

S/S. HAR Z104. Page 2.

Steering Engine:- After piston rod badly worn, now renewed.
Forward piston rod scored, now skimmed up. Forward piston valve chamber bored out and new valve fitted. One crosshead found broken (cast iron) now renewed. Four piston rings renewed.
A number of broken holding down bolts (Main Engine) now renewed and the remainder hardened up as required.
One length of Main steam pipe fractured, now renewed and tested.

Now done for DMC:-

Vessel placed in dry dock. Propeller and outside fastenings examined. Sea connections opened up and examined.
All Main Engine cylinders, pistons, slide valves and casings, crank, thrust and intermediate shafting examined.
The Air, Bilge, feed, circulating, ballast, transfer, General Service and oil fuel pressure pumps opened up and examined and the pumping arrangements examined. Dynamo engine opened up and examined. Steam pipes and electrical installation tested as per rule requirements. Condenser examined and tested.
Main Boilers and their mountings examined internally, externally, under hydraulic pressure (after repairs) and under steam and their Safety Valves adjusted under steam.
The Oil Burning Installation was examined under working conditions and found to be satisfactory.

Wear and tear Repairs:-

HP Piston rings renewed. HP Piston rod skimmed up and new Metallic packing fitted. HP Piston Valve bobbin repaired with "Jobin Bronze". All Air Pump Kinghorn Valves overhauled and worn sets renewed. M. & C. Feed pump rammer skimmed up and new neck and gland bushes fitted, relief valves overhauled and made workable.
One M. & C. Bilge pump suction valve seat renewed. About 100 Main Condenser tubes renewed. Division plate on forward Condenser door renewed. Condenser banjo piece found cracked in way of circulating water inlet branch and now repaired with a cement box.
The circulating pipe line from the Ballast Pump to the Condenser repaired and part renewed.
After Weir's Feed pump:- Water end liner and bucket rings renewed, bucket rod skimmed up and new neck & gland bushes fitted.
Steam piston ring renewed.
Forward Weir's Feed pump:- Water end liner and bucket rings renewed. Piston ring renewed, bucket rod skimmed up and new neck and gland rings fitted. Main circulating pump:- Spare cylinder block fitted. Ballast Pump:- Water end completely renewed. Steam pistons renewed. Piston Valve chests bored out and new piston valves fitted.
One valve spindle renewed. Valve gear overhauled and crosshead pins renewed.

Continued:

W1004-01152/3

S/S HAR ZION Page 3.

Several lengths of pipe in the ballast and oil fuel line found defective and now renewed. Dynamo Governor overhauled and made workable.

Boiler Mountings:- Port Aux Stop Valve lids renewed. Port Aux feed valve lid and spindle renewed. Safety Valve casing gear made workable.

Port Boiler:- 2 broken cc stays renewed. a number of stay and plain tubes renewed. In all furnaces the opening of the furnace weld had been repaired by welding which owing to its thickness had proved unsatisfactory. This welding was dressed off and the furnaces in ray cut right through and re-welded.

Starboard Boiler:- 3 broken cc stays renewed. a number of stay and plain tubes renewed. The furnaces in this boiler which had also been repaired by welding of excessive thickness were dealt with in the same way as the Port Boiler.

Other minor repairs were carried out and the boilers were afterwards tested by hydraulic pressure and found satisfactory. The electrical installation was tested throughout and placed in order with the exception of that in the passenger cabins, which the Owners representative states is not to be used meantime. These circuits have been disconnected and should not be used until repaired.

After the repairs were completed all bilge and ballast lines were tried and found to be clear.

H.M.