

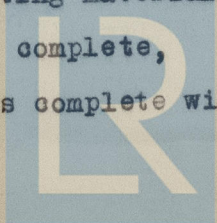
re Lithgows Ltd., Port Glasgow. - No. 762 for N.Y.K.

Spare Gear to be provided as follows :

for Main Engines :

- 1 Cylinder cover complete with all valves,
- 1 Combined fuel and starting valve complete extra,
- 1 Advance starting air valve,
- 4 Fuel valve needles,
- 16 Distance rings between the atomiser rings,
- 8 Flame plates,
- 1 Working piston complete with piston rings and rod,
- 56 Main piston rings extra,
- 2 Crosshead slippers for main engine,
- 1 each camshaft driving gear wheels,
- 2 Connecting rod top end bolts and nuts,
- 12 Coupling bolts for crankshaft,
- 4 Sets of piston rings for air compressor,
- $\frac{1}{2}$ Set of valves for air compressor,
- 1 Complete set of all working parts for fuel pump,
- 4 Valves for 1 bilge pump,
- 4 Valves for lubricating oil pump,
- 1 Set of assorted bolts and nuts,
- 1 Bucket and rod for lubricating oil pump,
- 18 Studs and nuts for cylinder cover,
- 8 Lubricating studs (for 1 main cylinder) with pipe unions for same,
- 1 Set of length pipes suitable for the fuel delivery and the blast pipes to cylinders and the air delivery from the compressor to the receivers,

- 1 Cylinder relief valve,
- 2 Main bearings (4 halves) with studs and nuts,
- 2 Connecting rod bottom end bearings (4 halves) with bolts and nuts,
- 2 Camshaft bearings,
- 4 Cam rollers for fuel valve,
- 8 Fuel cams,
- 1 Set of piston cooling tubes for 1 engine (8 of each),
- 1 " " " " " " 1 cyl.(2 pipes, 2 unions),
- 2 Sets of springs for 1 engine,
- 1 Connecting rod bottom end bearing for air compressor,
- 1 Connecting rod top end bearing for air compressor,
- 3 Valve cones left hand for L.P.and I.p. stage,
- 3 Valve cones right hand " " " " "
- 18 Disc valves 74 mm diameter,
- 18 " " 40 mm "
- 3 Suction valves for H.P.stage,
- 3 Delivery " " " " ,
- 10 Valve cones for H.P.stage,
- 30 Air cooler tubes for L.P.
- 15 Air cooler tubes for I.P. and H.P.
- 1 Relief valve for L.P.stage,
- 1 " " " H.P. " ,
- 1 " " " I.P. " ,
- 2 Valves and seats for crosshead lubricating pump,
- 1 Set of packing and jointing material,
- 2 Working cylinder liners complete,
- 4 Scavenge air valve cages complete with valves (sufficient for one main engine),



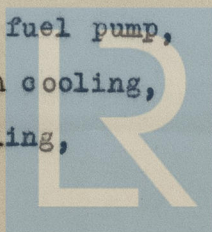
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- 1 Lower scavenge air valve cage,
- 1 Upper scavenge air valve cage,
- 2 Thrust rings for thrust block,
- 2 Fuel non-return valves,
- 1 16-Point *Bosch* lubricator
- 10 % of total number of tubes for oil coolers,
- 64 metres rubber cord for rings of main cylinder liners,
- 1 spare element for fuel filter,
- 1 set of 10 elements for lubricating oil filters with bottom support plate and top cover,
- 50 kgs. of Wigmarit metallic packing.

for 3 Auxiliary Diesel Engines.

- 2 Cylinder covers without valves,
- 3 Main bearings (6 halves)
- 6 Fuel valves complete,
- 4 Flame plates,
- 3 Safety valves for cylinder cover,
- 3 Connecting rod big end bearings (6 halves)
- 4 Connecting rod small end bearings (8 halves)
- 2 Connecting rod small end bearings for scavenge air pump (4 halves),
- 2 Connecting rod big end bearings for scavenge air pump (4 halves),
- 48 Main piston rings,
- 24 Valves for fuel pump,
- 2 Plungers and 2 bushes for fuel pump,
- 2 Injection pipes for piston cooling,
- 2 Stand pipes for piston cooling,



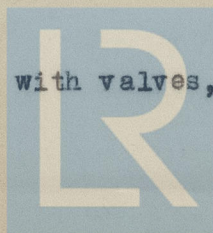
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- 4 Tension springs for governor,
- 2 Suction valve nests for scavenge air pump,
- 2 Delivery valve nests for scavenge air pump,
- 3 sets of packing material,
- 2 Complete sets of springs,
- 12 Copper tubes for oil coolers,
- 4 Lubricating studs for main cylinder with pipe unions, complete (1 cylinder),
- 20 metres steel piping 5/9 mm for fuel,
- 8 Iron cone unions for fuel,
- 7 Iron cone couplings for fuel,
- 24 metres rubber cord for cylinder liner rings,
- 5 boxes (each 200) ignition cartridges,
- 1 Spring for relief valve of main cylinder,
- 1 Spring for relief valve of lubricating oil pump,
- 1 Spare element for lubricating oil filter,
- 2 Fuel pump cams,
- 2 Fuel pump rollers.

for 2 Auxiliary Air Compressors.

- 1 Connecting rod big end bearing (2 halves)
- 1 Connecting rod small end bearing (2 halves),
- 1 Set of piston rings,
- 1 Valve cone for 1st stage,
- 1 " cage " " " with valves,
- 1 " cone " 2nd " ,
- 1 " cage " " " with valves,
- 1 " cone " 3rd " ,



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- 1 Valve cage for 3rd stage with valves,
- 2 Sets of packing material,
- 3 Piston rings for L.P.stage,
- 7 " " " I.P. " ,
- 6 " " " H.P. " ,
- 1 Filter element for lubricating oil.

for Emergency Compressor Set.

- 1 Connecting rod big end bearing (2 halves),
 - 1 Connecting rod small end bearing (2 halves),
 - 1 Set of piston rings,
 - 1 L.P. valve cone,
 - 1 H.P. valve cone,
 - 2 Rubber rings,
 - 2 Suction valve springs for L.P.stage,
 - 2 Delivery valve springs for L.P.stage,
 - 4 Valve springs for H.P.stage.
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for Centrifugal Jacket Cooling Pump.

1 impeller ready to fit.

for Centrifugal Piston Cooling Pumps.

1 impeller ready to fit.

for Motors and Starters for Cooling Water Pumps.

1 Rotor (jacket cooling water pumps) ready to fit to motor,

2 Sets contact fingers for starters for do.

1 Rotor (piston cooling water pumps) ready to fit,

2 Sets contact fingers for starters for do.

for Turbo-Blower Motors and Starters.

1 Set (24) brush holders for the motors,

2 Sets (48) carbon brushes for the motors,

2 Sets (16) contact pieces for the starters,

2 Sets (16) contact pieces for the starters, (different purpose)

1 Commutator grinding apparatus for the motors ready to fit.



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