Rpt. 5a.

REPORT ON BOILERS.

No. 22995

Received at London Office DEC 17 1938

Date of writing Report 12th Dec. 19 38 When handed in at Local Office 19 Port of HAMBURG

No. in Reg. Book. 76490 Survey held at HAMBURG Date, First Survey 20th June Last Survey 5th Dec. 1938.

on the Single Screw Motor Tanker INVERILEN (Number of Visits 6) Tons Gross 9456 Net 5561.

Master Built at HAMBURG By whom built Deutsche Werft A.G. Yard No. 204 When built 1938.

Engines made at Augsburg By whom made Maschinenfabrik Augsburg-Nürnberg Engine No. 690190 When made 1938

Boilers made at HAMBURG By whom made Deutsche Werft A.G. Boiler No. 740 When made 1938.

Nominal Horse Power 1000 Owners Inver Tankers, Ld. Port belonging to Dublin.

WASTE HEAT "LAMONT" DONKEY BOILER COIL SYSTEM

~~MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.~~

Headers: Bork & Co, Dortmund.

Manufacturers of Steel Tubes: Mannesmannröhren-Werke Abt. Remscheid (Letter for Record S.)

Total Heating Surface of Boilers 149 sq. metres Is forced draught fitted – Coal or Oil fired exhaust gas fired.

No. and Description of Boilers One Waste Heat "La Mont" Donkey Boiler Coil System **Working Pressure** 180 lbs

Tested by hydraulic pressure to 385 lbs Date of test 31.8.38 No. of Certificate 701. Can each boiler be worked separately no

Area of Firegrate in each Boiler – No. and Description of safety valves to each boiler one spring loaded.

Area of each set of valves per boiler { per Rule – / as fitted 35 mm ϕ, 962 mm² } Pressure to which they are adjusted 180 lbs Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler –

Smallest distance between boilers or uptakes and bunkers or woodwork – Is oil fuel carried in the double bottom under boilers boiler in 'tween.

Smallest distance between shell of boiler and tank top plating – Is the bottom of the boiler insulated –

Largest internal dia. of boilers 1440 mm Length 4270 mm **Shell plates:** Material S-M-Steel Tensile strength 50-60 kg/cm²

Thickness ϕ 90 mm ; ϕ 80 mm BORE 100 mm ; 70 Are the shell plates welded or flanged – Description of riveting: circ. seams { end – / inter. – }

~~long. seams~~ No. of coils: 25 Diameter of ~~rivet holes~~ coil tubes in { circ. seams 32 / 26 mm / long. seams } ~~Pitch of rivets~~ Thickness of shell 3 mm.

Percentage of strength of circ. end seams { plate / rivets } Percentage of strength of circ. intermediate seam { plate / rivets }

Percentage of strength of longitudinal joint { plate / rivets / combined } Working pressure of ~~shell~~ tubes by Rules 16.25 kg/cm²

Thickness of butt straps { outer / inner } **No. and Description of Furnaces in each Boiler**

Material Tensile strength Smallest outside diameter

Length of plain part { top / bottom } Thickness of plates { crown / bottom } Description of longitudinal joint

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules

End plates in steam space: Material Tensile strength Thickness Pitch of stays

How are stays secured Working pressure by Rules

Tube plates: Material { front / back } Tensile strength { } Thickness { }

Mean pitch of stay tubes in nests Pitch across wide water spaces Working pressure { front / back }

Girders to combustion chamber tops: Material Tensile strength Depth and thickness of girder

at centre Length as per Rule Distance apart No. and pitch of stays

in each Working pressure by Rules **Combustion chamber plates:** Material

Tensile strength Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top Are stays fitted with nuts or riveted over

Working pressure by Rules **Front plate at bottom:** Material Tensile strength

Thickness **Lower back plate:** Material Tensile strength Thickness

Pitch of stays at wide water space Are stays fitted with nuts or riveted over

Working Pressure **Main stays:** Material Tensile strength

Diameter { At body of stay, / or / Over threads } No. of threads per inch Area supported by each stay

Working pressure by Rules **Screw stays:** Material Tensile strength

Diameter { At turned off part, / or / Over threads } No. of threads per inch Area supported by each stay

Working pressure by Rules ... *Are the stays drilled at the outer ends* ... *Margin stays: Diameter* {*At turned off part, or Over threads* ...

No. of threads per inch ... *Area supported by each stay* ... *Working pressure by Rules* ...

Tubes: *Material* ... *External diameter* {*Plain* ... *Stay* ...} *Thickness* {...} *No. of threads per inch* ...

Pitch of tubes ... *Working pressure by Rules* ... **Manhole compensation:** *Size of opening in*

shell plate ... *Section of compensating ring* ... *No. of rivets and diameter of rivet holes* ...

Outer row rivet pitch at ends ... *Depth of flange if manhole flanged* ... **Steam Dome:** *Material* ...

Tensile strength ... *Thickness of shell* ... *Description of longitudinal joint* ...

Diameter of rivet holes ... *Pitch of rivets* ... *Percentage of strength of joint* {*Plate* ... *Rivets* ...}

Internal diameter ... *Working pressure by Rules* ... *Thickness of crown* ... *No. and diameter of*

stays ... *Inner radius of crown* ... *Working pressure by Rules* ...

How connected to shell ... *Size of doubling plate under dome* ... *Diameter of rivet holes and pitch*

of rivets in outer row in dome connection to shell ...

Type of Superheater ... *Manufacturers of* {*Tubes* ... *Steel forgings* ... *Steel castings* ...}

Number of elements ... *Material of tubes* ... *Internal diameter and thickness of tubes* ...

Material of headers ... *Tensile strength* ... *Thickness* ... *Can the superheater be shut off and*

the boiler be worked separately ... *Is a safety valve fitted to every part of the superheater which can be shut off from the boiler* ...

Area of each safety valve ... *Are the safety valves fitted with easing gear* ... *Working pressure as per*

Rules ... *Pressure to which the safety valves are adjusted* ... *Hydraulic test pressure:*

tubes ... *forgings and castings* ... *and after assembly in place* ... *Are drain cocks or*

valves fitted to free the superheater from water where necessary ...

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes.

The foregoing is a correct description,

DEUTSCHE WERFT AKTIENGESELLSCHAFT

Manufacturer.

Dates of Survey while building — *During progress of work in shops* - - June 20th, 27th, Aug 1st, 31st — *During erection on board vessel* - - - Nov. 28th, Dec. 5th.

Are the approved plans of boiler ~~and superheater~~ forwarded herewith 20.5.38.
(If not state date of approval.)

Total No. of visits 6

Is this Boiler a duplicate of a previous case yes. *If so, state Vessel's name and Report No.* INVERLIFFEY Hamburg Report No. 22830; INVERDARGLE " " " 22865; INVERSUIR " " " 22970

GENERAL REMARKS (*State quality of workmanship, opinions as to class, &c.*)

Material and workmanship of this "La Mont" - Donkey Boiler Coil System are of good quality. The materials used in the constructions are made at Works recognised by the Committee and tested by the Society's Surveyors in accordance with the requirements of the Rules.

This donkey boiler coil system having been made under Special Survey in conformity with the approved plan, the Secretary's letter and otherwise in compliance with the requirements of the Rules is eligible in my opinion to be classed with notation in the Register Book:

One Donkey Boiler (WT) 180 lbs/sq. inch pressure.

Thickness of adjusting washer of safety valve: 5 mm.

Survey Fee ... ... £R No: 84 : - — When applied for, 10. 12. 1938.

Travelling Expenses (if any) £ : : — When received, 10-1 1939

H. Röhrs

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 20 DEC 1938

Assigned See Ham F.E. 22995