

SPARE GEAR LIST

F O R

ENGINES AND BOILERS NO. 919.

ENGINES AND BOILERS NO. 920.

ENGINES AND BOILERS NO. 921.

D.O. Drawing office.

E.S. Fitting Shop and Stores.



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S.S. "ALMEDA", S.S. "Andalucia" and S.S. "Arandora"

ENGINES AND BOILERS NOS. 919, 920 and 921

SPARE GEAR LISTS      SHEET NO. 1.

set of perforated steel plates for Corrosion Strainer  
4 plates (in halves)

For Serck Oil Coolers.

00 Tubes.

set of replacement tools.

Studs, Bolts and Nuts for H.P. Ahead Turbine Cylinder

Horizontal Joints (Print No. 159643)

off 1.1/2" dia. x 6.3/4" long Bolts.

" 1.1/2" dia. x 6.3/8" " Studs.

Studs, Bolts and Nuts for L.P. Ahead and Astern Turbine

Cylinders (Print No. 159827)

off Main Horizontal Joint Bolts 1.3/8" dia. x 5.5/8" long.

" " " Studs 1.5/8" dia. x 5.1/4" "

" Internal Joint Bolts 1.3/8" dia. x 6" long.

Half Set of Gland Strips to replace those in H.P. and L.P.

Turbine Glands, viz:-

8 rows of strips for H.P. sleeve)

6 " " " " rotor )

Print No. 160308

8 rows of strips for L.P. sleeve)

6 " " " " rotor )

Print No. 160309

2 lbs: Silver solder.

H.M. Turbine Bearings complete with white metal lining

(Print No. 160007)

H.P. aft. bearing complete (in halves) 5 1/2" bore x 9 3/4" long over-  
all

H.P. fwd. " " " " " x 9" " "

L.P. aft " " " 7" x 13 5/8" " "

L.P. fwd. " " " " x 13" " "

L.P. & L.P. Adjusting Blocks (Print No. 160310)

2 Thrust Pads.

2 Thrust Pivots for Pads.

Complete Adjusting Rings (in halves) 12" Outside dia. x 8 1/2" bore  
x 1/2" thick full.

H.P. Pinion. (Print No. 159214)



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1 L.P. Pinion }  
 4 Plugs for Pinion. } Print No. 159214  
 2 W.I. Nuts for above pinions.  
 Studs, Bolts and Nuts for Gear Case.

4 off Pinion Cover joint Bolts 1" dia. x 4" long }  
 4 " " " Studs 1" " x 3 $\frac{1}{4}$ " " } Print No. 159334

11 off Main Horizontal Joint Bolts 1 $\frac{1}{4}$ " dia. x 4 $\frac{1}{2}$ " Long }  
 4 " " Bearing Keep Studs 1 $\frac{1}{2}$ " dia. x 5 $\frac{3}{8}$ " long } Print  
 4 " " " " " 1" " x 4 $\frac{1}{4}$ " " } No.  
 159672

24 H.P. & I.P. Flexible Coupling bolts & Nuts  $\frac{7}{8}$ " dia. x 3 $\frac{7}{8}$ "  
 long Print No. 159680.

50 Main Condenser Tubes each  $\frac{3}{4}$ " outside dia. x 18 w.g. x  
 10'8 $\frac{1}{2}$ " long.

40 " " Ferrules.

40 Aux. " "

240 Yards Cord Packing for Condensers, (or equivalent weight).  
 16 Bolts & Nuts for Shaft Couplings each 3" dia. x 3 $\frac{1}{2}$ " long -

(Print No. 159867)

# DISCS FOR MAIN STEAM VALVES.

2 Flexible Discs for Main Manoeuvring Valves.

2 " " " " Bulkhead Emergency Stop Valves.

Main Thrust Block Pad Pieces sufficient for one complete block,  
 viz:-

7 Ahead pads }  
 7 Astern pads } Print No. 159996

Gear Case Bearings complete with white metal lining (Print No. 160000).

2 off Centre G.M. Pinion Bearings complete (in halves) 6 $\frac{1}{4}$ " bore x  
 13" long overall.

2 off Ford. End G.M. Pinion Bearings complete (in halves) 6 $\frac{1}{4}$ " bore  
 x 9 $\frac{1}{8}$ " long overall.

2 off Aft. End G.M. Pinion Bearings complete (in halves) 6 $\frac{1}{4}$ " bore -  
 x 8 $\frac{1}{2}$ " long overall.

2 off Main Gear Wheel C.I. Bearings complete (in halves) 16" bore  
 x 20" long overall.



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SHEET NO. 3.

set of Studs and Nuts for one propeller blade, viz:- 9

(Print No. 159980)

studs with shoulders  $2\frac{7}{8}$ " dia. x  $9\frac{1}{2}$ " fitted with cap nuts.

Locking studs  $\frac{3}{4}$ " dia. x  $1.15/16$ " long.

Right Hand, 1 Left Hand Bronze Propeller Blades

Patent 3 glass pattern protector of Boiler Gauges.

10 Woodite Cone packing rings for Boiler Gauges.

Internal Main feed check valve & seat for 3" bore bodies  
D.E.Boilers.

" Aux. " " " " " 3" bore bodies  
D.E.Boilers.

" Main " " " " "  $2\frac{1}{2}$ " bore bodies  
S.E.Boilers.

" Aux. " " " " "  $2\frac{1}{2}$ " bore bodies  
S.E.Boilers.

R.H. & 4 L.H.furnace fronts, side baffle plates for

4 Furnace crown baffle plates.

2 " doors complete.

1 R.H. & 1 L.H.wood patterns for furnace front side baffles.

1 wood pattern for furnace crown baffle.

1 R.H. & 1 L.H.wood pattern for bridge bearers.

3 Wood patterns for furnace fire bars viz:- 2 for wing bars 1 R.H.&  
1 L.H. & 1 for ordinary fire bars.

Sufficient bars for 3 furnaces viz:- Total 6 wing bars and about  
78 fire bars.

1 R.H. & 1 L.H. bridge bearers for one main boiler.

4 Furnace dead plates (each in 3 pieces)

60 Bolts, Nuts and Washers (assorted)

50 Studs assorted, say  $\frac{1}{2}$ " to  $\frac{7}{8}$ " diameters.

36 Gauge glasses for Main Boiler Water Gauges.

4 Sight glasses for forced lub. observation chests.

12 Tubes for Main Boilers, plain.

2 Gauge glasses for Gravity oil tank.



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STEEL HELICAL SPRINGS unless otherwise stated.

red

D.

1	for H.P. Turbine Relief Valves	E.N.21 & 22	} Print No.160594
1	" L.P. Turbine Relief Valves	E.N.23 to 26	
3	" Triple Boiler Safety Valves	B.N.1,2 and 3	
2	" Double Boiler Safety Valves	B.N.4 and 5	
1	" Alarm Whistle Control Valves for Lubrication Oil Gravity Tanks.		
1	" Auxiliary exhaust valve to main condenser	E.E.8	} Print No. 162683.
1	" " " " " atmosphere	E.E.11	
1	" Main & Aux.feed discharge valves	E.F.D.2 and 5	
1	" Aux. Feed Discharge	E.F.D.12	
1	" Steam valve to cabin heating	E.S.61	
1	" Wash Deck Service Valve & Bilge Pump Disch. Valve	E.B.72 and B.B.39.	
1	" Forward and After Winch Valves	E.E.30, 31.	
1	" Boiler circulating suction valve	B.V.5.	
1	" Sanitary Gen.Service,Bilge,Pumps Disch. Valves.	E.B.76, 77 and 78.	
1	" Dynamo exhaust control box	E.E.40 and	
	Brine pump exh: relief valve.	O.E.106.	
1	" Oil Fuel Sediment Drain Valves (of hard brass)	B.O. 37 and 38.	
2	" Reducing valves for steam to winches and Windlass	B.S. 20 and 31.	
1	" Reducing valves for steam to dynamo	E.S.48.	
1	" " " " " Refrigerator	E.S.50	
1	" " " " " Steering Engine	E.S.47	
1	" " " " " O.F.Heating System	B.Z.1.	
1	" " " " " Ash Hoist	B.S.15.	
1	" Relief Valve of Reducing Valve	B.S.20.	
1	" " " " " " "	E.S.31.	
1	" Reducing valve for steam to Cabin Heating Systems	E.S.27.	
1	" Reducing Valve for steam to Turbine glands	E.G.1.	
1	" Relief " " " " " "	E.G.1.	



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SHEET NO. 5.

BRONZE HELICAL SPRINGS.

- 1 for Main Feed Check Valves on D.E.Boilers B.N.16,17 & 18.  
1 " Aux. " " " " " B.N.21,22 & 23.  
1 " Main " " " S.E. " B.N.19 and 20  
1 " Aux. " " " " " B.N.24 and 25

DIAPHRAGM DISCS FOR REDUCING VALVES.

- 1 for each Reducing Valve = 9 in number.

FOR WEIRS DUAL AIR PUMPS.

- 1 Steam Valve Chest with valves & spindle complete.  
1 Air pump rod and nuts.  
6 Air pump valves (Kinghorn type, 3 discs = 1 valve,  $4\frac{1}{2}"$ ,  $4\frac{1}{2}"$ ,  $4\frac{3}{8}"$  dia.)  
3 Pump gland studs.

FOR WEIRS MAIN FEED PUMPS.

- 1 Steam Valve chest with valves and spindle complete.  
1 Pump rod and nut.  
1 Piston rod and nut.  
1 Pump crosshead with nuts complete.  
1 Pump bucket complete with rings.  
1 Piston complete with Buckley's Patent rings & springs.  
6 Suction group valves and springs.  
6 Delivery group valves.  
3 Pump gland studs.

FOR WEIRS AUXILIARY FEED PUMP.

- 1 Pump rod and nut.  
1 Piston rod and nut.  
1 Pump crosshead with nuts complete.  
1 Pump bucket complete with rings.  
1 Piston complete with rings (ordinary type rings)  
3 Pump gland studs.



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FOR WEIRS FORCED LUBRICATION PUMPS.

Steam Valve chest with valves and spindle complete.  
Pump rod and nut.  
Piston rod and nut.  
Pump crosshead with nuts complete.  
Pump bucket complete with rings.  
Piston complete with Buckleys Patent rings and springs.  
Suction valves and springs (Kinghorn type, 3 discs = 1 valve,  
3 $\frac{1}{2}$ " x 3 $\frac{1}{4}$ " x 3 $\frac{1}{8}$ " dia. set for one pump.  
Delivery valves and springs (Kinghorn type 3 discs = 1 valve  
3 $\frac{1}{2}$ ", x 3 $\frac{1}{4}$ " x 3 $\frac{1}{8}$ " dia. set for one pump.  
Pump gland studs.

FOR WEIRS OIL FUEL TRANSFER PUMP.

See also at end of list.

Spring for relief valve.  
Pump gland studs.

FOR LAMONTS SIMPLEX BILGE PUMP.

Bronze disc valves with seats and springs Kinghorn type  
(3 discs = 1 valve)  
Pump gland studs.

FOR LAMONTS SIMPLEX SANITARY PUMP.

Pump gland studs.

FOR LAMONTS SIMPLEX AUXILIARY SERVICE PUMP.

Pump gland studs.

FOR LAMONTS SIMPLEX BALLAST PUMP.

Pump gland studs.

FOR LAMONTS SIMPLEX FRESH WATER PUMPS.

Pump gland studs.

FOR MATTHEW PAUL MAIN CENTRIFUGAL CIRCULATING PUMPS.

M. Impeller and bronze spindle complete.  
Crankshaft.  
Piston rod and nut complete with crosshead brasses & bolts.  
Set of crank pin brasses and bolts.  
Set of H.P. piston springs and rings Buckleys restrained type.  
Set of L.P. piston springs and rings Buckleys restrained type.



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SHEET NO. 7.

ordered  
by FOR MATTHEW PAULS MAIN CENTRIFUGAL CIRCULATING PUMPS(Contd)

- D.O. 1 Valve spindle and nut suitable for H.P. and L.P. valves.  
" 1 Spring for each size escape valve = 1 for H.P.Valve & 1 for L.P. Valve.

FOR MATTHEW PAUL AUXILIARY CENTRIFUGAL CIRCULATING PUMP.

- " 1 Spring for relief valve.

FOR DEYSDALES S.O.S. ELECTRIC EMERGENCY BILGE PUMP.

- " 2 Air pump discharge valves and springs = 1 set  
" 10 Air pump piston rings = 1 set  
" 1 Set of spares for float = 5 parts.  
" 8 Brushes for motor = 1 set.  
" 1 Line of brush holders for motor

FOR WEIRS DIRECT CONTACT FEED HEATER.

- " 1 Spring for Escape Valve.  
" 1 Spring for spray valve.  
" 1 Spring for Atmospheric valve.

FOR HOOKINGS EVAPORATOR.

- " 2 Gauge glasses.  
" 1 Spring for Safety Valve.

FOR HOOKINGS MAIN FEED FILTER.

- " 1 Complete filtering cartridge ready for use.

FOR HOOKINGS AUXILIARY FEED FILTER.

- " 1 Complete filtering cartridge ready for use.

No.6 SHARPLES OIL PURIFIER.

- " One set of bearings = 2  
" One set of brushes for motor = 4

CROMPTON'S ASH HOIST.

- " 1 Lifting Rope.  
" 3 Piston cups.

FOR THORNYCROFT'S OIL FUEL INSTALLATION.

- " 4 Sprayers complete.  
" 12 Sprayer caps.  
" 12 Deflectors and guide tubes.  
" 2 Thermometers.



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SHEET NO. 8.

FOR THORNYCROFTS OIL FUEL INSTALLATION (Contd.).

- 20 Square feet wire mesh for filters  
8 Piston rings for Oil Fuel Pumps (sufficient for both pumps)  
4 Pump " " " " " " " "  
8 Valves and 8 springs for Oil Fuel Pumps (sufficient for both pumps)  
2 Springs for Oil Fuel Pump Relief Valve.  
1 Spring for Oil Fuel Heater Relief Valve.  
4 Burner supply pipes.

FOR HOWDEN'S FORCED DRAUGHT FAN MOTORS.

- 1 Set Carbon Brushes 20  
1 Line Brush Holders 5  
1/2 Set Field Coils i.e. (2 Main Shunt Coils  
(2 Series "  
1/2 Set Interpole Coils. 2  
1 Bearing Bush.  
1 Armature.

FOR PHOMENE FIRE EXTINGUISHING INSTALLATION. PYRENE CO.

- 1 Chemical Charge for Main Gravity Tank Installation.  
1 " " " 34 Gall. Engine in Boiler Room.  
4 " " " 4 " Portable Fire Extinguishers in  
Boiler Room.  
2 " " " 2 " Portable Fire Extinguishers in  
Engine Room.

FOR WEIR'S OIL FUEL TRANSFER PUMP.

- 1 Set Suction Valves and Springs. 4 Valves and 18 Springs.  
1 Set Discharge Valves & Springs. 2 " " 12 "  
1 Set Steam Piston Rings. 4  
1 Piston Rod and Pump Rod complete with Nuts.  
1 Steam Shuttle Valve with Valves complete.



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