

REC'D NEW YORK AUG -6 1921

Rpt. 4.

## REPORT ON MACHINERY.

No. 3575

Received at London Office

Date of writing Report 13<sup>TH</sup> JULY 1921 When handed in at Local Office

19 Port of SAN FRANCISCO, CAL. MON. AUG. 22 1921

No. in Survey held at SAN PEDRO, CAL.  
Reg. Book.Date, First Survey MARCH 10<sup>TH</sup> 1921 Last Survey JULY 8<sup>TH</sup> 1921  
(Number of Visits 4)

on the

S/S "SCOPAS"

Gross 5828  
Net 3455

When built 1921

Master F. REEDEKER

Built at SAN PEDRO, CAL.

By whom built SOUTHWESTERN S. B. Co

Engines made at HAMILTON OHIO.

By whom made HOOVER OWENS &amp; RENTSCHELER CO.

when made 1921.

Boilers made at PORTLAND OREGON.

By whom made WILLAMETTE IRON &amp; STEEL CO.

when made 1921.

Registered Horse Power

Owners NEDERLANDSCH-INDISCHE TANK STOOMBOOT  
MAATSCHAPPIJ

Port belonging to COPENHAGEN.

Nom. Horse Power as per Section 28 556.

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted YES

## ENGINES, &amp;c.—Description of Engines TRIPLE EXPANSION.

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 24" x 45" x 44"

Length of Stroke 48"

Revs. per minute 80

Dia. of Screw shaft

as per rule 14.8

Material of screw shaft

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 YES.

If the liner is in more than one length are the joints burned WELD.

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 YES.

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush 63"

Dia. of Tunnel shaft

as per rule 14.8

Dia. of Crank shaft journals

as per rule 14.8

Dia. of Crank pin 14 1/2"

Size of Crank webs 24 1/2" x 29"

Dia. of thrust shaft under

collars 14 1/2"

Dia. of screw 14" x 9"

Pitch of Screw 14" x 0"

No. of Blades 4

State whether moveable No

Total surface 86.6

No. of Feed pumps 2/NO.

Diameter of ditto 10 1/2" x 8"

Stroke 21"

Can one be overhauled while the other is at work YES

No. of Bilge pumps 2.

Diameter of ditto 4"

Stroke 26"

Can one be overhauled while the other is at work YES.

No. of Donkey Engines 2

Sizes of Pumps 12" x 10" x 12", 8" x 6" x 18"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 1-3 1/2" 2-3" B.R. 2-3" DRY WELL. 2-3"

In Holds, &amp;c. COFFER DAM. 2-4"

No. of Bilge Injections 1

sizes 10"

Connected to condenser, or to circulating pump C.P.

Is a separate Donkey Suction fitted in Engine room &amp; size YES 4"

Are all the bilge suction pipes fitted with roses YES.

Are the roses in Engine room always accessible YES.

Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship YES.

Are they Valves or Cocks VALVES.

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YES.

Are the Discharge Pipes above or below the deep water line ABOVE

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel YES.

Are the Blow Off Cocks fitted with a spigot and brass covering plate YES.

What pipes are carried through the bunkers NONE

How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES.

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YES.

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

## BOILERS, &amp;c.—(Letter for record ) Manufacturers of Steel SEE PORTLAND REPORT No 629.

Total Heating Surface of Boilers 8451.

Is Forced Draft fitted YES.

No. and Description of Boilers 3, S.E. SCOTCH

Working Pressure 180 LBS.

Tested by hydraulic pressure to 320

Date of test MARCH 15<sup>TH</sup> 1921.

No. of Certificate 228-229-230

Can each boiler be worked separately YES.

Area of fire grate in each boiler OIL BURNER

No. and Description of Safety Valves to

each boiler 2 SPRING LOADED.

Area of each valve 11" x 4"

Pressure to which they are adjusted 185 LBS

Are they fitted with easing gear YES.

Smallest distance between boilers or uptakes and bunkers or woodwork 14 1/2"

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are they secured

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide outer spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Steam dome: description of joint to shell

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

## SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

W1329-0149



IS A DONKEY BOILER FITTED? *Yes.*

If so, is a report now forwarded? *Yes.*

SPARE GEAR. State the articles supplied:— 2 Top end brasses with bolts and nuts. 2 Bottom end brasses with bolts and nuts. 2 Main bearing bolts and nuts. 6 Coupling bolts and nuts. Set of valves for air <sup>feed</sup> and bilge pumps. Set of springs and rings for H.P. I.P. and L.P. piston. Valve stem. Link. Slack brasses and eccentric strap complete. Air pump rod and bilge pump plunger. Guide shoe. 1 Crank shaft section. Follower studs and nuts for pistons and studs and nuts for stuffing boxes. Spare tail shaft. Spare C.T. propeller. A quantity of assorted nuts bolts and iron.

*The foregoing is a correct description,*

W. Kibbe South Western Shipbuilding Co. Manufacturer.

Dates of Survey while building	{	During progress of work in shops - -	1921: MAR. 10. 15. APR. 5. 8. 9. 13. 22. MAY. 7. 9. 16. 17. 18. 19. 20. JUNE. 4.
		During erection on board vessel - - -	1921: APR. 18. 29. MAY. 4. 7. 10. 14. 17. 23. 24. 25. 26. 31. JUNE. 2. 3. 6. 7. 8. 10. 14. 15. 18. 20. 21. 24. 25. 26. 29. 30. JULY. 2. 5. 6. 8.
		Total No. of visits	47.

Is the approved plan of main boiler forwarded herewith No

Is the approved plan of main boiler forwarded herewith No

” ” ” *donkey* ” ” ” *No*

Dates of Examination of principal parts—Cylinders ——— Slides *SEE* Covers *CLEVELAND* Pistons *REPORT* Rods *Nº 148*

Connecting rods \_\_\_\_\_ Crank shaft \_\_\_\_\_ Thrust shaft \_\_\_\_\_ Tunnel shafts ✓ \_\_\_\_\_ Screw shaft 15/3/21 Propeller 9/4/21

Stern tube 4/5/21 Steam pipes tested 14/20/5/21 & 4/6/21 Engine and boiler seatings 18/4/21 Engines holding down bolts 2/6/21

Completion of pumping arrangements 5/4/21 Boilers fixed 14/6/21 Engines tried under steam 25/6/21.

Completion of fitting sea connections 26/5/21 Stern tube 9/5/21 Screw shaft and propeller 9/4/21

Main boiler safety valves adjusted 6/4/21. Thickness of adjusting washers: STAMP F.  $\frac{3}{8}$  A.  $\frac{1}{8}$  PORT F.  $\frac{1}{32}$  A.  $\frac{1}{32}$  CENTRE F.  $\frac{1}{8}$  A.  $\frac{3}{8}$ .

Material of Crank shaft S. Identification Mark on Do. 42 Material of Thrust shaft S. Identification Mark on Do. 42

Material of Tunnel shafts ☒ Identification Marks on Do. ☒ Material of Screw shafts S. Identification Marks on Do. 3-12-20 A.W.

Material of Steam Pipes STEEL Test pressure 600 LBS

Is an installation fitted for burning oil fuel. Yes. Is the flash point of the oil to be used over 150°F. Yes.

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

Is this machinery duplicate of a previous case ☒ If so, state name of vessel ☒

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

The machinery and boilers of this vessel were constructed under special survey of materials tested to Rule requirements and workmanship found good throughout. On completion the machinery was thoroughly tested out under working conditions and found satisfactory. It is the opinion of the undersigned that the machinery of this vessel is eligible to be classed in the Register Book. ~~U.S.~~ L.M.C. 7-21. Fitted for Oil Fuel. 7-21. F.P. above 150° F. "Electric Light"

It is submitted that  
this vessel is eligible for  
**THE RECORD.** + LMC. 7.21. FD. CL.

Fitted for 6il Fuel 7.21 FP above 150°F

SPARE TAIL SHAFT  
LLOYDS  
NO 1023  
A.W.L  
1-1-21

2/5 Mach. fee (or \$205<sup>60</sup>) plus \$139.15 to be credited Cleveland, their Eng. Rpt. No. 148.  
2/5 " " (or \$205<sup>60</sup>) to be credited Portland, their Boiler Rpt. No. 629.  
2/3 D.B. " (or \$50<sup>20</sup>) " " " " " " " " " "

The amount of Entry Fee ... \$ 30.00 : When applied for,

Special ... .. ✓ \$ 514.00 : July 30 1921

Donkey Boiler Fee ... \$ 75.00 : When received,

Travelling Expenses (if any) \$ 9.75 : 22.10. 1930

Cleveland "	"	\$139.15
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Committee's Minute New York AUG - 9 1921

*The Assigned* + LMC - 7.21.

MACHINERY DEPT.  
WRITER 15/9/21  
(Totalled 22/8/21)

TUE. NOV. 11 1921

Lloyd's Register  
Foundation