

REPORT ON BOILERS.

No. 11387.

Received at London Office 25 AUG 1945

Date of writing Report 29th November 41 When handed in at Local Office 19 Port of Copenhagen

No. in Survey held at Copenhagen - Skibskov Date, First Survey 9th September 1939 Last Survey 3rd November 1941

on the Single Sc. Motor Tanker "HENNING MÆRSK" (Number of Visits 19) Tons { Gross 9842 Net 5912

Registered at Skibskov Built at Skibskov By whom built Lokalitet Skibsverf Yard No. 93 When built 1941

Engines made at Copenhagen By whom made apl. Bunnike & Wain Engine No. 3060 When made 1941

Boilers made at Copenhagen By whom made Skibskov og Skibsbyggeri Boiler No. 1976-77 When made 1941

Indicated Horse Power 735 Owners 1/5 of 1912 4/5 of Srenclborg Port belonging to Copenhagen.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Material: Vittoria clime Steel. Sm. rivets Corp. Stays: Colville Co. Riv. Lewis Bros. Emp.

Manufacturers of Steel Tubes: Albert Laker Rumma Poland. Tomau. Mannmann Röhrenwerke, Leckburg

Total Heating Surface of Boilers oil fired 150.2 m² Exhaust f.: 58.3 m² Is forced draught fitted yes ✓ Coal or Oil fired exhaust gas

and Description of Boilers 2 off horizontal, multitubular, composite ✓ Working Pressure 180 lbs/0" ✓

Tested by hydraulic pressure to 320 lbs/0" Date of test 14.12.39 No. of Certificate 655-56 Can each boiler be worked separately yes ✓

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 2 off direct spring loaded, 90 mm dia ✓

Area of each set of valves per boiler { per Rule 9270 mm² Pressure to which they are adjusted not say. Are they fitted with easing gear yes ✓

Use of donkey boilers, state whether steam from main boilers can enter the donkey boiler -

Least distance between boilers or uptakes and bunkers or woodwork none Is oil fuel carried in the double bottom under boilers Boilers placed on platform ✓

Least distance between shell of boiler and tank top plating - Is the bottom of the boiler insulated yes ✓

Least internal dia. of boilers 3850 mm Length 3180 mm Shell plates: Material S. cl. Steel Tensile strength 45.75/52 kg/mm² ✓

Thickness 26 mm Are the shell plates welded or flanged no ✓ Description of riveting: circ. seams { end 26 lbs 219-229 inter. -

Seams 36 lbs riveted Diameter of rivet holes in { circ. seams 29 mm Pitch of rivets { 88.24 mm long. seams 28 mm 190 mm

Percentage of strength of circ. end seams { plate 67 Percentage of strength of circ. intermediate seam { plate - rivets 47

Percentage of strength of longitudinal joint { plate 85.3 Working pressure of shell by Rules 183 lbs/0" rivets 95.5 combined 89.6

Thickness of butt straps { outer 26 mm No. and Description of Furnaces in each Boiler 2 off corrugated Deighton's section ✓ inner 26 mm

Material S. cl. Steel Tensile strength 41/47 kg/mm² Smallest outside diameter 940 mm ✓

Thickness of plain part { top ✓ Thickness of plates { crown 13 mm Description of longitudinal joint welded ✓ bottom ✓

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 200 lbs/0"

Plates in steam space: Material S. cl. Steel Tensile strength 41/47 kg/mm² Thickness 27 mm Pitch of stays 350 x 490 mm

How are stays secured Screwed in both plate, nuts ins. & outside Working pressure by Rules 180 lbs/0"

Plates: Material { front S. cl. Steel Tensile strength { 41/47 kg/mm² Thickness { 24 mm back 19 mm

Least pitch of stay tubes in nests 228 mm Pitch across wide water spaces 355 mm Working pressure { front 181 lbs/0" back 248 lbs/0"

Stays to combustion chamber tops: Material S. cl. Steel Tensile strength 44/50 kg/mm² Depth and thickness of girder

Least dia. 160 x 19 x 2 mm Length as per Rule 672 mm Distance apart 225 mm No. and pitch of stays

Least dia. 2 off 224 mm Working pressure by Rules 192 lbs/0" Combustion chamber plates: Material S. cl. Steel ✓

Tensile strength 41/47 kg/mm² Thickness: Sides 17 mm Back 16 mm Top 17 mm Bottom 19 mm

Least dia. of stays to ditto: Sides 240 x 215 mm Back 204 x 188 mm Top 225 x 224 mm nuts in S. ch.

Working pressure by Rules 195 lbs/0" Front plate at bottom: Material S. cl. Steel Tensile strength 41/47 kg/mm²

Thickness 24 mm Lower back plate: Material S. cl. Steel Tensile strength 41/47 kg/mm² Thickness 24 mm

Least dia. of stays at wide water space D = 492 mm Are stays fitted with nuts or riveted over nuts inside & outside

Working Pressure 228 lbs/0" Main stays: Material S. cl. Steel Tensile strength 44/50 kg/mm²

At body of stay, Top 2 3/4" Bottom 2 1/2" No. of threads per inch 11 Area supported by each stay abt. 172000 mm²

Over threads 3" - 2 3/4" | 2 3/4" - 2 1/2" Screw stays: Material S. cl. Steel Tensile strength 41/47 kg/mm²

Working pressure by Rules 208 lbs/0" At turned off part, No. of threads per inch 11 Area supported by each stay abt. 44000 mm²

Over threads 1 1/2" - 1 5/8"

Working pressure by Rules *211 lb/0* Are the stays drilled at the outer ends *no* Margin stays: Diameter *1 3/4* " 4c.
 No. of threads per inch *11* Area supported by each stay *alt. 53000 sq in* Working pressure by Rules *221 lb/0*
 Tubes: Material *S.M. Steel* External diameter *2 1/2* " Plain Thickness *1 W.G. No. 9. 3.75* " No. of threads per inch *11*
 Pitch of tubes *90 x 92* Working pressure by Rules *230 lb/0* Manhole compensation: Size of opening
 shell plate *405 x 505* Section of compensating ring *flanged* No. of rivets and diameter of rivet holes *46 of 28*
 Outer row rivet pitch at ends *195 x 127* Depth of flange if manhole flanged *88* Steam Dome: Material
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint
 Internal diameter Working pressure by Rules Thickness of crown No. and diam. of stays
 How connected to shell Inner radius of crown Working pressure by Rules
 of rivets in outer row in dome connection to shell Size of doubling plate under dome Diameter of rivet holes and of sets

Type of Superheater Manufacturers of Tubes
 Number of elements Material of tubes Steel forgings
 Material of headers Tensile strength Steel castings
 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
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressure
 tubes forgings and castings and after assembly in place Are drain 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,
NARSKOV SKIBSVÆRFT
 Manufacturing Agent

Dates of Survey: During progress of work in shops - *9/9-14/9-25/9-30/9-7/10-16/10-20/10-3/11-23/11* 4/12-14/12-39
 while building: During erection on board vessel - *18/4-20/4-30/4-7/5-17/5-19/7-27/7-40* 3/11-41
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *yes*
 Total No. of visits *19*

Is this Boiler a duplicate of a previous case - If so, state Vessel's name and Report No. -

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *The above 2 dunking boilers have been constructed and fitted under Special Survey in accordance with the Rules, the approved plans and the requirements contained in the Secretary's letters. The materials used in construction has been tested as required by the Rules and the workmanship is good.*

Survey Fee ... *£ 672.75* } When applied for, *27/6 19 40*
 Travelling Expenses (if any) £ : : } When received, *12/9 19 40*

J. Langkilde Jensen
 Engineer Surveyor to Lloyd's Register of

Committee's Minute **FRI 1 FEB 1946**

Assigned *See minute on Je. 74*

