

COLLEGE OF MARITIME ENGINEERING AND SEA SCIENCES

PROPULSION SYSTEM PROJECT

Course project

August, 2015

It is required to design in detail and with complete autonomy, the propulsion system for a ship selected by the student, previously accepted by the instructor. It is suggested to follow the design process discussed in class. The report must be presented in English language.

It is required to present the following:

- i- The requirements of the shipowner as speed in a certain load condition.
- ii- Design criteria to be applied: rules from a certain ship classification society.
- iii- Propulsion system arrangement: AutoCAD drawing of the propulsion system included in ship profile.
- iv- Dimensions: selection of the propeller and analysis in a second load condition, shaft, flanges, etc. Selection of supports and calculation of alignment.
- v- Dynamical analysis: forced lateral vibration of the system, considering unbalance and hydrodynamic propeller excitation; include a quick fatigue analysis if the classification society presents recommendations on this topic.
- vi- Details: calculation of sleeves, end shaft tunnel, and shaft details.
- vii- Final plan: AutoCAD drawing of the complete system, including as many details as possible.

The project will be evaluated considering:

Oral presentation (Naval Engin. Technical Student Sessions): 30%, and
Written report (no more than 10 pages, Times New Roman 11): 70%

- Presentation: quality, syntax and spelling;
- Technical content: calculations and innovation;
- Analysis (applicability) and conclusions.

Do not forget to include: Executive summary, index, and, to number pages, figures and tables. The bibliography has to be listed and referred to in the text.