

# **“Knowledge on Ocean Going Ship Technology”**

**Presented by:**

**U Soe Aung  
B.E (Automobile) 1970**

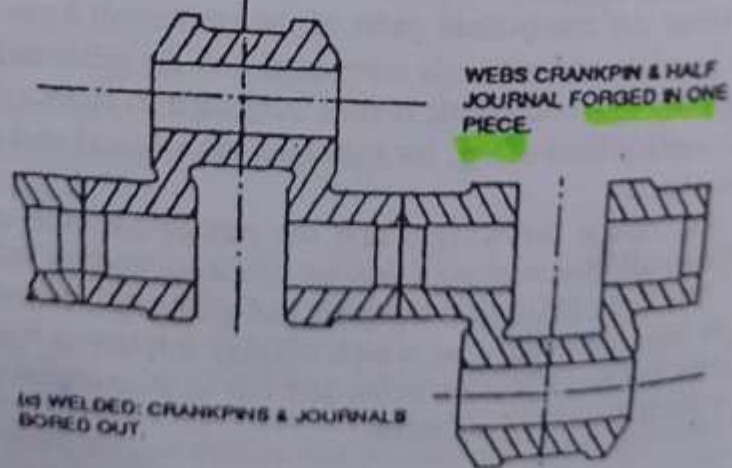
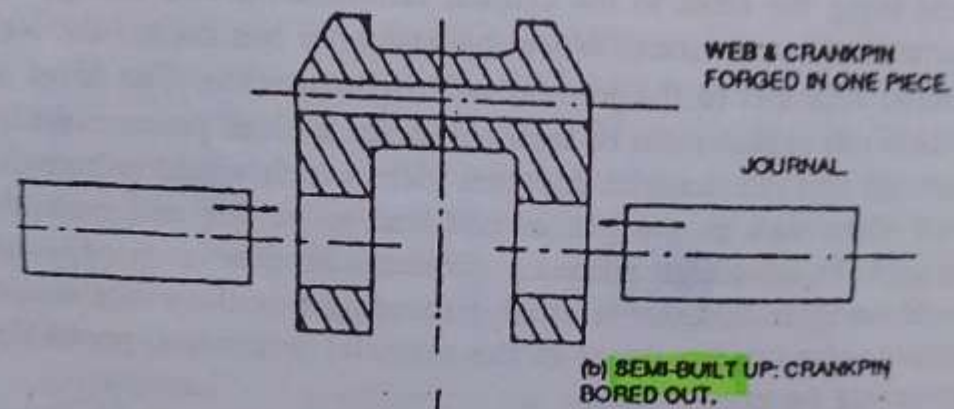
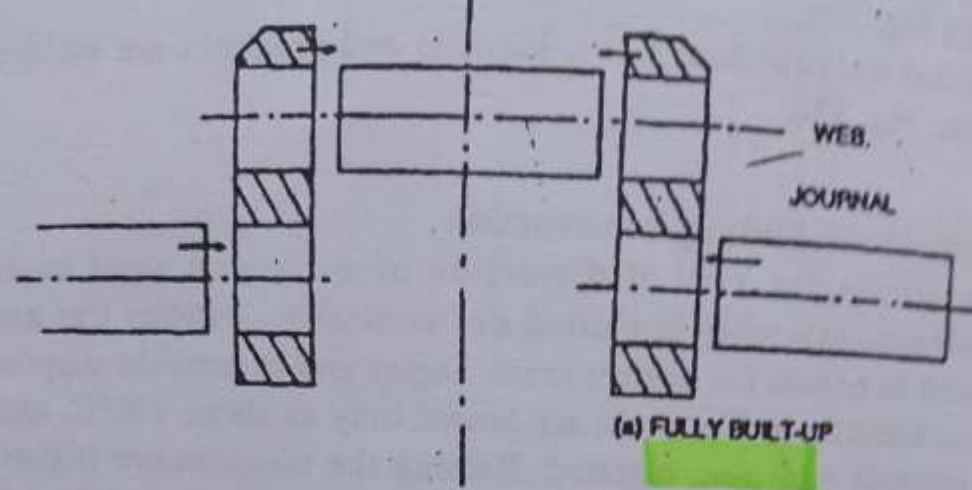
**Date: 1<sup>st</sup> March, 2025 (Saturday)**

**Venue: Function Hall, Fed.MES Building**

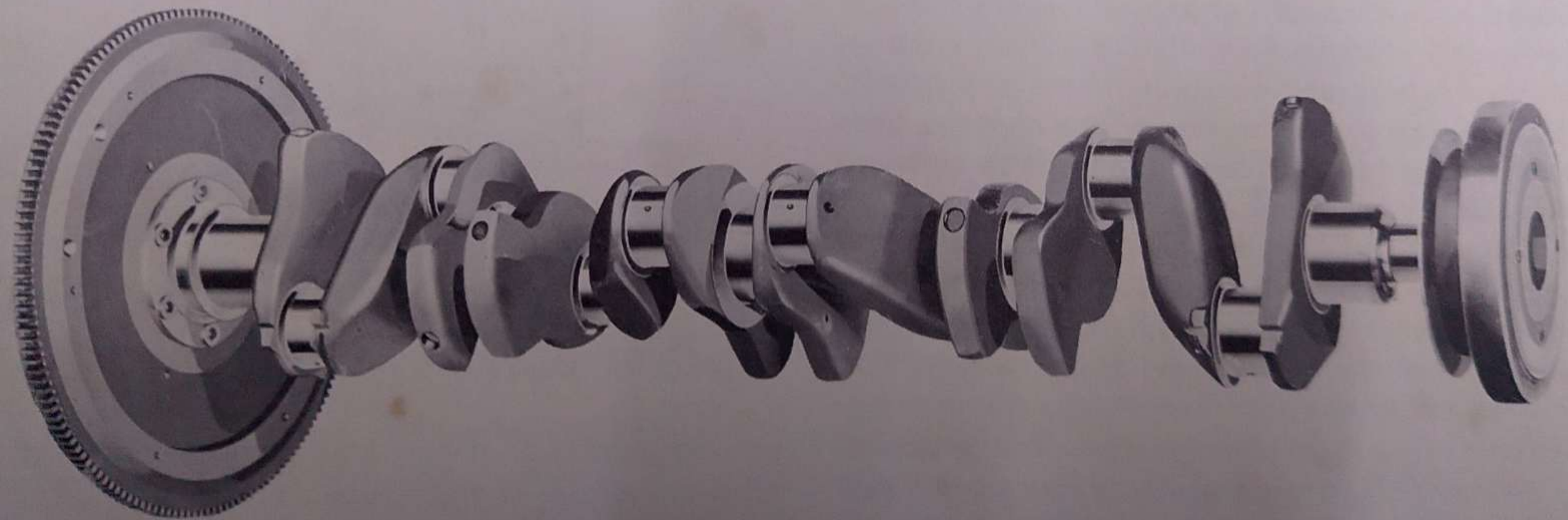
# Ship Technology

## 1.Crankshaft Design

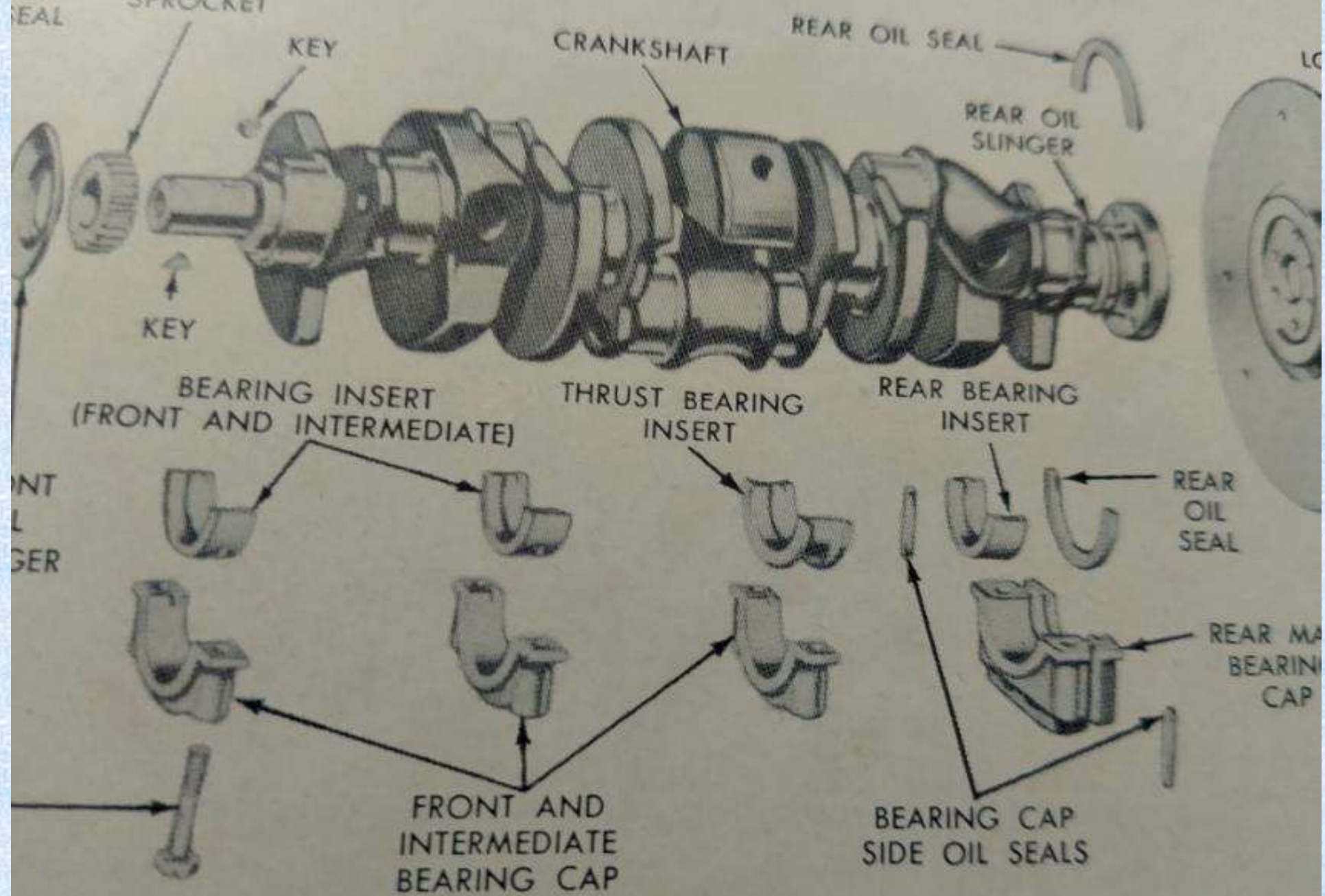
- As the ship engine is running in low speed range, with high combustion load, it is constructed strong enough to withstand high pounding load at various speed ranges.
- Not directly connected to piston, but thru' cross head arrangement.
- Can be ground (or) polished in place, as the shaft is a large in size.
- Directly connected to propeller thru thrust bearing block just after flywheel.
- Static electricity generated along the prop-shaft is ground thru carbon brush and slip-ring flitted on the shaft.







*Fig. 7-3. A counter-balanced crankshaft complete with flywheel and vibration damper.*



1. Crankshaft and related parts for a V-8 engine. (Ford D



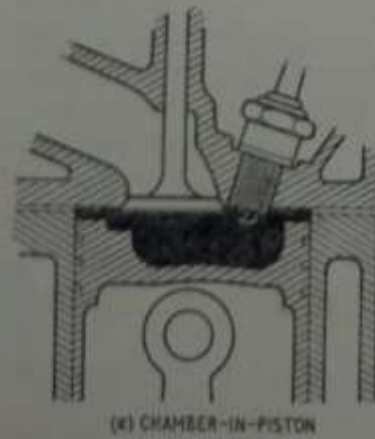
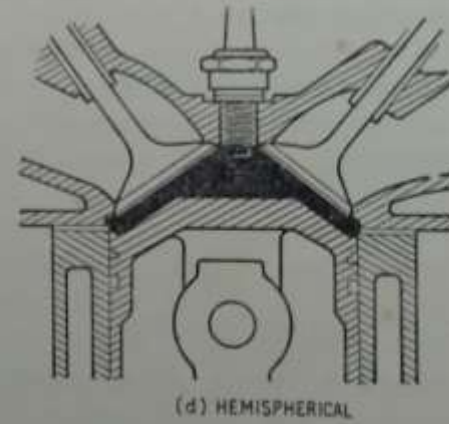
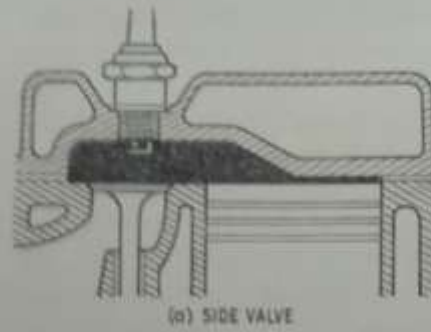


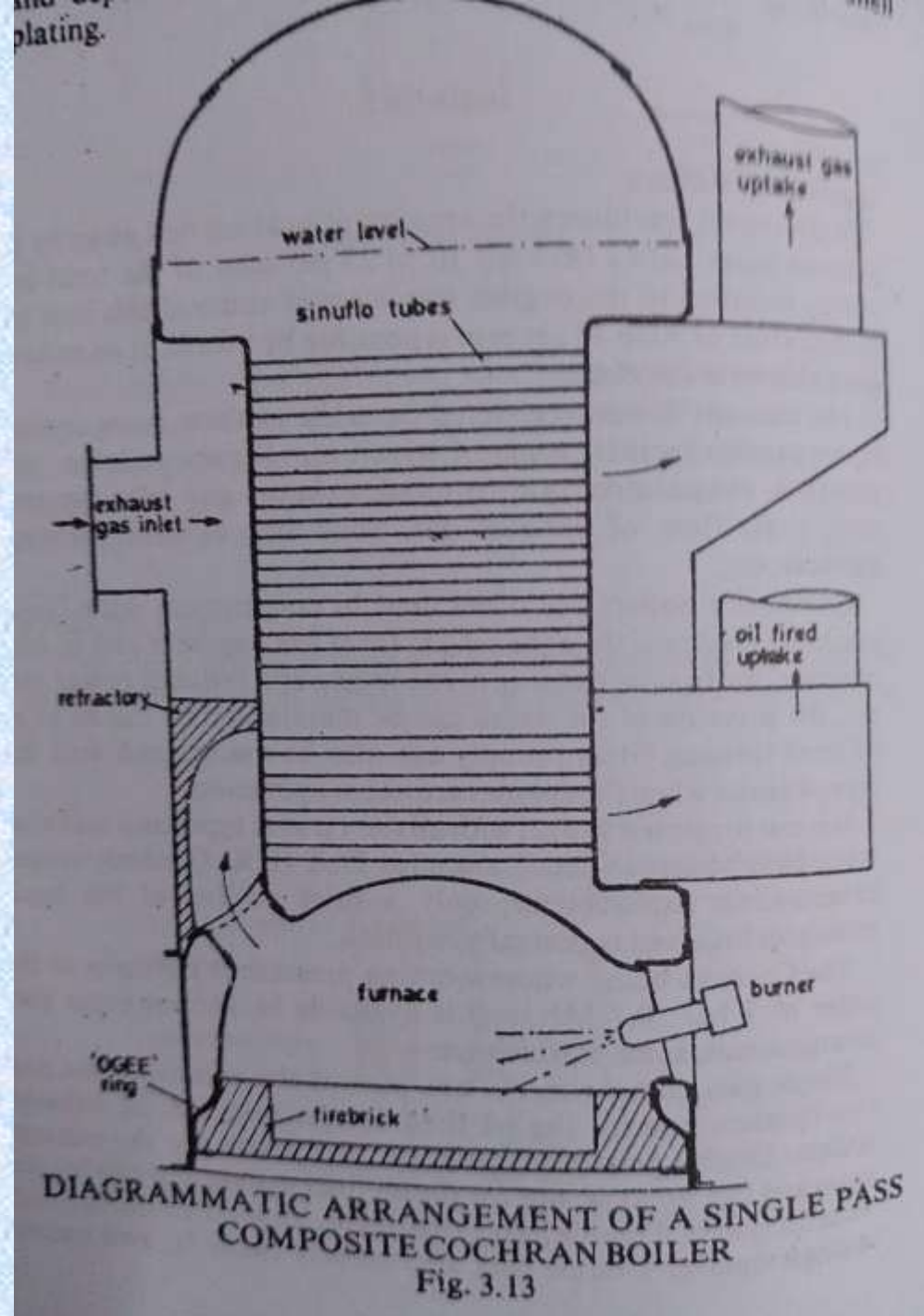
Fig. 1.3 (a)–(e) Combustion chamber designs—petrol engines

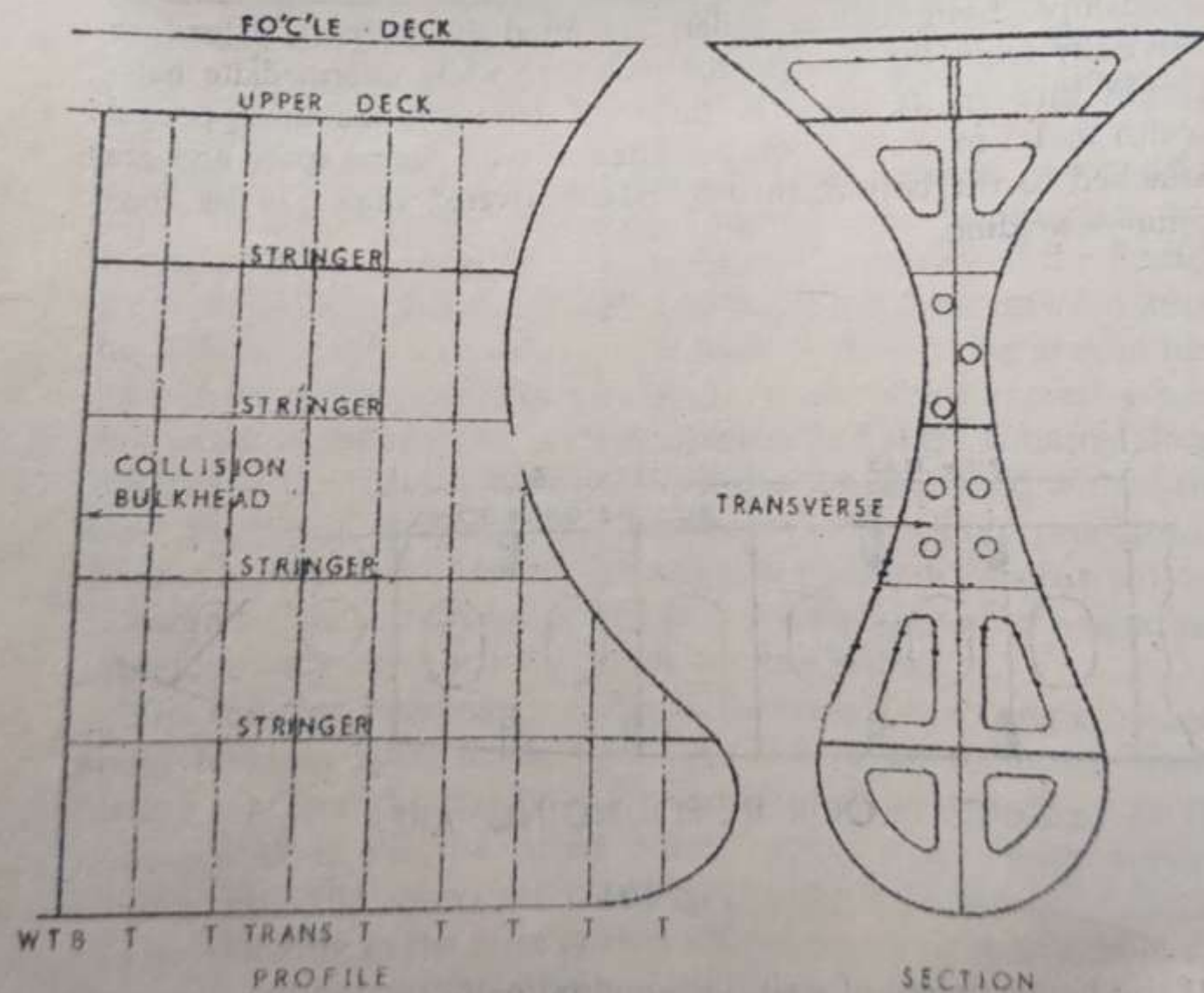
2. Critical speed is marked at barred-range on the maneuvering handle for safety measure.
3. Bow-thruster is fitted to reduce wake effect due to wave making phenomenon.
4. Furnace Oil (FO) is used for both main engine and generator to minimize fuel cost.
5. For steam production economizer is put into service in conjunction with oil fired boiler.
6. Fresh water is produced from S.W thru F.W generator by using M.E jacket water heat (About 60C)

7. To dispose waste onboard, incinerator is used.
8. Sewage can only discharged onboard thru Sewage treatment plant.
9. Air-con & Refrigeration is also a must onboard in order to provide better living environment as well as to keep vegetable and meat for long period use, while cruising at sea for long distance voyages.
10. Exhaust emission control is carried out in Exh-gas economizer as well as in Exh gas discharge funnel.



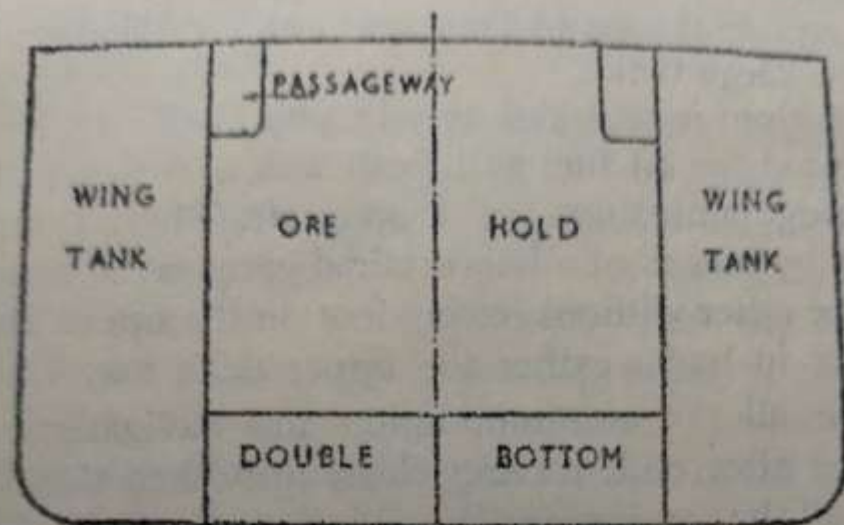
11. For ship stability control purpose, ballast water management is carried out by chief officer onboard (To control G.M Value)
12. Navigation lights are well controlled for safety sea passages (or) river passages. (Left = Red Light, Right= Green Light)
13. Crankshaft control reversal engine; Crankshaft is equipped with 2 sets of can lope, one set for ahead running and another set for astern running purpose. It can be shifted fore & aft by a hydraulic piston fitted Infront of the crankshaft assembly.





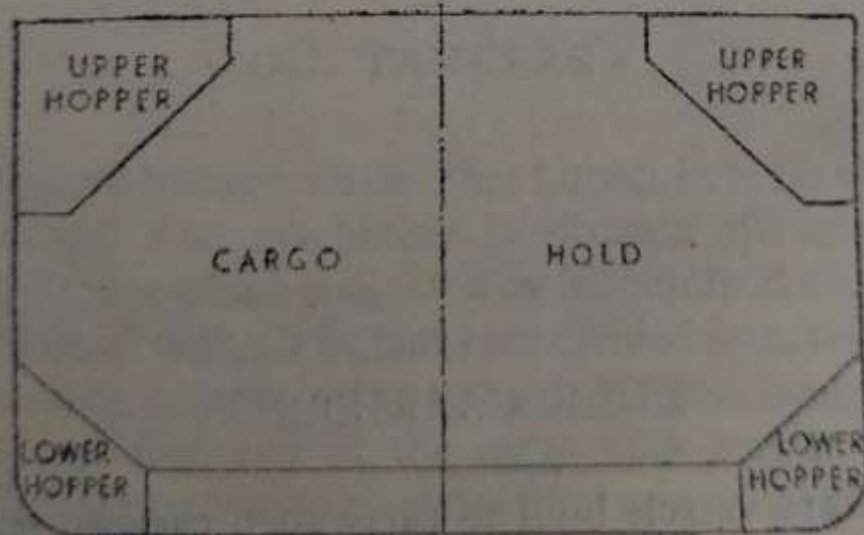
BULBOUS BOW



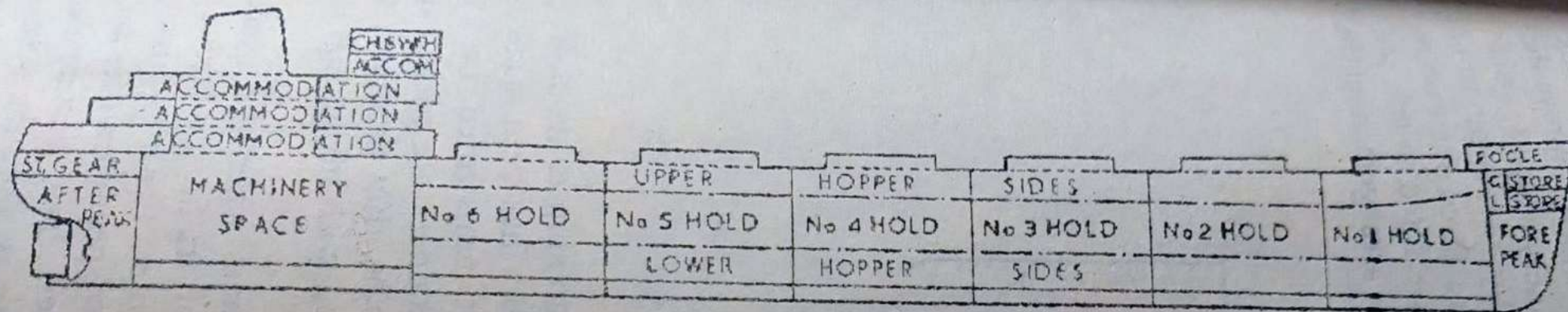


ORE CARRIER

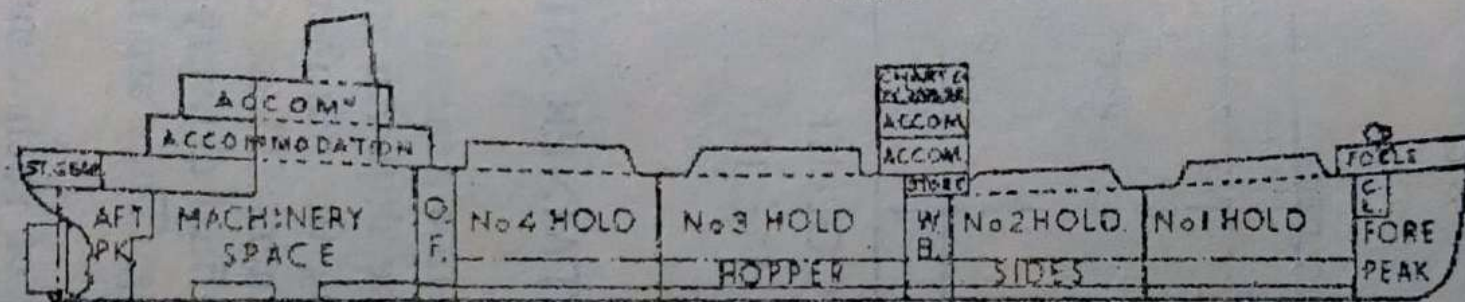
Fig. 5



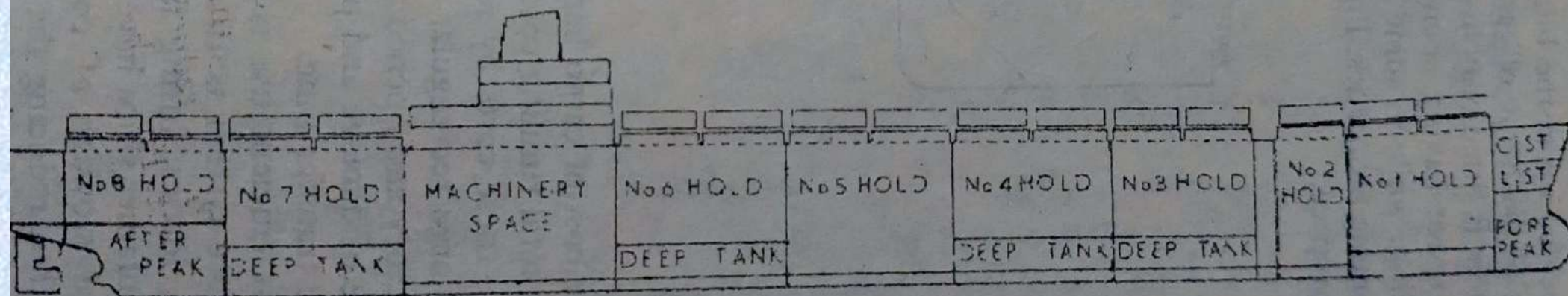
BULK CARRIER



BULK CARRIER




COLLIER



CONTAINER SHIP





Thank you very much  
for your attention