exhaust velocity of the ship is inlet of the quiet propeller. Using the continuity equation we have to conclude in theoretical manner.

Inlet velocity=25km\ hr
Inlet divergent nozzle diameter=25cm
Density of water=1000kg\m3 Outlet convergent nozzlediameter=15cm

$$V1*1000*D1=V2*1000*d2$$
$$25*1000*25=V2*1000*15$$
$$V2=41.6km\ hr$$

VI. CONCLUSION

The present study was intended to develop a concept for a nozzle propeller to with the motivation of increasing the efficiency with the decreases of fuel consumption. By providing the nozzle to decreases the level of noise pollution and the vibrational effects .Various studies have been done on a quiet propeller, but analyzing a quiet propeller by using different turbulence models and comparing them with each other, studying the effects of propeller position along the duct on hydrodynamic characteristics. the effects of the propeller position along the duct on hydrodynamic characteristics are investigated and the position in which the maximum thrust is produced will be determined.