



PT.PAL INDONESIA

Shafting Arrangement

Rudder

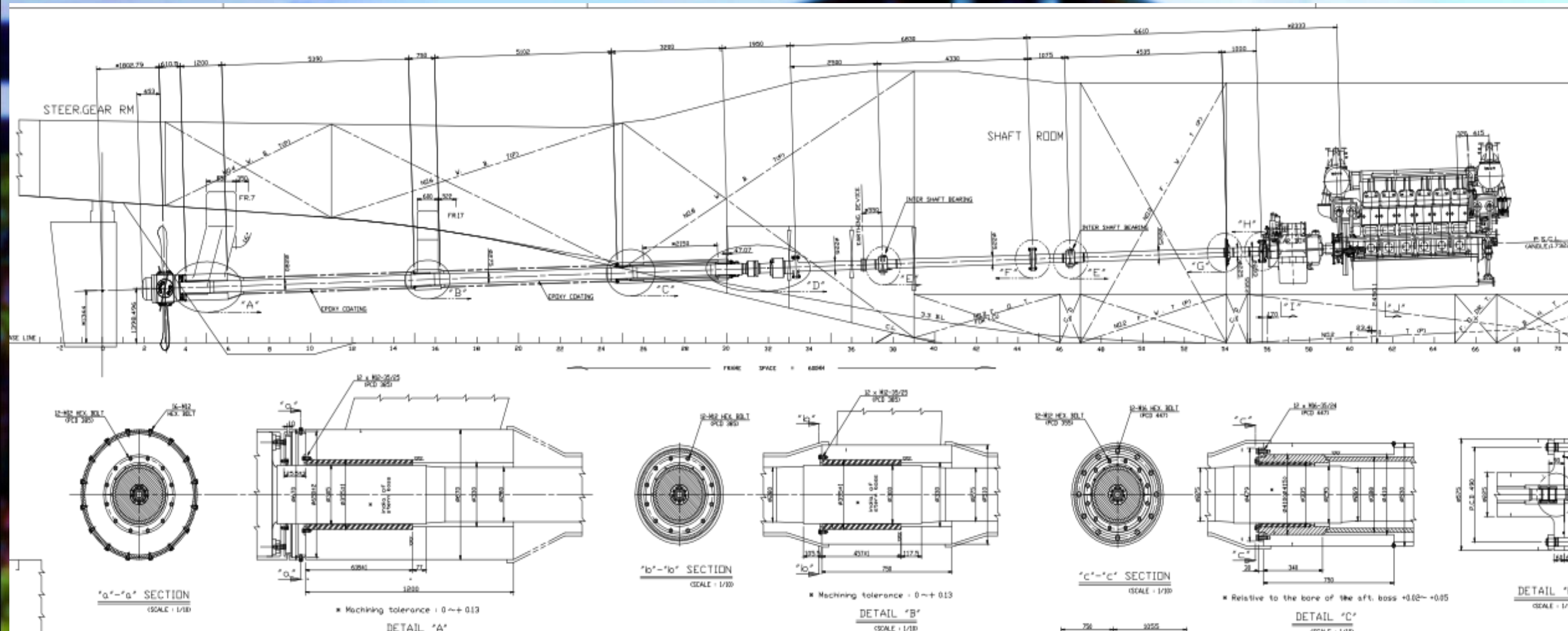
Shafting Arrangement

- Drawing shafting arrangement.
- Pengertian dan fungsi komponen
- Scope of work.

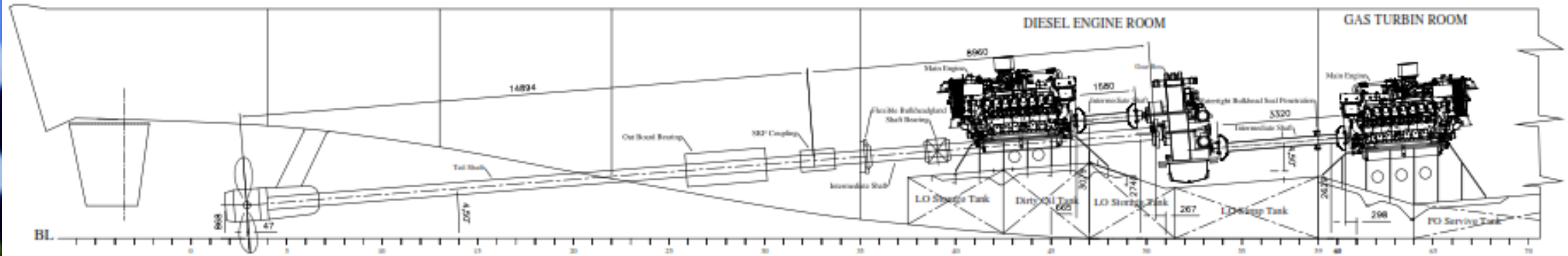
Rudder

- Drawing Rudder.
- Scope of work.

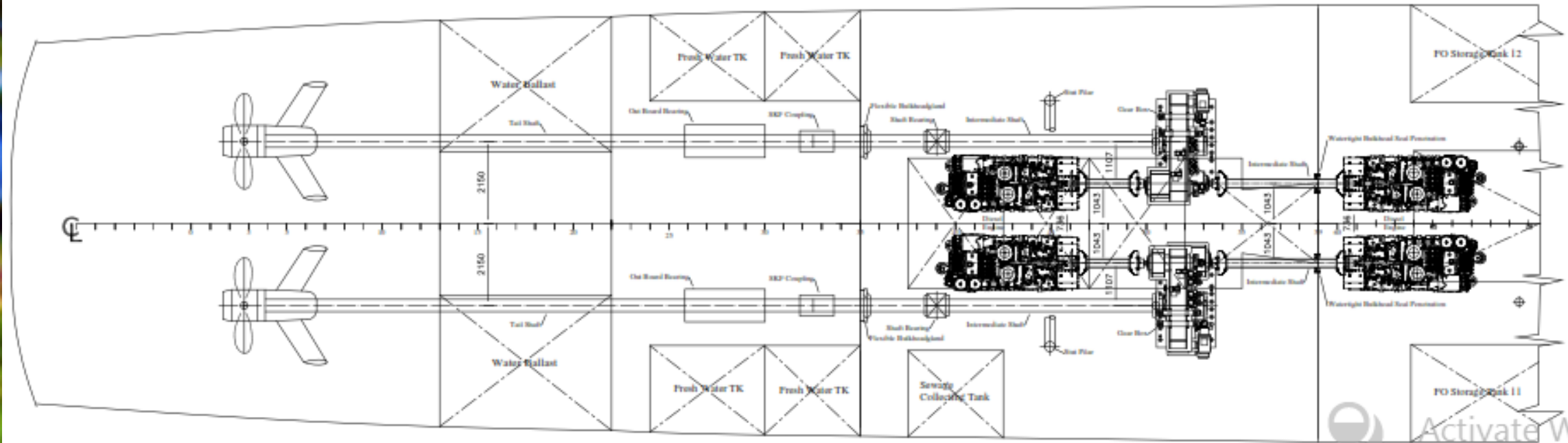
Drawing Shafting Arrangement



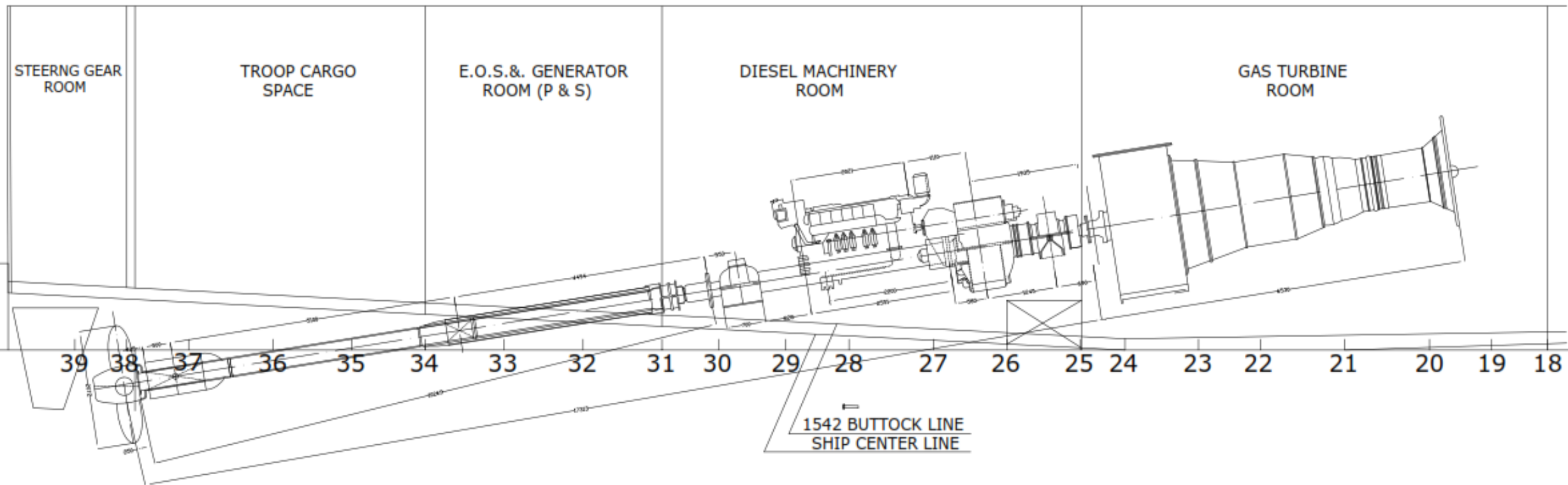
Drawing Shafting Arrangement



PLAN VIEW BELOW J-DECK



Drawing Shafting Arrangement



Pengertian dan fungsi komponen

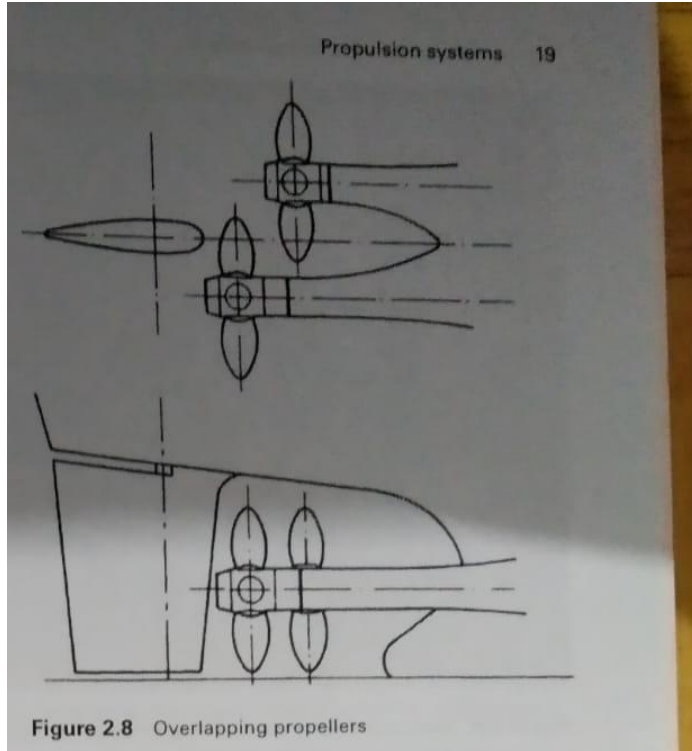
1. Propeller
2. Shaft
3. Couple shaft
4. plummer block /bearing
5. Bantalan (v bracket, l bracket ,sterntube dalam dan sterntube luar)
6. Sterntube seal
7. Gearbox
8. Main Engine

Pengertian tiap komponen

1. Propeller

- FPP
- Ducted Propeller
- Contra rotating propellers
- Overlapping Propellers
- Tandem Propellers
- Controllable Pitch Propeller

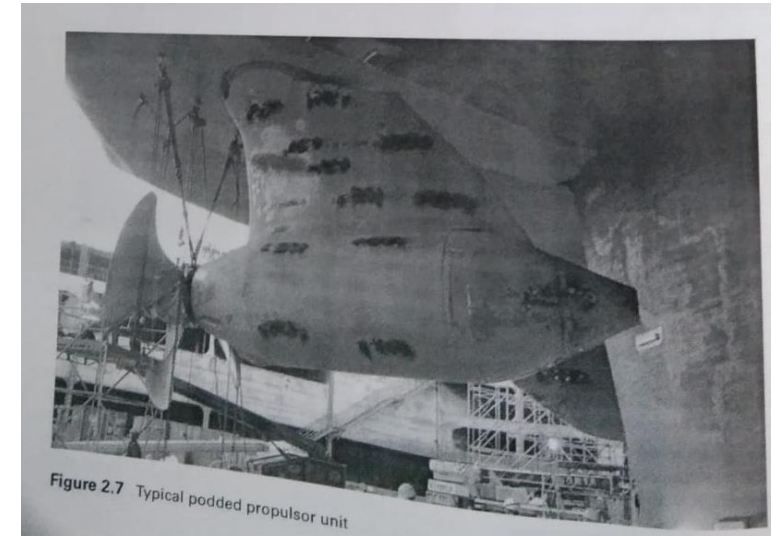
Propeller



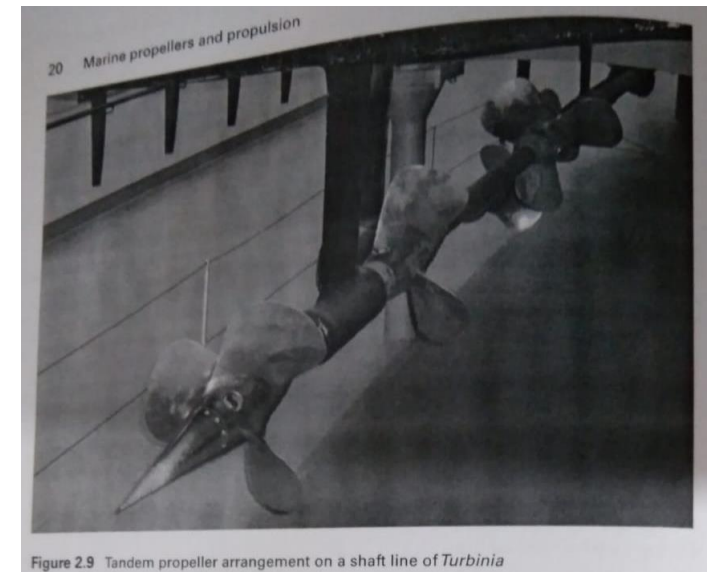
(Overlapping propellers)



(Steerable ducted propellers)

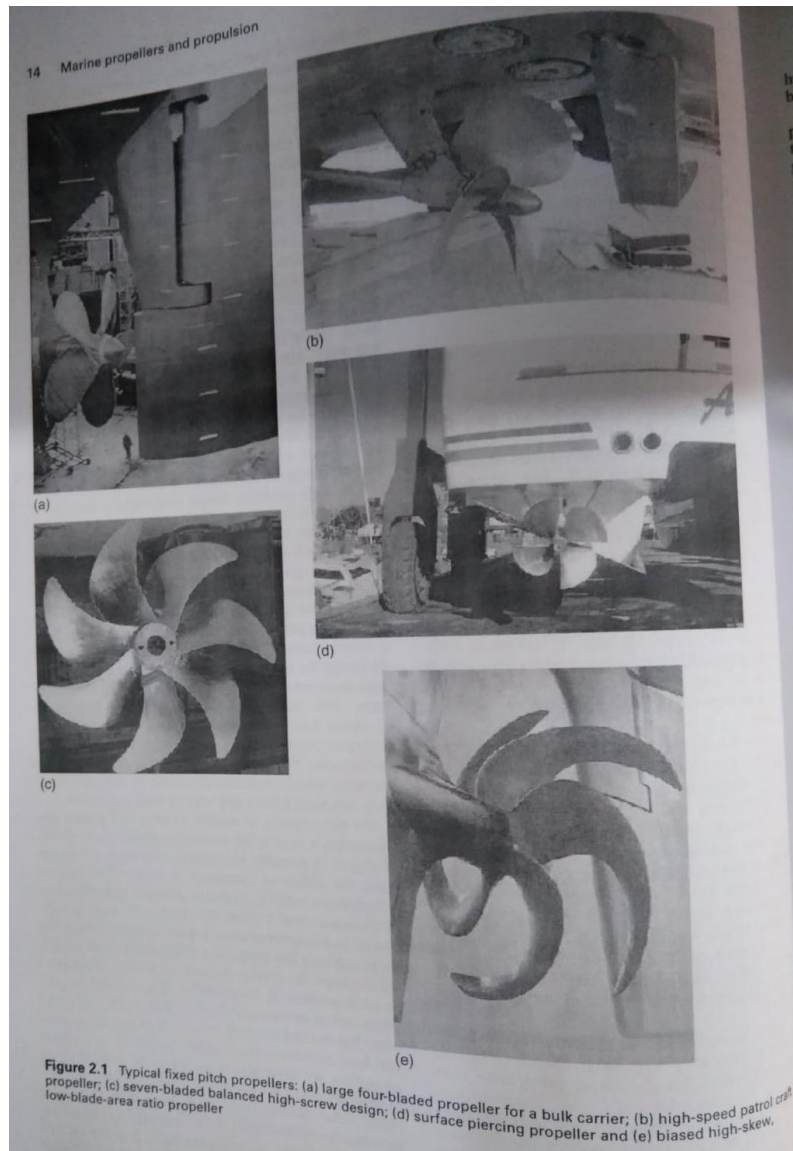


(Typical podded propeller)

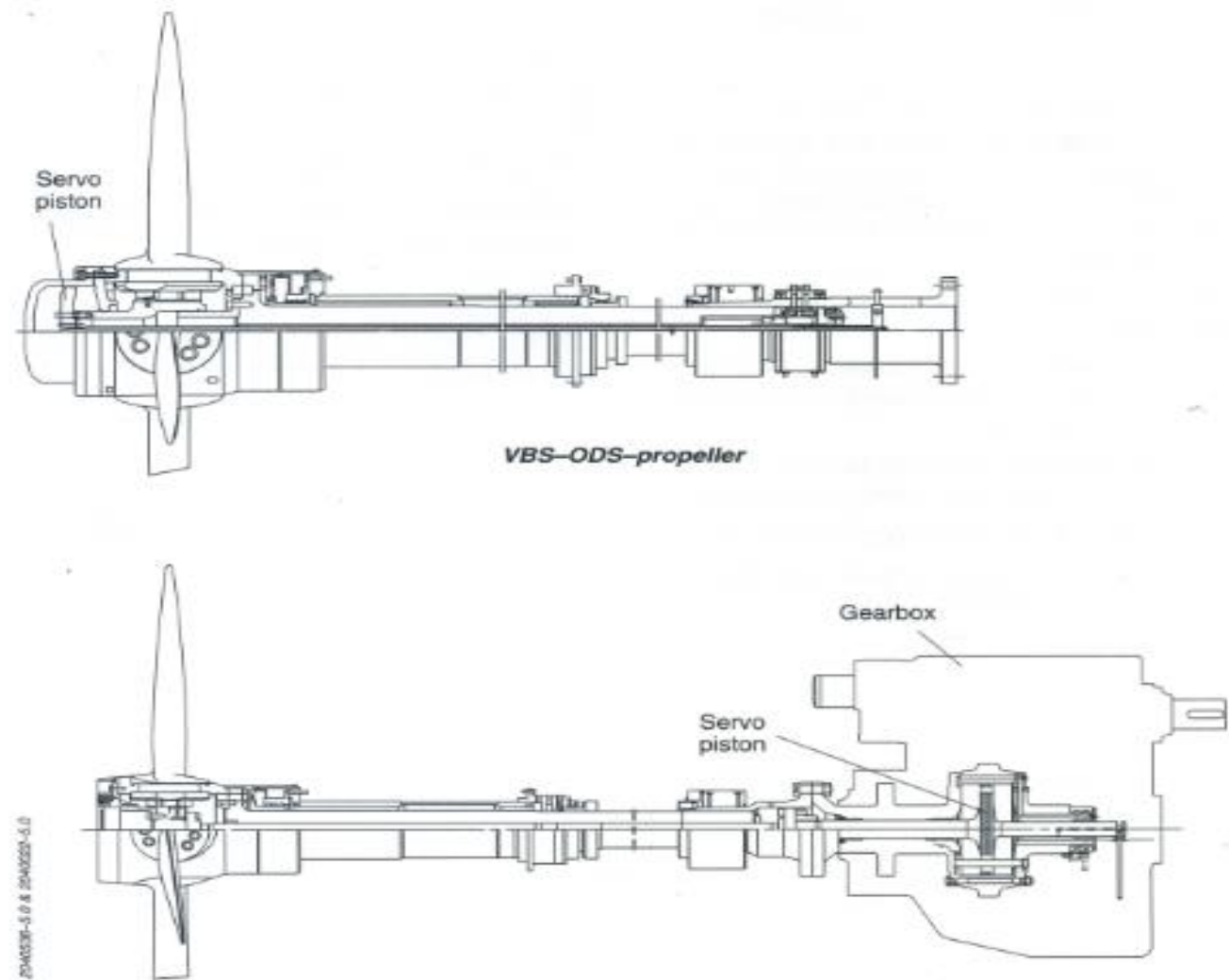


(Tandem propeller)

Propeller



(FPP)



(CPP)

Alignment shaft with laser



(Toolkit)



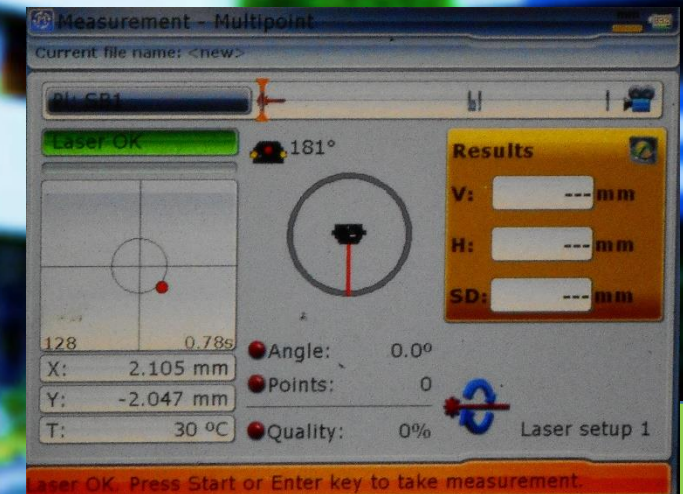
(Alignment process)



(Shotter)



(Receiver)



(Monitor)

Shaft Propeller



(Tail shaft)



(Intermediate shaft)



(Intermediate shaft)

Couple Shaft Propeller



(Couple SKF)

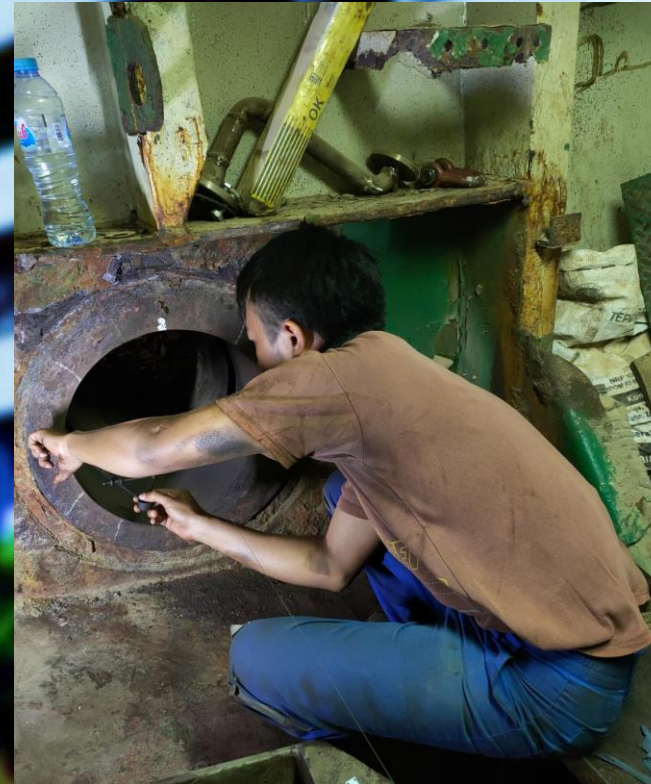


(Couple FAG)

Alignment with wire



(Alat alignment)



(Pengukuran posisi di tube)



(Pengukuran posisi V)

Test Keretakan shaft dan Propeller



(Pengecekan keretakan shaft by MPI)

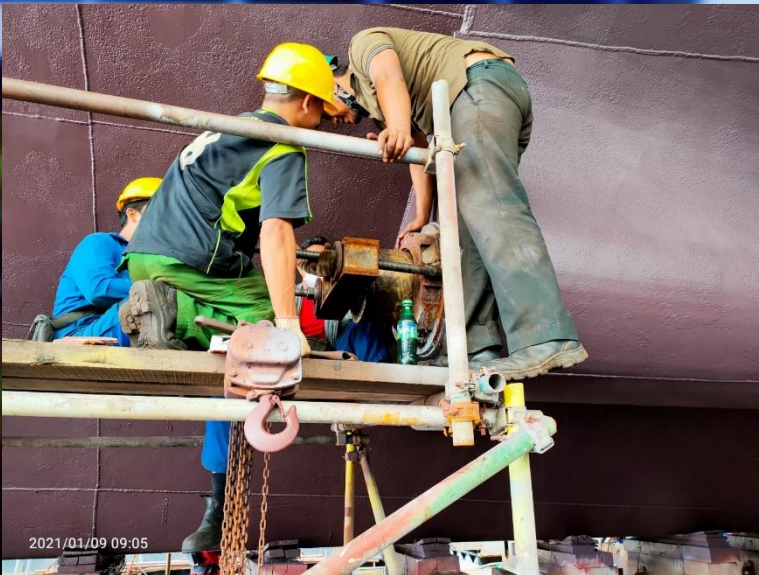


(Pengecekan keretakan blade by PT)



(Pengecekan keretakan shaft by PT)

Pembongkaran bantalan



Cek Kelurusan Shaft Propeller



Overhaul Hub CPP



Bantalan



(Bantalan lama yang wear limit)



(Bantalan baru)



(Machining bantalan baru)

STERNTUBE SEAL

Tipe Water Lubricated

Face Type Seal
Water Lubricated:



Type CRIM Propeller Shaft Seal
Forward Non Split Face Type Shaft Seal
Water Lubricated



Type CREW Propeller Shaft Seal
Forward Split Face Type Shaft Seal
Water Lubricated

Oil Lubricated:

Tipe Oil Lubricated

Oil Lubricated:



Type KR Propeller Shaft Seal
Aft Split Shaft Seal
Oil Lubricated



Type Sea Qual - Forward Propeller Shaft Seal
Forward Split Shaft Seal
Oil Lubricated



Type Sea Qual - Aft Propeller Shaft Seal
Aft Split Shaft Seal
Oil Lubricated



Type MLX - Propeller Shaft Seal
Forward Semi Split Shaft Seal
Oil Lubricated



Type KLR - Propeller Shaft Seal
Aft Non Split Shaft Seal
Oil Lubricated



Type MDL Propeller Shaft Seal
Forward Non Split Shaft Seal
Oil Lubricated

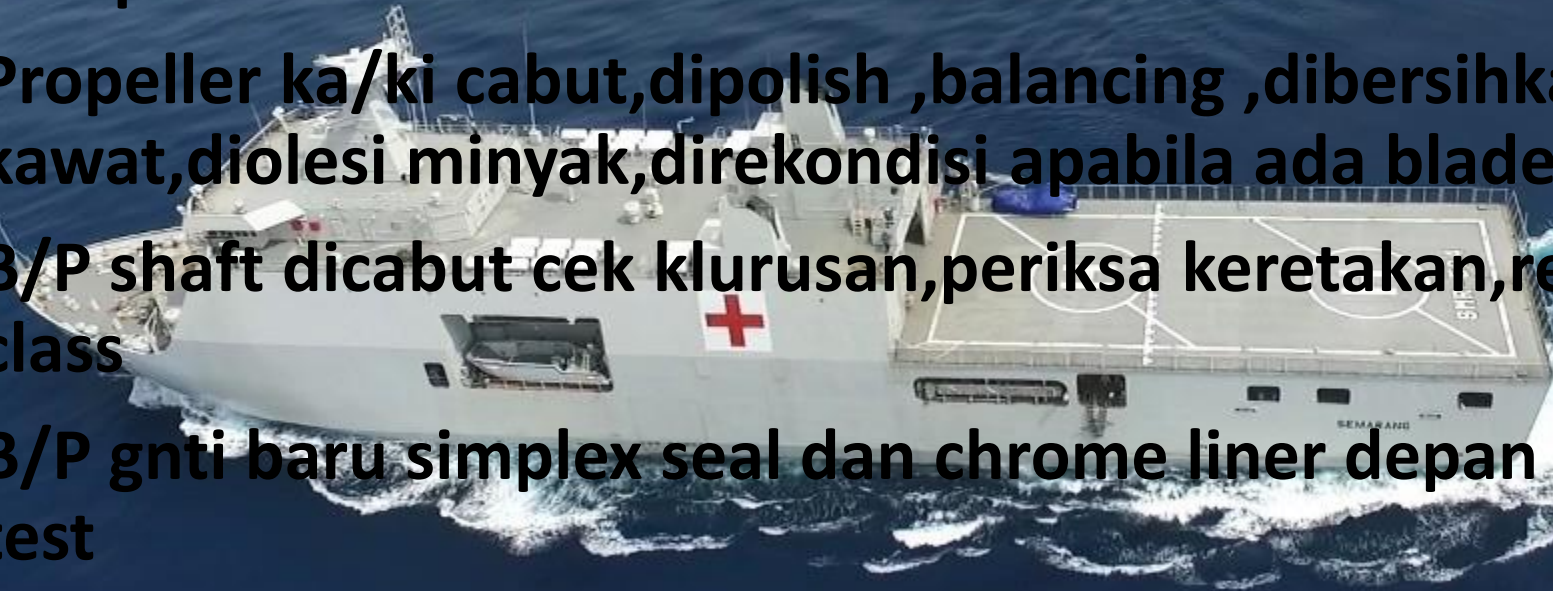
Main Engine & Gearbox



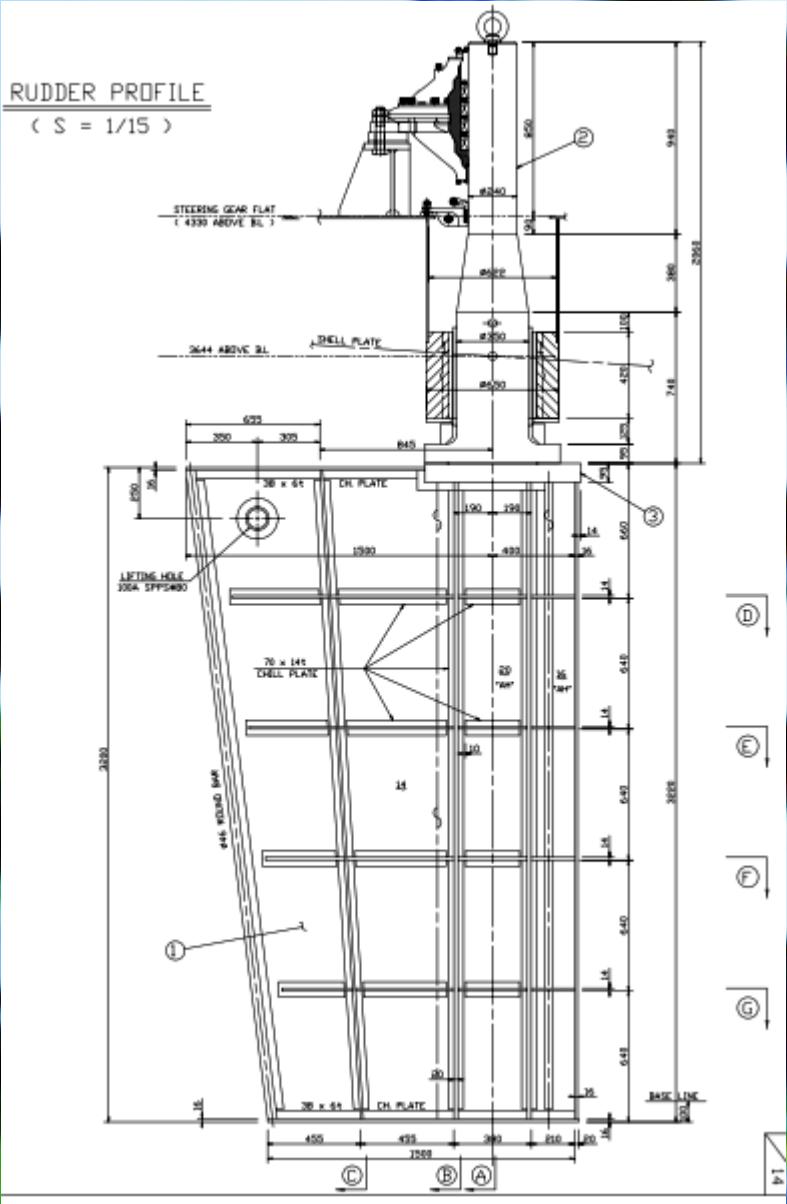
(Lifting tool for ME and GA)

Scope of work propulsion

- B/p, skerm seal poros ukur ruang gerak poros baling ka/ki dan rekap.
- Propeller ka/ki cabut, dipolish, balancing, dibersihkan, disikat kawat, diolesi minyak, direkondisi apabila ada blade yg kavitasi.
- B/P shaft dicabut cek klurusan, periksa keretakan, record dan periksa class
- B/P ganti baru simplex seal dan chrome liner depan belakang, press test

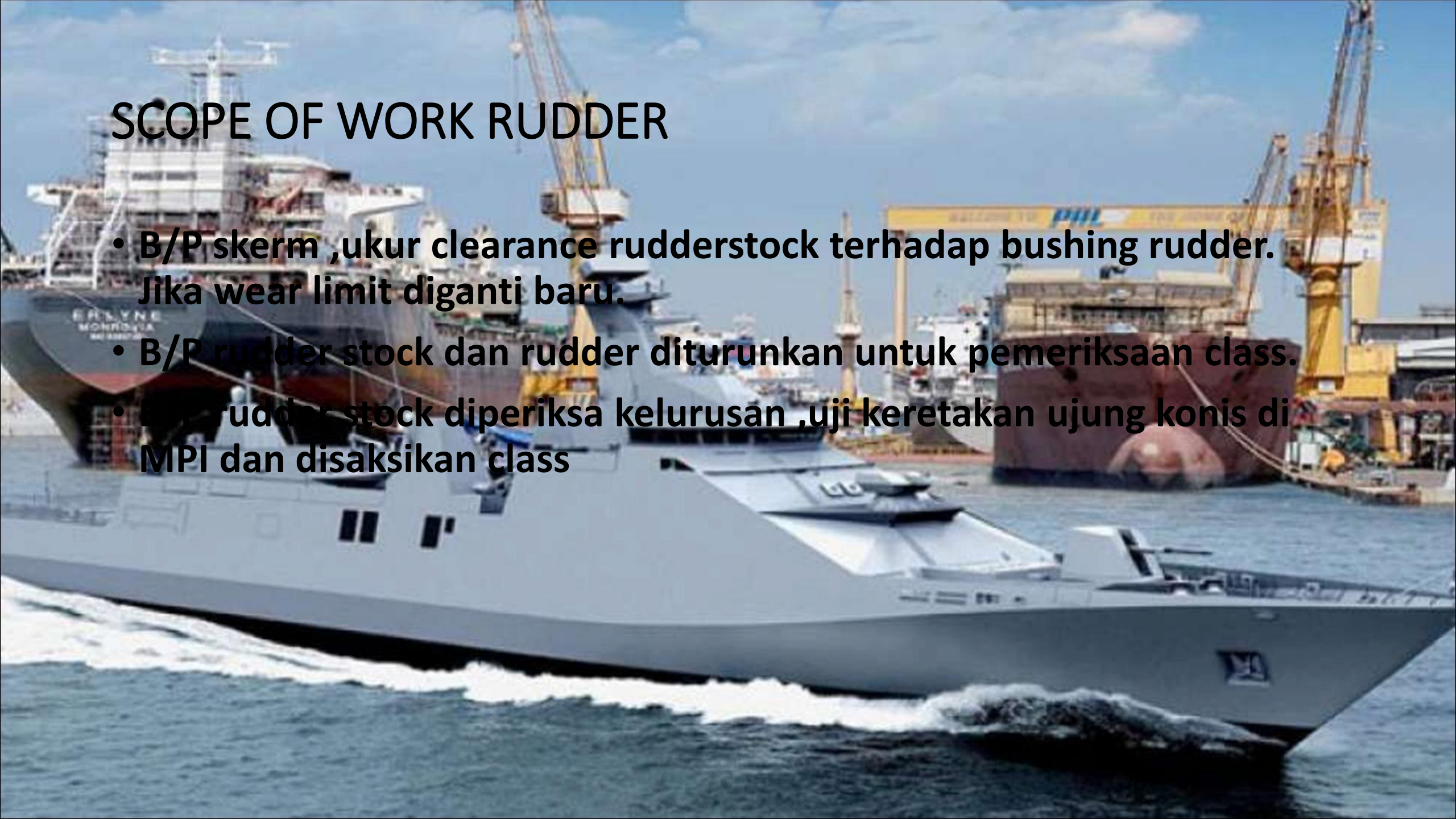


Rudder Stock



SCOPE OF WORK RUDDER

- B/P skerm ,ukur clearance rudderstock terhadap bushing rudder. Jika wear limit diganti baru.
- B/P rudder stock dan rudder diturunkan untuk pemeriksaan class.
- B/P rudder stock diperiksa kelurusan ,uji keretakan ujung konis di MPI dan disaksikan class



Pengukuran Clearance rudder



Pembongkaran rudder



TERIMAKASIH

