

# REPORT ON MACHINERY.

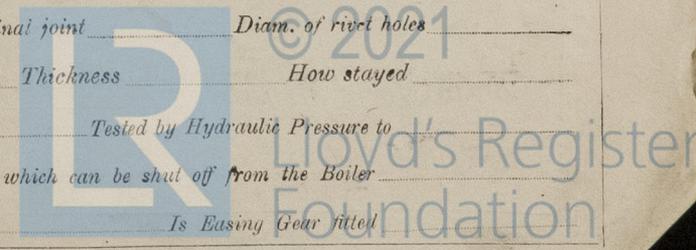
Received at London Office

Date of writing Report 24 April 1919 When handed in at Local Office 19 Port of Kobe WED. 9-JUL. 1919  
 No. in Survey held at Kobe Date, First Survey 28<sup>th</sup> March 1918 Last Survey 12<sup>th</sup> March 1919  
 Reg. Book. on the Engines for the Asano Shipbuilding Yard No 12 (Number of Visits)  
 Master Tsurumi Built at Tsurumi By whom built Asano S. B. Co Tons } Gross  
 Engines made at Kobe By whom made The Kobe Steel Works when made 1918-19 Net  
 Boilers made at Tokyo By whom made Ishikawajima S. B. Co when made 1919  
 Registered Horse Power 513 Owners Hashimoto Ken K Port belonging to Uraga  
 Nom. Horse Power as per Section 28 513 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes

**ENGINES, &c.**—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks Three  
 Dia. of Cylinders 26" 43 1/2" 72" Length of Stroke 48" Revs. per minute 14.9 Dia. of Screw shaft 16" Material of screw shaft Steel  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight in the propeller boss ✓ If the liner is in more than one length are the joints burned ✓ If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 5' 3 3/8"  
 Dia. of Tunnel shaft 13.54" as per rule 13 3/4" as fitted Dia. of Crank shaft journals 14.2" as per rule 14 1/2" as fitted Dia. of Crank pin 14 3/4" Size of Crank webs 9 1/2" x 27" Dia. of thrust shaft under collars 14 1/2" Dia. of screw 17" 9" Pitch of Screw 19" 0" No. of Blades 4 State whether moveable Yes Total surface 99"  
 No. of Feed pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 1 Sizes of Pumps 10" No. and size of Suctions connected to both Bilge and Donkey pumps 10"  
 In Engine Room 1 In Holds, &c. 1  
 No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump 10" Is a separate Donkey Suction fitted in Engine room & size 10"  
 Are all the bilge suction pipes fitted with roses ✓ Are the roses in Engine room always accessible ✓ Are the sluices on Engine room bulkheads always accessible ✓  
 Are all connections with the sea direct on the skin of the ship ✓ Are they Valves or Cocks ✓  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates ✓ Are the Discharge Pipes above or below the deep water line ✓  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel ✓ Are the Blow Off Cocks fitted with a spigot and brass covering plate ✓  
 What pipes are carried through the bunkers 10" How are they protected ✓  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times ✓  
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges ✓  
 Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

**BOILERS, &c.**—(Letter for record) Manufacturers of Steel  
 Total Heating Surface of Boilers 10000 Is Forced Draft fitted ✓ No. and Description of Boilers 1  
 Working Pressure 150 Tested by hydraulic pressure to 180 Date of test 1918 No. of Certificate 1  
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 100 No. and Description of Safety Valves to each boiler 1  
 Area of each valve 100 Pressure to which they are adjusted 150 Are they fitted with easing gear ✓  
 Smallest distance between boilers or uptakes and bunkers or woodwork 10 Mean dia. of boilers 100 Length 100 Material of shell plates Steel  
 Thickness 1/2" Range of tensile strength 40000 Are the shell plates welded or flanged ✓ Descrip. of riveting: cir. seams ✓  
 long. seams ✓ Diameter of rivet holes in long. seams 1/4" Pitch of rivets 2" Lap of plates or width of butt straps 1"  
 Per centages of strength of longitudinal joint 100 Working pressure of shell by rules 150 Size of manhole in shell 10"  
 Size of compensating ring 10" No. and Description of Furnaces in each boiler 1 Material Steel Outside diameter 100  
 Length of plain part 100 Thickness of plates 1/2" Description of longitudinal joint ✓ No. of strengthening rings 1  
 Working pressure of furnace by the rules 150 Combustion chamber plates: Material Steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 1/2"  
 Pitch of stays to ditto: Sides 10" Back 10" Top 10" If stays are fitted with nuts or riveted heads ✓ Working pressure by rules 150  
 Material of stays Steel Area at smallest part 100 Area supported by each stay 100 Working pressure by rules 150 End plates in steam space: 100  
 Material Steel Thickness 1/2" Pitch of stays 10" How are stays secured ✓ Working pressure by rules 150 Material of stays Steel  
 Area at smallest part 100 Area supported by each stay 100 Working pressure by rules 150 Material of Front plates at bottom 100  
 Thickness 1/2" Material of Lower back plate Steel Thickness 1/2" Greatest pitch of stays 10" Working pressure of plate by rules 150  
 Diameter of tubes 10" Pitch of tubes 10" Material of tube plates Steel Thickness: Front 1/2" Back 1/2" Mean pitch of stays 10"  
 Pitch across wide water spaces 10" Working pressures by rules 150 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10" Length as per rule 100 Distance apart 100 Number and pitch of stays in each 10"  
 Working pressure by rules 150 Steam dome: description of joint to shell ✓ % of strength of joint 100  
 Diameter 100 Thickness of shell plates 1/2" Material Steel Description of longitudinal joint ✓ Diam. of rivet holes 1/4"  
 Pitch of rivets 2" Working pressure of shell by rules 150 Crown plates ✓ Thickness 1/2" How stayed ✓

**SUPERHEATER.** Type Water Tube Date of Approval of Plan 1918 Tested by Hydraulic Pressure to 180  
 Date of Test 1918 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler ✓  
 Diameter of Safety Valve 10" Pressure to which each is adjusted 150 Is Easing Gear fitted ✓



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

M. Kimura, Superintendent Engineer of Kobe Steel Works, Manufacturer. Kobe Steel Works Ltd.



Dates of Survey while building: Continuous attendance 28th March 1918 - 12th March 1919.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts: Cylinders 28/12/18, Slides 10/12/18, Covers 10/12/18, Pistons 10/12/18, Rods 16/23/18, Connecting rods 16/8/18, Crank shaft 8.3.19, Thrust shaft 29/5/18, Tunnel shafts 14/3/19, Screw shaft 6/5/18, Propeller, Stern tube, Steam pipes tested, Engine and boiler seatings, Engines holding down bolts, Completion of pumping arrangements, Boilers fixed, Engines tried under steam, Completion of fitting sea connections, Stern tube, Screw shaft and propeller.

Main boiler safety valves adjusted, Thickness of adjusting washers, Material of Crank shaft Steel, Identification Mark on Do. 8.3.19, Material of Thrust shaft Steel, Identification Mark on Do. ROB, Material of Tunnel shafts Steel, Identification Marks on Do. A.S. 17 A, Material of Screw shafts Steel, Identification Marks on Do. A.S. 8 A, Material of Steam Pipes, Test pressure, Is an installation fitted for burning oil fuel, Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case Yes. If so, state name of vessel Asano S.S.'s No. 8 & 10.

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines have been made under special survey in accordance with the requirements of the Rules and the materials and workmanship have been found good. The Engines have been sent to Yokohama.

Certificate (if required) to be sent to... The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £ : : When applied for, Special ... £ 162.00 : : 20th May 1919, Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 19.

Signature of R. B. Batches, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. JUL. 15. 1919

Assigned

