

February 2015

FINAL TEST

A. Supply the terms that match the meanings of the following definitions. (15x1)

- The place in the boiler where the fuel is burnt: _____
- A valve for adding chemicals to the boiler: _____
- A great number of small tubes which super heat the wet steam: _____
- They supply the fuel and air to the furnace: _____
- It shows the level of water in the boiler: _____
- It removes the black carbon particles from the tubes of the boiler: _____
- A valve which controls the passage of the steam to the engine: _____
- A delay between two events: _____
- A device which cools exhaust steam back into water: _____
- Irregular or abnormal function: _____

B. Match the words from column A to their synonyms. (13x1)

Group A: drip, initiate, predetermined, convert, adequate, saturated, steady, simultaneously, location, collide, submerge, efficient, stationary

Group B: enough, constant, place, place under water, cause to start, not in motion, fall in drops, decided in advance, capable of better output, crash with, at the same time, filled with moisture, change into something else

C. Fill in the gaps with one of the words below (12x1)

*casing capacity reaction viscous pressure reciprocate
impeller principle suitable speeds moving vanes*

The rotary pumps operate on the _____ displacement, but their _____ part does not _____; it rotates. Rotary pumps are used mainly for oil or _____ fluids. In volute pumps the _____ is surrounded by a spiral _____. The diffuser pump is a version of the volute type, but here the impeller is surrounded by diffusion _____ which are fixed. Because of this similarity to a _____ turbine, it is often called turbine pump. The diffuser type is used on high _____ e.g. boiler feed, and the regenerative type where small _____ is required. Centrifugal pumps are _____ for all duties except very small capacities or very low _____.

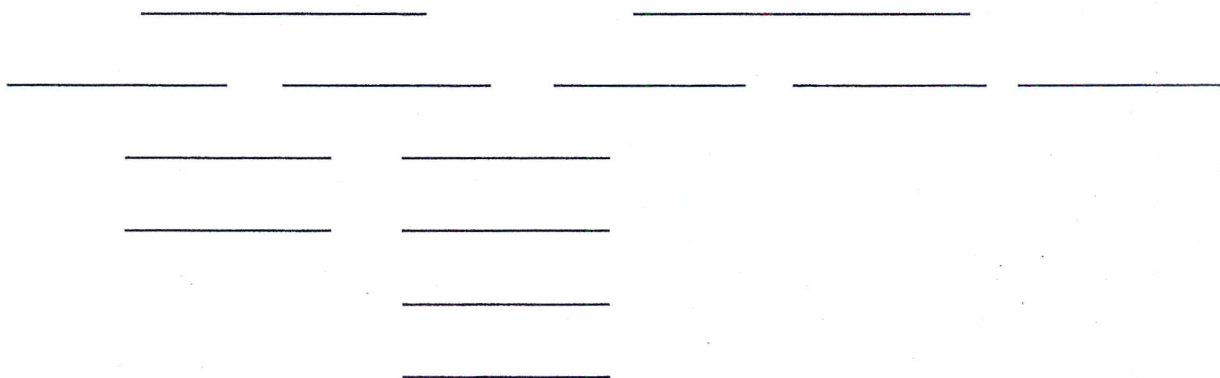
D. Fill in the gaps with an appropriate word (18x1)

- Steam may be used to _____ the main engine.
- The fuel oil system provides the _____ with fuel.
- The casing of the furnace forms an airtight _____.
- The walls of the furnace have a(n) insulation of _____ bricks in two or three layers.
- The boiler has three main parts: the _____ drum, the _____ drum and the water _____ that connect them.
- When the boiler is in operation, the water _____ through the water tubes.
- There are two basic types of boilers: The _____ boiler and the _____ boiler.
- 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.
- In the reaction turbine the blades can be both stationary and _____.
- The piston rod slides into the _____.
- When the pressure of the steam is decreased its _____ is increased, because the steam expands.

E. Complete the diagram on pumps by filling in the 13 gaps. The words you need are given below. (13x1)

*lobe rotary double-acting diffuser centrifugal reciprocating volute
regenerative single-acting gear-wheel vane-type displacement screw-type*

PUMPS

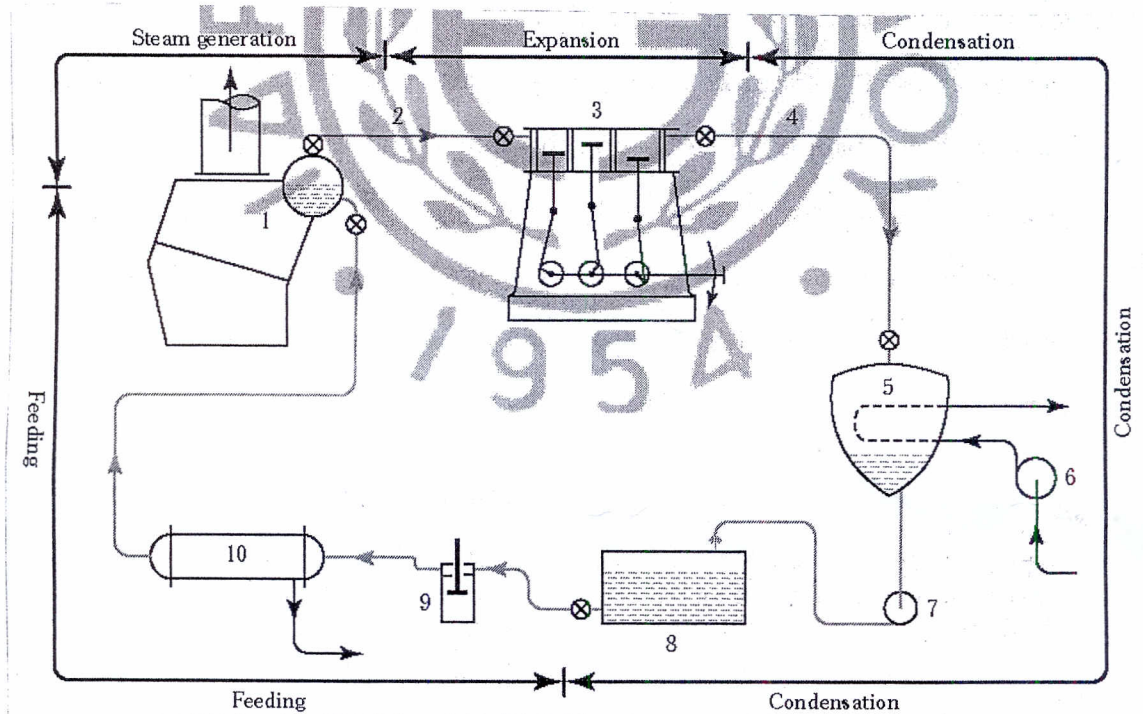


F. Write a paragraph comparing a two-stroke with a four-stroke engine. (7 points)

G. Below you will find a diagram of a steam power plant of a triple cylinder reciprocating steam engine. Fill in the missing terms using the words provided. There are 2 extra words. (10x1)

Sea-Water Pump Superheater Boiler Condenser Condensate Pump Steam Pipe Preheater

Economizer Reciprocating Engine Exhaust Pipe Deaerating Feed Tank Service Pump



1. _____
2. _____
3. _____
4. _____
5. _____

6. _____
7. _____
8. _____
9. _____
10. _____

H. Fill in the gaps with one of the words below. There are two extra words. (12x1)

efficiency weight elements consists of require throttle blading
operating support advantages stages turbine principle fed

The reaction-type turbine has all the _____ of the impulse-type, plus a slower _____ speed and greater _____. The steam is _____ from a high-pressure line into a high-pressure _____ through a _____ valve.

The L.P. turbine usually _____ a combination of impulse and reaction _____. All the _____ of the L.P. turbine operate on the reaction _____. This rotor also carries the _____ of the astern element, which is used for backing down. The turbine bearings _____ special attention.