

No. 2048

TRANSFERRED TO:
L. R. SYSTEM

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. *1874* No. in Register Book *3188*

TRANSFERRED TO:
L. R. SYSTEM

S.S. "*SOUTHERN WAVE*" *805*

Makers of Engines *Smith's Dock Co. Ltd.*

Works No. *274.*

Makers of Main Boilers *Hawthorn Leslie & Co. Ltd.*

Works No. *8863.*

Makers of Donkey Boiler *✓*

Works No. *✓*

MACHINERY.



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002109-002118-0215

No.

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. *1874* No. in Register Book *3188*

Received at Head Office *28th October 1925*

Surveyor's Report on the Neto Engines, Boilers, and Auxiliary Machinery of the ^{Single Triple} ~~Twin Quadruple~~ ^{Screw} *Whaler*

"Southern Whale"

Official No. *147319* Port of Registry *Liverpool*

Registered Owners *The Southern Whaling & Fishing Co. Ltd.*

Engines Built by *Smiths Dock Co. Ltd.*

at *South Bank-on-Tyne*

Main Boilers Built by *Sawthorn Leslie Co. Ltd.*

at *Newcastle-on-Tyne*

Donkey " " "

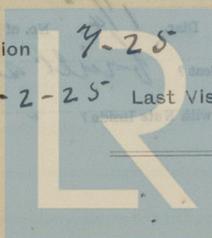
at

Date of Completion *7-25*

First Visit *17-2-25*

Last Visit *30-7-25*

Total Visits *45*



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RECIPROCATING ENGINES.

Works No. 274 No. of Sets 1 Description Triple expansion.
C.C. 3 Cyls.

No. of Cylinders each Engine 3 No. of Cranks 3
Diars. of Cylinders 16"-26"-43" Stroke 26"

Cubic feet in each L.P. Cylinder 21.8

Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cyl.? *yes.*

" " " each Receiver? *yes.*

Type of H.P. Valves, *Piston.*

" 1st I.P. " *Piston.*

" 2nd I.P. "

" L.P. "

" Valve Gear *Slide*

" Condenser *Repleason link.*

Diameter of Piston Rods (plain part) *Surface.* Cooling Surface 1280 sq. ft.
4 1/2" Screwed part (bottom of thread) 3.16"

Material " *Mild steel.*

Diars. of Connecting Rods (smallest part) 4 1/4" Material *Ins.*

" Crosshead Gudgeons 4 3/4" Length of Bearing 5 3/16" Material "

No. of Crosshead Bolts (each) 4 Diars. over Thrd. 2 1/8" Thrs. per inch 8 Material *Ins.*

" Crank Pin " " 2 " 2 5/8" " 6 " "

" Main Bearings 6 Lengths 10 7/8" " " "

" Bolts in each 2 Diars. over Thread 2 3/8" Threads per inch 6 Material *Ins.*

" Holding Down Bolts, each Engine 40 Diars. 1 1/4" No. of Metal Chocks 40

Are the Engines bolted to the Tank Top or to a Built Seat? *built seat.*

Are the Bolts tapped through the Tank Top and fitted with Nuts Inside? "

If not, how are they fitted? "

Connecting Rods, Forged by *Brown Bros.*

Piston " " *Yip Longdon.*

Crossheads, " " *Brown Bros.*

Connecting Rods, Finished by *Cnutts & Co.*

Piston " " " " " " " " " " " "

Crossheads, " " " " " " " " " " " "

Date of Harbour Trial 24-7-25

" Trial Trip 30-7-25

Trials run at *Between Isles & Ynne.*

Were the Engines tested to full power under Sea-going conditions? *yes.*

If so, what was the I.H.P.? 1138 Revols. per min. 156

Pressure in 1st I.P. Receiver, 59 lbs., 2nd I.P., " lbs., L.P., 11 lbs., Vacuum, 25 ins.

Speed on Trial 13.6 knots.

If the Conditions on Trial were such that full power records were not obtained give the following estimated

data:—

Builders' estimated I.H.P. Revols. per min.

Estimated Speed



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SHAFTING.

Are the Crank Shafts Built or Solid? *Built.*

No. of Lengths in each *4* Angle of Cranks *120°*

Diar. by Rule Actual *8 1/2"* In Way of Webs *8 7/8"*

„ of Crank Pins *8 3/4"* Length between Webs *11"*

Greatest Width of Crank Webs *24"* Thickness *5 1/4"*

Least „ „ *13"* „ „ „ *4"*

Diar. of Keys in Crank Webs *1 1/2"* Length *4"*

„ Dowels in Crank Pins *1"* Length *3 1/2"* Screwed or Plain *Plain.*

No. of Bolts each Coupling *6* Diar. at Mid Length *2"* Diar. of Pitch Circle *12 1/2"*

Greatest Distance from Edge of Main Bearing to Crank Web *3/16"*

Type of Thrust Blocks *Karveshae.*

No. „ Rings *6.*

Diar. of Thrust Shafts at bottom of Collars *8 1/2"* No. of Collars *6*

„ „ Forward Coupling *8 1/2"* At Aft Coupling *8 1/2"*

Diar. of Intermediate Shafting by Rule Actual No. of Lengths

No. of Bolts, each Coupling Diar. at Mid Length Diar. of Pitch Circle

Diar. of Propeller Shafts by Rule Actual *8 7/8"* At Couplings *8 1/2"*

Are Propeller Shafts fitted with Continuous Brass Liners? *Continuous.*

Diar. over Liners *10"* Length of After Bearings *4'-0 1/2"*

Of what Material are the After Bearings composed?

Are Means provided for lubricating the After Bearings with Oil?

„ „ to prevent Sea Water entering the Stern Tubes?

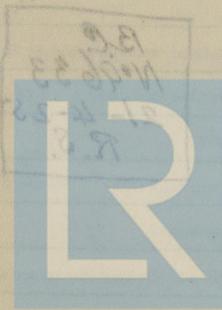
If so, what Type is adopted?

SKETCH OF CRANK SHAFT.

Handwritten notes and faint sketches of crank shaft components, including labels like 'Diar. of Propeller', 'Length of Propeller', and 'Coefficient of Displacement'.

STAMP MARKS ON SHAFTS

Stamp box containing handwritten numbers: 88, 10, 20-3-22, R.S.



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PUMPS, ETC.

No. of Air Pumps

Diar.

1-2 1/2"

Stroke

1-1 1/2"

Worked by Main or Independent Engines?

Main engines.

No. of Circulating Pumps

Diar.

Stroke

Type of

"

Centrifugal

Diar. of

"

Suction from Sea

8"

Has each Pump a Bilge Suction with Non-return Valve?

y/s.

Diar.

5 1/2"

What other Pumps can circulate through Condenser?

General Service.

No. of Feed Pumps on Main Engine

Diar.

Stroke

Are Spring-loaded Relief Valves fitted to each Pump?

y/s.

Can one Pump be overhauled while the others are at work?

y/s.

No. of Independent Feed Pumps

2

Diar.

8 1/2"

Stroke

18"

What other Pumps can feed the Boilers?

General Service.

No. of Bilge Pumps on Main Engine

2

Diar.

3"

Stroke

13 1/2"

Can one Pump be overhauled while the others are at work?

y/s.

No. of Independent Bilge Pumps

2

What other Pumps can draw from the Bilges?

General Service.

Are all Bilge Suctions fitted with Roses?

y/s.

Are the Valves, etc., so arranged as to prevent unintentional connection between Sea and Bilges?

y/s.

Are all Sea Connections made with Valves or Cocks next the Ship's sides?

y/s.

Are they placed so as to be easily accessible?

y/s.

Are the Discharge Chests placed above or below the Deep Load Line?

above.

Are they fitted direct to the Hull Plating and easily accessible?

y/s.

Are all Blow-off Cocks or Valves fitted with Spigots through the Hull Plating and Covering Plates or Flanges

on the Outside?

y/s.

BOILERS



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BOILERS.

Works No. *8863.*

No. of Boilers *1* Type *Cylindrical multitubular*

Single or Double-ended *single.*

No. of Furnaces in each *3*

Type of Furnaces *centr. mouson.*

Date when Plan approved *15/12/24*

Approved Working Pressure *200 lb. □*

Hydraulic Test Pressure *350 " oil filled boiler.*

Date of Hydraulic Test *17/3/25*

„ when Safety Valves set *24-4-25*

Pressure at which Valves were set *206 lb.*

Date of Accumulation Test *24-7-25*

Maximum Pressure under Accumulation Test *210 lb.*

System of Draught *Howden's C.A. (oil fired).*

Can Boilers be worked separately? *yes.*

Makers of Plates *David Colville Sons.*

„ Stay Bars *R. B. N. Co. Ltd.*

„ Rivets *Yield's Forge Coy.*

„ Furnaces

Greatest Internal Diam. of Boilers *14'-9"*

„ „ Length „ *12'-6"*

Square Feet of Heating Surface each Boiler *2620*

„ „ Grate „ „ *variable*

No. of Safety Valves each Boiler *2* Rule Diam. Actual *3"*

Are the Safety Valves fitted with Easing Gear? *yes.*

No. of Pressure Gauges, each Boiler *2* No. of Water Gauges *2*

„ Test Cocks „ *none* „ Salinometer Cocks *1*

Are the Water Gauges fitted direct to the Boiler Shells or mounted on Pipes? *Water Cocks*

Are the Water Gauge Fittings fitted direct to the Boiler Shells or connected by Pipes?

Are these Pipes connected to Boilers by Cocks or Valves?

Are Blow-off Cocks or Valves fitted on Boiler Shells?

No. of Struts of Shell Lifting in each Boiler

Water in each Strake

Thickness of Shell Plates approved

in Boiler

Are the Rivets Iron or Steel?

Are the longitudinal seams butt or lap joints?

Are the girth seams single or double?

Are the Double Butt Seams of equal width?

Thickness of outside Ribs Straps

inside

Are longitudinal seams hand or Machine Riveted?

Are they Single, Double or Triple Riveted?

No. of Rivets in a Row

Dist. of Rivet Lines

No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams hand or Machine Riveted?

Dist. of Rivet Lines

No. of Rows of Rivets in Front End Circumferential Seams

Are these Seams hand or Machine riveted?

Dist. of Rivet Lines

No. of Rows of Rivets in Back End Circumferential Seams

Are these Seams hand or Machine Riveted?

Dist. of Rivet Lines

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Thickness of End Plates in Steam Space Approved *1 1/2"*

" " " " " in Boilers *1 1/2"*

Pitch of Steam Space Stays *21 x 20"*

Diar. " " " " Approved Threads per Inch *3 3/8*

" " " " " in Boilers *3 3/8*

Material of " " " *Steel*

How are Stays Secured? *Double nut washers*

Diar. and Thickness of Loose Washers on End Plates *6 1/2 x 1/4"*

" " " " Riveted " " " *None*

Width " " " Doubling Strips " *None*

Thickness of Middle Back End Plates Approved *2 3/8"*

" " " " " in Boilers *2 3/8"*

Thickness of Doublings in Wide Spaces between Fireboxes *None*

Pitch of Stays at " " " " " *15" x 9"*

Diar. of Stays Approved Threads per Inch *1 7/8"*

" " " " in Boilers *1 7/8"*

Material " " " *Steel*

Are Stays fitted with Nuts outside? *Yes*

Thickness of Back End Plates at Bottom Approved *2 3/8"*

" " " " " in Boilers *2 3/8"*

Pitch of Stays at Wide Spaces between Fireboxes *15" x 9"*

Thickness of Doublings in " " " *2 5/8"*

Thickness of Front End Plates at Bottom Approved *3 1/2"*

" " " " " in Boilers *3 1/2"*

No. of Longitudinal Stays in Spaces between Furnaces *4*

Threads per Inch *3 3/8*

Thickness of End Plates Approved *1 1/2"*

Thickness of Back End Plates Approved *2 3/8"*

Pitch of Stay Tubes at Spaces between Fireboxes *15" x 9"*

Thickness of Doublings in " " " *2 5/8"*

Stays fitted with Nuts at Front End? *Yes*

Thickness of Middle Back End Plates Approved *2 3/8"*

Thickness of Back End Plates Approved *2 3/8"*

Pitch of Stay Tubes in Back End Plates *15" x 9"*

Thickness of Stay Tubes *1 7/8"*

Material of Plates *Steel*

Thickness of Front End Plates Approved *3 1/2"*

Thickness of Back End Plates at Bottom Approved *2 3/8"*

Pitch of Stays at Wide Spaces between Fireboxes *15" x 9"*

Thickness of Doublings in " " " *2 5/8"*

Thickness of Front End Plates at Bottom Approved *3 1/2"*

No. of Longitudinal Stays in Spaces between Furnaces *4*



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Diar. of Stays Approved Threads per Inch

" " in Boilers

2 1/4" - 16
Steel 2 1/2 x 20"

Material "

Thickness of Front Tube Plates Approved

" " " " in Boilers

31/32"

Pitch of Stay Tubes at Spaces between Stacks of Tubes

13 1/2" x 7 1/2"

Thickness of Doublings in " " "

None fitted

" Stay Tubes at " " "

3/8"

Are Stay Tubes fitted with Nuts at Front End?

Yes

Thickness of Back Tube Plates Approved

" " " in Boilers

2 3/8"

Pitch of Stay Tubes in Back Tube Plates

7 1/2" x 7 1/2"

" Plain "

3 3/4" x 3 3/4"

Thickness of Stay Tubes

7/16" - 3/8" - 5/16"

" Plain "

No. 9 L.S. T.

External Diar. of Tubes

2 1/2"

Material "

Iron

Thickness of Furnace Plates Approved

" " " in Boilers

5/8"

Smallest outside Diar. of Furnaces

3 - 4 3/4"

Length between Tube Plates

7 - 4 7/16"

Width of Combustion Chambers (Front to Back)

3 - 2" over box

Thickness of " " Tops Approved

21/32"

" " " in Boilers

8 3/4" x 8 3/4"

Pitch of Screwed Stays in C.O. Tops

Threads per Inch

List of Screwed Stays Approved

P 1 1/2" 16
1 1/2"

" " " in Boilers

Material "

Thickness of Combustion Chamber Tops Approved

" " " in Boilers

Pitch of screw stays in C.O. Tops

Threads per Inch

List of Screwed Stays Approved

P 1 1/2" 16
1 1/2"

" " " in Boilers

Material "

Thickness of Combustion Chamber Joints Approved

" " " in Boilers

Pitch of screw stays in C.O. Joints

Threads per Inch

List of Screwed Stays Approved

P 1 1/2" 16
1 1/2"

" " " in Boilers

Material "

Are all screw stays fitted with nuts inside C.O.?

Thickness of Combustion Chamber Bottoms

No. of Rivets over each Wing Chamber

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Diar. of Screwed Stays Approved Threads per Inch
 " " " in Boilers 1578" 9
 Material " " Steel

Thickness of Combustion Chamber Sides Approved
 " " " " in Boilers $\frac{3}{8}$ " C. & $\frac{1}{2}$ " Side
 Pitch of Screwed Stays in C.O. Sides $8\frac{3}{4}" \times 8\frac{1}{2}"$

Diar. " " Approved Threads per Inch
 " " " in Boilers 1578" 9
 Material " " Steel

Thickness of Combustion Chamber Backs Approved
 " " " " in Boilers $2\frac{1}{2}"$
 Pitch of Screwed Stays in C.O. Backs $9" \times 8\frac{1}{4}"$

Diar. " " Approved Threads per Inch
 " " " in Boilers $1578"$ 9
 Material " " Steel

Are all Screwed Stays fitted with Nuts inside C.O. ? Yes.

Thickness of Combustion Chamber Bottoms $15/16"$

No. of Girders over each Wing Chamber 4
 " " " Centre " 2
 Depth and Thickness of Girders $9" \times \frac{15}{16}"$
 Material of Girders Steel

No. of Stays in each 3

No. of Tubes, each Boiler 241

Size of Lower Manholes $16 \times 12"$

VERTICAL DONKEY BOILERS

No. of Boilers
 Type
 Greatest Int. Dia.
 Height
 Height of Boiler Crown above Fire Grate
 A. Boiler Crown Flat or Dished?
 Internal Radius of Dished Boilers
 Thickness of Plates
 Description of Stays in Boiler Crown
 Dia. of Rivet Heads
 Width of Overlap
 Height of Rivet Crown above Fire Grate
 Are Rivets Crown Flat or Dished?
 Internal Radius of Dished Crowns
 No. of Crown Stays
 Dia.
 External Dia. of Rivet at Top
 Bottom
 Thickness
 No. of Water Tubes
 Dia. of Water Tubes
 Material of Water Tubes
 Size of Manhole in Shell
 Description of Combustion Liner
 Riveting Pattern and Pitch
 Grate Surface

SUPERHEATERS

Description of Superheaters
 Where situated?
 Which boilers are provided with superheaters?
 Can Superheaters be run off while Boilers are working?
 No. of tubes in each superheater
 Dia.



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VERTICAL DONKEY BOILERS.

No. of Boilers *1* Type *9*
 Greatest Int. Diar. *5 1/2* Height *9*
 Height of Boiler Crown above Fire Grate
 Are Boiler Crowns Flat or Dished?
 Internal Radius of Dished Ends *4 1/2* Thickness of Plates *3/8*
 Description of Seams in Boiler Crowns
 Diar. of Rivet Holes *3/4* Pitch *2* Width of Overlap
 Height of Firebox Crowns above Fire Grate
 Are Firebox Crowns Flat or Dished?
 External Radius of Dished Crowns Thickness of Plates
 No. of Crown Stays *2* Diar. *3/4* Material
 External Diar. of Firebox at Top *3 1/2* Bottom *3 1/2* Thickness of Plates
 No. of Water Tubes *2* Ext. Diar. *2* Thickness
 Material of Water Tubes
 Size of Manhole in Shell *13" x 18"*
 Dimensions of Compensating Ring
 Heating Surface, each Boiler Grate Surface

SUPERHEATERS.

Description of Superheaters
 Where situated?
 Which Boilers are connected to Superheaters?
 Can Superheaters be shut off while Boilers are working?
 No. of Safety Valves on each Superheater *2* Diar. *3/4*
 Are " " fitted with Lasing Gear?
 Date of Hydraulic Test Test Pressure
 Date when Safety Valves set Pressure on Valves

MAIN STEAM PIPES

No. of Lengths	Material	Internal Diar.	Thickness	Date of Hydraulic Test	Test Pressure
<i>1</i>	<i>Copper</i>	<i>2 1/2</i>	<i>1/8</i>	<i>1-1-02</i>	<i>100 lbs</i>
<i>2</i>	<i>Copper</i>	<i>2 1/2</i>	<i>1/8</i>	<i>1-1-02</i>	<i>100 lbs</i>



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MAIN STEAM PIPES.

No. of Lengths	2	1	
Material	copper.	copper.	
Brazed, Welded or Seamless	S.D.	S.D.	
Internal Diar.	4"	4"	
Thickness	5 w.g.	5 w.g.	
How are Flanges secured?	braced.	braced.	
Date of Hydraulic Test	1-7-25	15-7-25	
Test Pressure	400 lbs.	400 lbs.	
No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diar.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			
No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diar.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			

General Services Vertical
Duplex Boilers 6' x 4' x 6'

Boilers have been fed

FEED WATER HEATERS

Boilers have been fed
200 lbs. test pressure

FEED WATER FILTERS



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EVAPORATORS.

No.	Type	Makers	Working Pressure	Test Pressure	Tons per Day	Date of Test
		<i>copper copper</i>				
		<i>400 500</i>				
		<i>brass brass</i>				

Date of Test of Safety Valves under Steam

FEED WATER HEATERS.

No.	Type	Makers	Working Pressure	Test Pressure	Date of Test
<i>1</i>	<i>Surface Heater.</i>	<i>Camp & Rayner.</i>	<i>200 lbs.</i>	<i>30 lbs</i> <i>400 lbs</i>	<i>3/6/25</i>

FEED WATER FILTERS.

No.	Type	Makers	Working Pressure	Test Pressure	Size	Date of Test

LIST OF DONKEY PUMPS.

*Spruont's General Service Vertical
Duplex Donkey 6" x 4 1/4" x 6"*

1 Pair Weirs Feed pumps 6" x 8 1/2" x 18"



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SPARE GEAR

No. of Top End Bolts.	2	No. of Bot. End Bolts.	2	No. of Cylinder Cover Studs	
" Coupling Bolts	6	" Main Bearing Bolts	2	" Valve Chest "	
" Junk Ring Bolts		" Feed Pump Valves	1 set.	" Bilge Pump Valves	1 set.
" H.P. Piston Rings	6	" L.P. Piston Rings		" L.P. Piston Rings	
" " Springs		" " Springs		" " Springs	
" Safety Valve "	1	" Fire Bars	1 set.	" Feed Check Valves	2
" Piston Rods		" Connecting Rods		" Valve Spindles	1
" Air Pump Rods		" Air Pump Buckets		" Air Pump Valves	1 set.
" Cir. "		" Cir. "		" Cir. "	
" Crank Shafts		" Crank Pin Bushes		" Crosshead Bushes	
" Propeller Shafts	1	" Propellers	1	" Propeller Blades	
" Boiler Tubes	8	" Condenser Tubes	12	" Condenser Ferrules	30

OTHER ARTICLES OF SPARE GEAR:—

REFRIGERATORS



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REFRIGERATORS.

No. of Machines

Capacity of each

Makers

Description

No. of Steam Cylinders, each Machine

No. of Compressors

No. of Cranks

Particulars of Pumps in connection with Refrigerating Plant and whether worked by Refrigerating Machines or Independently

System of Refrigeration

Insulation

Are Brine and other Regulating Valves placed so as to be accessible without entering the Insulated Spaces?

Are all Pipes, Air Trunks, &c., well secured and protected from risk of damage?

Are all Bilge, Sounding, and Air Pipes in Insulated Spaces properly insulated?

Are Thermometer Tubes so arranged that Water cannot enter and freeze in them?

Date of Test under Working Conditions

RESULTS OF TRIALS.

COMPARTMENT.	Temp. at beginning of Trial.	Temp. at end of Trial.	Time required to obtain this Result.	Rise of Temp. after hours.
Machine of System				
Capacity	45			
Current consuming in Coldroom				
Height of Brine in Coldroom				
Position of Brine in Coldroom				
No. of Cylinders in each Machine as provided in Main Trial				
Particulars of these Trials				

Articles of Spare Gear for Refrigerating Plant carried on board:—



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Total No. of Lists

Current required for Motor and Machine

POSTAL TELEGRAPH

ALL INFORMATION ON THIS FORM IS TO BE KEPT SECRET AND NOT TO BE DISCLOSED TO ANY OTHER PERSON

NAME: *John Doe* NO. *10* DATE: *10/10/19*

ADDRESS: *123 Main St, New York, NY*

TELEPHONE: *123 4567*

TELEGRAMS: *John Doe*

POSTAL TELEGRAPH: *John Doe*



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