

FINAL TEST



A. Fill in the gaps with the correct word from the list (15x1=15)

deaerating throttle boiling astern liquid produce rim volume  
stationary gas packing gland blades rotating solid mounted

- The rotor is \_\_\_\_\_ on a shaft.
- In the reaction turbine the blades can be both \_\_\_\_\_ and \_\_\_\_\_.
- The piston rod slides into the \_\_\_\_\_.
- In the \_\_\_\_\_ feed tank the condensate gets rid of air.
- We can \_\_\_\_\_ steam by heating water to its \_\_\_\_\_ point.
- The water can exist in three stages: as \_\_\_\_\_ it is water, as \_\_\_\_\_ it is ice, and as \_\_\_\_\_ it is steam.
- On the \_\_\_\_\_ of the rotor there are curved \_\_\_\_\_.
- The high pressure steam passes from the H.P. line into the H.P. turbine through a \_\_\_\_\_ valve.
- The rotor of the L.P. turbine has additionally the \_\_\_\_\_ blades for backing down.
- When the pressure of the steam is decreased its \_\_\_\_\_ is increased, because the steam expands.

B. Fill in the gaps with the following words. There are two extra words. (15)

scavenge gases crankpin B.D.C. T.D.C. running exhaust rotor diffuser  
compression crown stator combustion skirt crosshead silencer impeller

- The three upper rings of the piston are \_\_\_\_\_ rings.
- The \_\_\_\_\_ connects the piston rod to the connecting rod.
- The connecting rod is connected to the crankshaft with the \_\_\_\_\_.
- At the end of the 1<sup>st</sup> stroke of a 4-stroke D.E. the piston is at the \_\_\_\_\_.
- In a 2-stroke D.E. two phases, \_\_\_\_\_ and \_\_\_\_\_, happen at the same time.
- The upper part of the piston is called \_\_\_\_\_ and the lower \_\_\_\_\_.
- The two main parts of a turbocharger are the turbine \_\_\_\_\_ and the compressor \_\_\_\_\_.
- The turbine assembly has a \_\_\_\_\_, that is, stationary vanes which direct the exhaust \_\_\_\_\_ to the rotor.
- On the compressor's side of a turbocharger there is a \_\_\_\_\_ which contributes to further rising of the pressure of the compressed air.
- The \_\_\_\_\_ absorbs the noise of the vibration of the \_\_\_\_\_ components of the turbocharger.

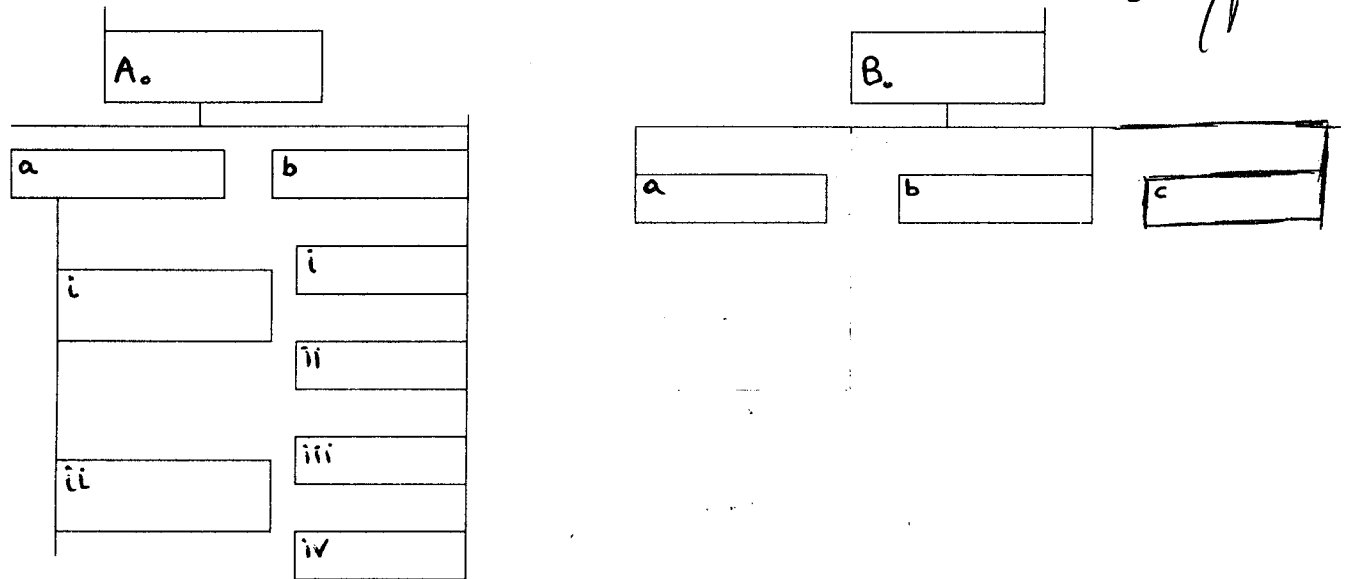
C. Which of the auxiliary machinery is used for... (5)

- reducing rolling of the ship? \_\_\_\_\_
- supplying the ship with electrical power and lighting? \_\_\_\_\_
- handling the cargo? \_\_\_\_\_
- transferring liquids from one place to another? \_\_\_\_\_
- burning the garbage? \_\_\_\_\_



**D. Complete the diagram on pumps using the terms below. (13)**

*gear-wheeled p/p    reciprocating    volute    single-acting ram p/p    lobe p/p  
 regenerative displacement    vane p/p    rotary    double-acting ram p/p  
 diffuser    screw p/p    centrifugal*



**E. Match the words in Column A to their synonym or explanation in Column B. Write the pairs in the empty lines below. (5)**

A	B
Irregular or abnormal function	Feed check valve
Fittings (gauges and valves)	Main stop valve
A valve to control the entry of water to the boiler	Malfunction
A valve to remove water from the system	Drain valve
Gauge	A gauge to check the salinity of water
A valve which controls the passage of steam to the engine	Chemical dosing valve
A valve which releases the excess of steam	meter. indicator
Salinometer	Mountings
A valve for adding chemicals directly to the boiler	Safety valve
It removes the black carbon particles from the tubes of the boiler	Soot blower

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F. Write a paragraph comparing a two-stroke with a four-stroke engine. (7)



G. Fill in the gaps with the correct form of the word in the parentheses (0.5x6)

- The steam drum mainly serves as a \_\_\_\_\_ (store) space for the steam.
- The furnace has an \_\_\_\_\_ (insulate) of fireproof bricks.
- The 4-stroke D.E. has lower fuel \_\_\_\_\_ (consume) than the 2-stroke one.
- The L.P. turbine usually consists of a \_\_\_\_\_ (combine) of impulse and reaction elements.
- The turbine bearings require special \_\_\_\_\_ (attend).
- Electric fans provide forced \_\_\_\_\_ (ventilate) to holds.

H. Complete the text with an appropriate word. (12)

During the suction or ..... stroke, the intake ..... is open and the ..... moves ..... . Air is drawn into the cylinder and when the piston reaches the ....., the cylinder is full of air and the inlet valve ..... .  
In the compression ..... the piston moves upwards and ..... the air. Both the ..... and the temperature rise. All valves are closed and when the piston is almost at the TDC, the fuel is sprayed into the cylinder by the fuel ..... valve.

I. Match the following words to their synonyms. (10)

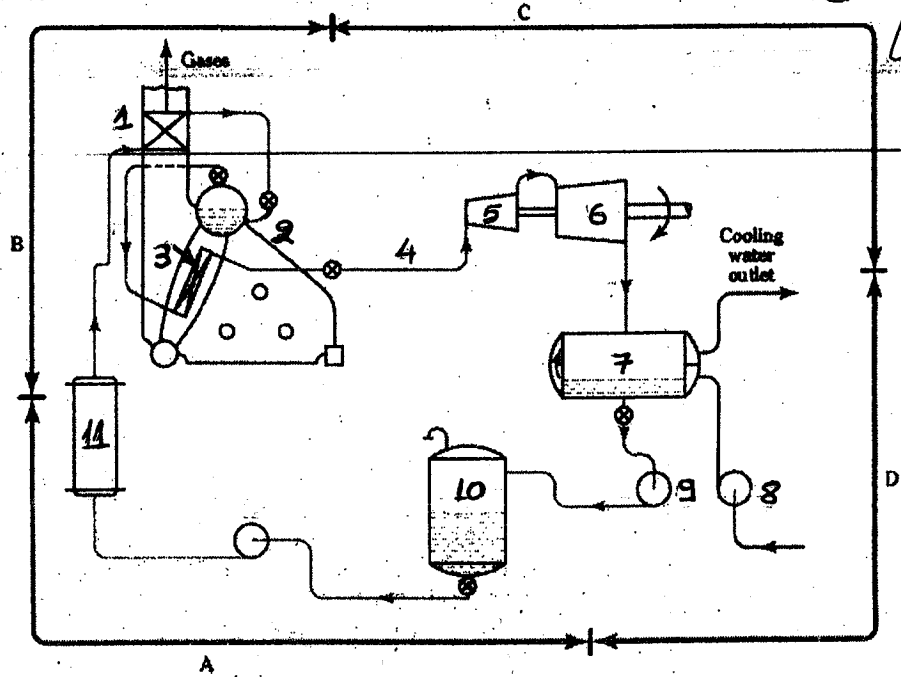
*charge, convert, efficient, impulse, combustion, evaporate, stationary, inject, fireproof, attemperator*

- capable of better output:
- turn from liquid into vapour:
- burning:
- action:
- change into something else:
- fixed, not in motion:
- force liquid into:
- not affected by fire:
- fill up (with air):
- apparatus which decreases the temperature:



J. The following is a diagram of a steam power plant of a reaction turbine. Provide the terms of the numbered parts and the letters A, B, C, D. (15)

Diagram of steam power plant of reaction turbine



- |         |          |         |
|---------|----------|---------|
| 1. .... | 8. ....  | A. .... |
| 2. .... | 9. ....  | B. .... |
| 3. .... | 10. .... | C. .... |
| 4. .... | 11. .... | D. .... |
| 5. .... |          |         |
| 6. .... |          |         |
| 7. .... |          |         |

Good luck!!!