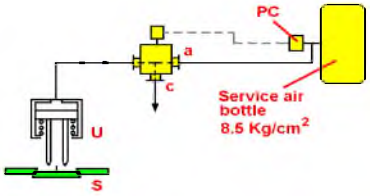
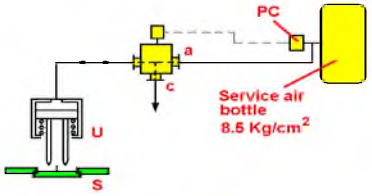
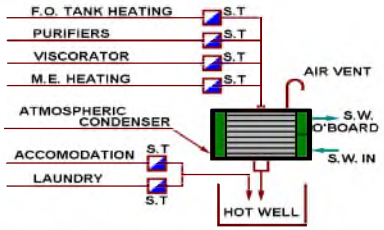
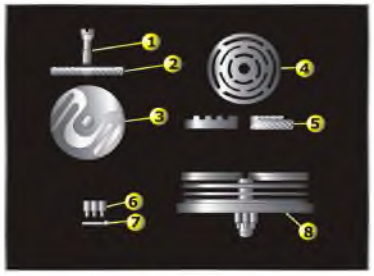
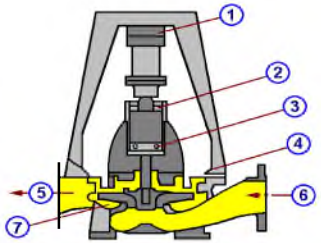
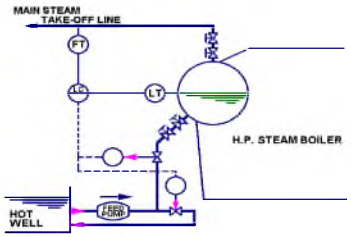
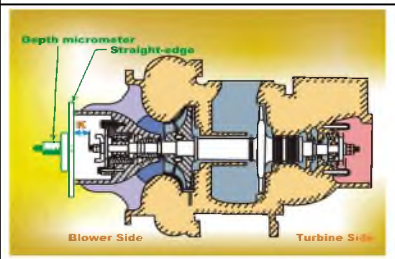
GUÍA DE ESTUDIO - JEFE DE MAQUINAS						
Q. Number	**Question**	**IMAGEN**	**A**	**B**	**C**	**D**
	DIAGNOSE AND CORRECT EQUIPMENT MALFUNCTIONS					
1	What is the function of item "PC" ?		Pressure Controller activating 3-way valve solenoid	Pressure Container admitting air to air bottle	Pressure Container activating automatic pressure release valve	Piston Controller activating compressor piston movement
2	What is item "U" and how does it act on item "S" ?		Item "U" is the uplifter of the air bottle's safety valve.	Item "U" is the upper pressure limit valve activating the solenoid.	Item "U" is the unloader lifting the compressor suction valve.	Item "U" is the activator for the safety release valve.
3	You will notice in this drawing that steam traps are fitted so only condensate can return. Then why is there an atmospheric condenser fitted ?		Because the water is condensed under pressure and will re-evaporate.	To allow the vapour and water to be cooled under vacuum.	To de-airate the water under vacuum.	To avoid steaming up if steam traps are frequently stuck or defective.
4	What will happen if the seat plate 5 is ground too much allowing valve disc 4 to open an increased amount?		The thermodynamic efficiency decreases.	The compression ratio decreases.	The maximum output pressure decreases.	All of these options.

GUÍA DE ESTUDIO - JEFE DE MAQUINAS						
Q. Number	**Question**	**IMAGEN**	**A**	**B**	**C**	**D**
	DIAGNOSE AND CORRECT EQUIPMENT MALFUNCTIONS					
5	What are the steps to be taken, in what order, to stabilise the governor of a diesel engine after overhaul ?		Adjust speed P, then integrate, next differentiating, from 0.	Set integrating to MAX. than adjust speed P and differential D.	Set integrating to MAX, differentiating to MIN, adjust speed upward.	Integrating and differentiating MAX, set speed from 0 upwards.
6	All engine crankcase explosion investigations have show only one thing in common; this is		the build up of oil vapour.	excessively high lubricating oil temperature.	evidence of a hot spot.	a wiped crankshaft bearing.
7	What is the primary cause of scavenge air space fires ?		Blow-by due to broken piston rings.	Insufficient cylinder lubrication.	Faulty injectors.	Excessive cylinder lubrication.
8	If the performance of a centrifugal pump deteriorates over time (tons/hour x height in metres) it is usually due to		cavitation of the impeller.	excessive wear between impeller and wear ring.	condition of the ball bearing.	condition of the pump housing.
9	The amount, condition and appearance of liquid collecting in bilges over time is a sign of .....?		sloppy engine room management.	flooding taking place.	specific system losses.	leakage or overflow.
10	Which are the parameters that steer the automatic level control system of the boiler shown here ?		Water level and steam consumption.	Feedvalve and feed by-pass valve.	The level controller.	The level transmitter.
11	Which of the significant combustible elements of fuel oil are a major source of air pollution?		Sulphur, carbon.	Nitrogen, oxygen.	Carbon, oxygen.	Hydrogen, nitrogen.
12	Too high alkalinity of boiler water may cause		scale.	corrosion.	caustic embrittlement.	alkoid precipitation.
13	The weakening of boiler steel as the result of inner crystalline cracking is known as		exposure stress.	caustic embrittlement.	alkaline stress.	corrosion.
14	Uneven flame distribution during combustion in the boiler furnace is known as		flame impingement.	furnace overload.	burner flame failure.	unequal firing.
15	The best way to ensure engine speed governor stability is to allow a given ratio of		stability.	sensitivity.	speed droop.	compensation.

GUÍA DE ESTUDIO - JEFE DE MAQUINAS						
Q. Number	**Question**	**IMAGEN**	**A**	**B**	**C**	**D**
	DIAGNOSE AND CORRECT EQUIPMENT MALFUNCTIONS					
16	When a new cylinder liner is fitted to a 2-stroke engine, which of the following steps should be taken ? I. Increase the cylinder oil flow. II. Reduce the cylinder load. III. Reduce the oil flow.		I and II	I, II and III	II and III	I and III
17	If you get a heavy scavenging air fire, which of these parts is likely to suffer the most serious damage ?		The crosshead bearing.	The piston.	The exhaust valve.	The stuffing box.
18	When taking a set of crankshaft deflections the + sign is indicated, example +4. This means that		the crankpin location is 4/100 mm out of centre.	the crankwebs have opened up by 4/100 mm.	the crankwebs have closed in by 4/100 mm.	one main bearing on one side is 4/100 mm bigger than the other.
19	In the operation shown what is being checked?		Axial position of the compressor impeller.	Turbine wheel/nozzle clearance.	Axial location of the labrynth gland.	Axial movement in the thrust bearings.

GUÍA DE ESTUDIO JEFE DE MAQUINAS	
DIAGNOSE AND CORRECT EQUIPMENT MALFUNCTIONS	
ANSWERS	
1	A
2	C
3	A
4	A
5	A
6	C
7	A
8	B
9	C
10	A
11	A
12	A
13	B
14	A
15	C
16	A
17	D
18	B
19	B