

REPORT ON MACHINERY.

94.

Port of Sunderland

Received at London Office 20 JUNE 1890

No. in Survey held at Sunderland

Date, first Survey 18th Febry

Last Survey 1st May 1890

Book. on the S.S. "Yandil"

(Number of Visits 1)

Tons { Gross 2188
Net 1406
When built 1890

ter Built at Middlesbrough By whom built Kaylton Dixon & Co

ines made at Sunderland By whom made North Eastern Marine Eng. Co when made 1890

ers made at Sunderland By whom made North Eastern Marine Eng. Co when made 1890

istered Horse Power 299 Owners A. Holland & Co

Port belonging to London.

INES, &c.—

ription of Engines Triple compound three cranks.

No. of Cylinders 3

of Cylinders 21.35.54" Length of Stroke 39" Rev. per minute 60 Point of Cut off, High Pressure 1/2 stroke Low Pressure 1/2 stroke

eter of Screw shaft 10 3/4" Diam. of Tunnel shaft 10 3/4" Diam. of Crank shaft journals 10 3/4" Diam. of Crank pin 10 3/4" size of Crank webs 4" x 16"

eter of screw 14-6" Pitch of screw 15-3" No. of blades 4 state whether moveable not total surface 55 sq

of Feed pumps 2 diameter of ditto 3 1/2" Stroke 21" Can one be overhauled while the other is at work yes

of Bilge pumps 2 diameter of ditto 4" Stroke 21" Can one be overhauled while the other is at work yes

re do they pump from fore hold. engine room after well sea & tanks

of Donkey Engines 2 Size of Pumps 8" x 9" & 3 1/2" x 5" Where do they pump from tanks. sea. hot well

ter well. engine room & fore hold

all the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yes

of bilge injections one and sizes 4" Are they connected to condenser, or to circulating pump circulating pump

are the pumps worked by levers on intermediate engine

all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both

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

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

at pipes are carried through the bunkers none How are they protected by covers

all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes

the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes

en were stern tube, propeller, screw shaft, and all connections examined in dry dock new vessel

he screw shaft tunnel watertight yes and fitted with a sluice door yes worked from top platform in engine room

ILERS, &c.—

of Boilers 2 Description Ordinary marine type Material Steel Letter (for record) S

orking Pressure 160 lbs Tested by hydraulic pressure to 320 lbs Date of test 31-3-90 No of certifs 1059.

ription of superheating apparatus or steam chest none

each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately yes

of square feet of fire grate surface in each boiler 45 sq Description of safety valves direct spring No. to each boiler 2

s of each valve 4.04 sq Are they fitted with easing gear yes No. of safety valves to superheater — area of each valve —

they fitted with easing gear — Smallest distance between boilers and bunkers or woodwork 15" Diameter of boilers 13-4"

ngth of boilers 9-9" description of riveting of shell long. seams double butt straps circum. seams double rivet Thickness of shell plates 1 3/16"

meter of rivet holes 1 1/8" whether punched or drilled drilled pitch of rivets 4" & 3 1/2" Lap of plating 16" straps

centage of strength of longitudinal joint 83-90% working pressure of shell by rules 162 lbs size of manholes in shell 16" x 13"

e of compensating rings 8" x 1 3/16" No. of Furnaces in each boiler 3 Description of Furnaces plain

side diameter 3-0" length 6 feet thickness of plates 3/4" description of joint welded if rings are fitted no

reatest length between rings — working pressure of furnace by the rules 183 lbs combustion chamber plating, thickness, sides 9/16" back 9/16" top 9/16"

ch of stays to ditto, sides 4 1/2" x 4 1/2" back 4 1/2" x 4 1/2" top 4 1/2" x 4 1/2" If stays are fitted with nuts or riveted heads nuts working pressure of plating by

rules 161 lbs Diameter of stays at smallest part 1-33 working pressure of ditto by rules 144 lbs end plates in steam space, thickness 1 1/16"

ch of stays to ditto 1 5/8" x 1 5/8" how stays are secured nuts working pressure by rules 160 lbs diameter of stays at

smallest part 2 5/8" working pressure by rules 161 lbs Front plates at bottom, thickness 3/4" Back plates, thickness 1/8"

reatest pitch of stays 11 1/2" working pressure by rules 144 lbs Diameter of tubes 3 1/4" pitch of tubes 4 1/2" x 4 1/2" thickness of tube

plates, front 13/16" back 3/4" how stayed stay tubes pitch of stays 9" x 9" width of water spaces 1 1/4"

iameter of Superheater or Steam chest none length — thickness of plates — description of longitudinal joint — diam. of rivet holes —

ch of rivets — working pressure of shell by rules — diameter of flue — thickness of plates — If stiffened with rings —

distance between rings — working pressure by rules — end plates of superheater, or steam chest; thickness — how stayed —

otal heating surface 3060 sq Superheater or steam chest; how connected to boiler —

DONKEY BOILER— Description *Cylindrical sulphuric acid engine boiler*
Made at *Stockton* by whom made *Riley Bros.* when made *3/15/90* where fixed *on level of deck*
Working pressure *80 lbs* tested by hydraulic pressure to *160* No. of Certificate *1048* fire grate area *20 sq feet* description of safety
valves *Spring* No. of safety valves *2* area of each *406 sq in* if fitted with easing gear *Yes* if steam from main boilers can
enter the donkey boiler *No* diameter of donkey boiler *8' 6"* length *8' 0"* description of riveting *Long Lap Double*
Thickness of shell plates *9/16"* diameter of rivet holes *5/16"* whether punched or drilled *Drilled* pitch of rivets *3"* lap of plating
per centage of strength of joint *68%* thickness of *top* plates *5/8"* stayed by *1 5/8" sq bar stays* pitch *15 1/2" x 15"*
Diameter of furnace, *top* *27 1/2"* *bottom* length of furnace *4' 0"* thickness of plates *5/16"* description of joint *Lap Single*
Thickness of *ambros* furnace crown plates *15/32"* stayed by *1 5/8" sq bar stays* pitch *8" x 8"* working pressure of shell by rules *80 lbs*
Working pressure of furnace by rules *80 lbs* diameter of uptake *4"* thickness of plates *1/2"* thickness of *back* tubes *9/16"*

SPARE GEAR. State the articles supplied:— *Top and bottom end connecting rod bottom nuts*
two main bearing bottom nuts. one set of coupling bolts + nuts.
rod and bilge pump valves. piston springs. bolts. nuts + pins
as fitted.

The foregoing is a correct description.
North Eastern Marine Engineering Co. Ltd. Manufacturer of main engines and boilers

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

The main steam pipes have been tested by hydraulic pressure to
320 lbs. The machinery of the above mentioned vessel has been constructed
under special survey. The material and workmanship are good and
efficient and the engines when tried under steam worked satisfactorily.
The Vessel has proceeded to Middlesbrough where the following
work requires to be done, viz. Sluices to fit on bulkheads. sections to
connect to fore hold after well. an engine room. donkey boiler to be fitted
with mountings and tried under steam. When this work is finished
to the satisfaction of a Surveyor to this Society. in my opinion the
vessel will be eligible for the notification in the Register Book of
+ LMC 5-90

The above mentioned work has been satisfactorily
Completed.

Wm Austin

Middlesbrough 12th June 1890

It is submitted that this vessel is eligible
to have + LMC 5-90 recorded.

M.A.

20.6.90

The amount of Entry Fee .. £ *2 : 0 :* received by me,

Special £ *29 : 14 :*

Donkey Boiler Fee £ *19 : 6 :*

Certificate (if required) .. £ *19 : 6 :* 1890

To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute

TUES 24 JUNE 1890

+ LMC 5/90

Pat Salmon 2019
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



Lloyd's Register
Foundation