·MODERN · MARINE · ENGINEERING · ·STEAM YACHTS & LAUNCHES - AND MACHINERY. ·ILLUSTRATED·

Pimpson Strickland+Co. Ltd.

TELEGRAMS ENGINEERS, DARTMOUTH. NAT.TELEPHONE No. 2 DARTMOUTH

SOUTH DEVON,

ENGLAND.



STEAM YACHTS,

STEAM LAUNCHES,

AND

AUXILIARY MACHINERY.

SPEED NOTES.

To ascertain the mean speed of any boat for ordinary purposes, two runs should be taken over a measured Mile, one with, and one against the tide, the times taken with a stop watch, then the mean of these two runs will give the true speed.

For instance:

1st run over mile with tide takes
$${}^{\text{Min. Sec.}}_{2} = {}^{\text{Knots.}}_{24}$$
2nd ,, ,, against ,, ,, ${}^{2}_{45} = {}^{21.818}_{21.909}$
Speed, Mean ... ${}^{2}_{22.909}$ Knots.

Admiralty practice is ordinarily to take a mean of means of six runs.

In ordinary work, corresponding times and speeds are taken from a standard published Knot Table, ranging from 1 min. 30 secs. = 40 Knots, to 7 min. 29 secs. = 8.018 Knots.

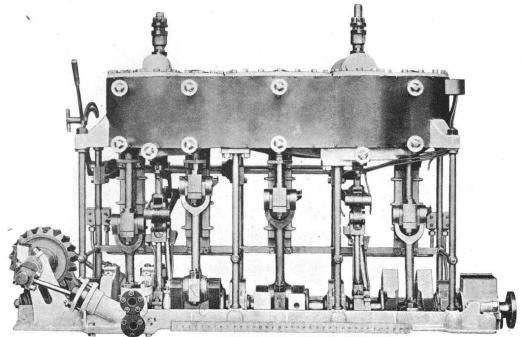
NOTES-GENERAL.

In preparing Catalogue No. 6, Simpson, Strickland & Co., Ltd., have, for the convenience of clients, endeavoured to represent some of the different types of Machinery, Steam Yachts, and Steam Launches built by them, on an improved system for simpler reference. It contains—Firstly, photographs and drawings of Machinery with their appropriate descriptions. Secondly, photographs of Steam Yachts and Auxiliaries, with a list of names; and Thirdly, a specially selected series of photos and designs, the latter numbered consecutively, followed by a corresponding numbered list which gives a short description of each type.

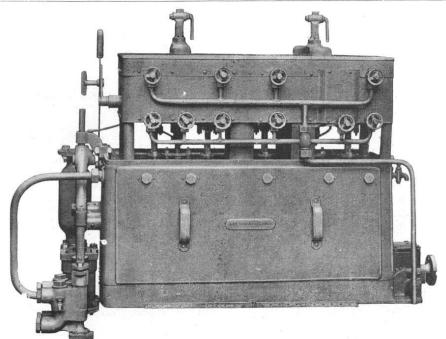
While modifications in design, speed, and size are possible in every case, it is impracticable within our limits to include them; but we shall be happy to correspond and to give full effect to our clients' requirements in preparing new designs. Beyond those now illustrated, we have hundreds in our drawing office, and we will forward photo prints when requested. The possible combinations of hull designs, engines, and boilers, are so various as to preclude our issuing a price list in printed form; but we will prepare estimates to meet stated requirements, and forward these with print, when required, with the least possible delay.

Our boats and machinery are running satisfactorily in all parts of the world, and we claim to be *Second to None* in all cases where material, workmanship, and design are required to be absolutely first class.

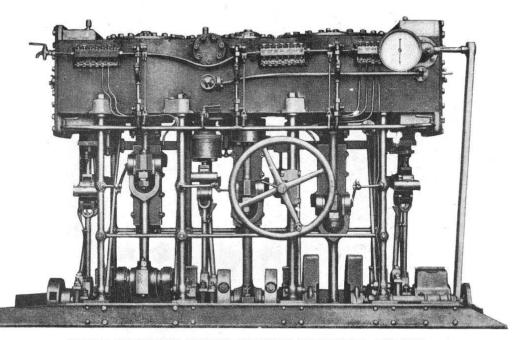
TYPES OF MACHINERY.



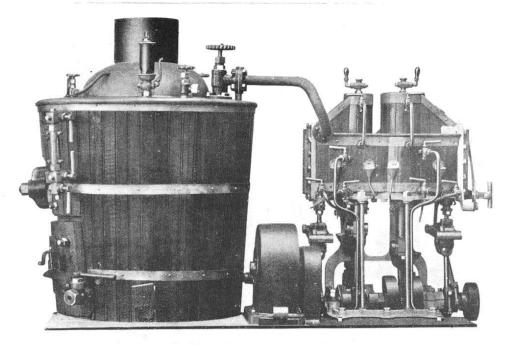
350 I.H.P. CROSS PATENT FOUR-CRANK QUADRUPLE.



CLOSED IN TYPE FOUR-CRANK QUADRUPLE (CROSS' PATENT).

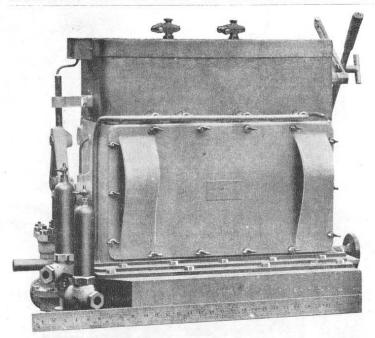


TRIPLE EXPANSION ENGINE, TORPEDO BOAT TYPE, 350 I.H.P.



KINGDON QUADRUPLE ENGINE AND KINGDON PATENT BOILER.

TWO CYLINDER
COMPOUND
ENGINES.



CLOSED IN COMPOUND ENGINES.

NOTES.

MACHINERY.

The following is a brief description of a few of the more important Types of Engines and Boilers built by us.

Two-Crank Compound.

This is the simplest and cheapest engine we build. It is very largely used, more especially by the Admiralty and for commercial work. It is supposed to be simpler to understand and handle than the Triple engines next described, but on the other hand it is somewhat extravagant in consumption, which necessitates a large boiler and consequently increased weight, and it is not suitable for high speeds owing to the impossibility of accurately balancing a two-crank engine. The air and feed pumps are driven direct off the crossheads and are of our standard pattern which will be found to give little or no trouble in working.

We have recently brought out a new design of the enclosed type (see photo). In this case the whole engine, excepting pumps, is enclosed in an oil-tight casing of aluminium alloy. The lubrication is of the splash kind and requires no attention beyond seeing a sufficient amount of oil is put into the casing once a day. The pumps are outside the casing and are driven at a slow speed by means of suitable reducing gear. In addition to reducing the amount of attention required, these engines are much quieter in running owing to being cased

in, they use much less oil, and the boat is kept far cleaner, as no oil can escape into the bilges.

The weight and price is the same as the open type. The boilers most suitable for this class of machinery are the Kingdon or the Direct Tube for the smaller, or Return Tube for the larger sizes, but Water Tube Boilers may equally well be used if saving of weight be an object.

Three-Crank Triple Engine

This is in general design so well known that we need not describe it, and is illustrated in photo (page 5). We have paid great attention to the design in detail of these engines, and they will be found better suited to high-class yacht work than any other in the market. One great feature is the size of the bearing surfaces, these having been made as large as practically could be got in. This enables the engine to be run at high speeds, without any undue wear or tear, and avoids all the trouble from heating of the bearings, and enables it to be run for long periods without repair. It also minimises the noise and vibration as well as the attention required in adjustments. The pumps are driven from the L.P. crosshead by rocking levers, and are fitted with metal and vulcanised fibre valves. The H.P. cylinder is fitted with a piston valve, except in the smaller sizes, and the I.P. and L.P. with slide valves,

all of which are easily accessible for examination. In sizes with 18-inch L.P. cylinder and over, the slide valves are of the balanced type. The balancing of these engines has received our most careful attention, and they now will run at very high speeds without undue vibration. Careful experiments have shown that they consume about 25% less steam than the two-crank compounds, they therefore require a smaller boiler and bunker capacity, and owing to the balancing being more perfect, and to the lightness of the moving parts, the wear and tear is very much reduced.

These engines are admirably adapted for Water Tube Boilers working at 250 lbs., but shell boilers of any type may be equally well used.

Kingdon Quadruple Expansion Two-Crank Engine.

This consists of two pairs of Tandem Cylinders arranged on two cranks, the high pressure and first intermediate in the forward crank, and the second intermediate and low pressure on the after one. The cylinders on each crank have the steam distributed to them through a single slide valve, driven by the ordinary link motion. The cylinders are so arranged that there is only one piston rod gland to each pair of cylinders, the piston rod passing through a plain bush between the cylinders, and having grooves cut in it to prevent leakage of steam. This plan has been found to give no trouble, and to make a perfectly tight joint when the engine is running. It will thus be seen that our Quadruple type has no

more moving or working parts to attend to than the ordinary Compound type, and therefore is quite equally simple to work, while it retains the economy of the Quadruple type. Another advantage is that no piston rod gland is exposed to the full boiler pressure. This type of engine has been very successful in all the sizes in which it is manufactured, in fact it is not too much to say that we have built more Quadruple engines than all the other builders in the world put together, though of course ours are relatively of very small size.

The Feed and Air Pumps.

These form an important feature of the Kingdon machinery. The feed and air pumps are fitted with metal valves, are of the most solid and durable character, and are not liable to get out of order. Both pumps are driven direct from the crosshead of the engine, so that all levers and weighshafts are done away with (except in machinery for the larger launches, or where an independent pumping engine is found desirable), and will work perfectly at 400 or 800 revolutions a minute. There is consequently no necessity to employ gearing or other means to reduce the speed of the pump, as is often done in torpedo and quick running launches. They are fixed in the framing of the engine, so that there are no pipes projecting in the boat.

Large numbers of these pumps are now running in all parts of the world, and their great superiority over all others, for quick running engines using condensed water, has been

amply demonstrated by nearly 15 years' practical use. The pattern of standard feed pumps has recently been modified, so as to allow both the valves to be taken out and replaced without even having to stop the engine. Engines of this type are very economical in working, and take up but little space fore and aft. They are not so well adapted for high speed work as Triples, owing to the weight of moving parts, and to the impossibility of perfectly balancing a two-crank engine. These engines are admirably adapted for Water Tube Boilers working at 250 lbs., but shell boilers of any type may be equally used.

Cross' Patent Quadruple Expansion Four-Crank Engine.

This engine was originally designed for boats of very high speed, such as racing launches, where very light weight and perfect balance are essential; and on this point it may be noticed that the first of these engines was built in 1900, and fitted into an ordinary 30 feet yacht's launch. This boat obtained a true mean speed of 19 knots, which has never been equalled or even approached by any boat of similar dimensions.

Owing to very light moving parts and perfect balance, these engines may be run at very high speeds with perfect safety, and with extraordinary little wear and tear. For example an engine of this type of 350 I.H.P. was run at from 700 to 900 revolutions for 3 seasons, and at the end of that time required no repairs or adjustments of any kind beyond a new set of piston rings.

In this design the H.P. and 1st I.P. cylinders have their cranks opposite the 2nd I.P. and L.P. likewise have cranks opposite; but this pair of cranks are at right angles to the other pair. Each pair of cylinders are provided with one set of ordinary link gear; the valve spindle carries a yoke at its upper end, and to each end of this yoke, which is inside the steam chest, is suspended an ordinary piston valve. By a suitable design these valves supply steam correctly to the two cylinders. The exhaust from the first pair of cylinders travels through a belt or pipe to the second set of valve gear, where the process is repeated.

A great simplification of parts results from this arrangement, there being only two sets of valve gear for the four cylinders, and further, the only gland exposed to the full steam pressure is that belonging to the H.P. piston rod.

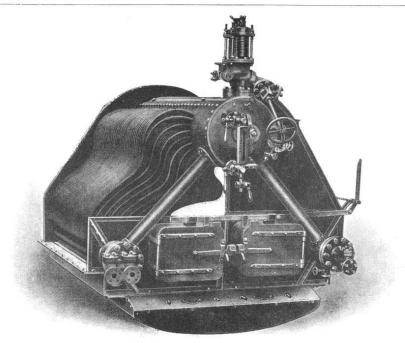
These engines are now completely enclosed, the three pumps, air, feed, and oil, being outside and driven at a slow speed by means of suitable reducing gear. The oil pump draws oil out of the casing, forces it through a suitable cooler and filter and then delivers it in jets at a considerable pressure on to all the working parts. This system has proved perfectly satisfactory, it requires no attention, and consumes a marvellously small amount of oil.

The standard types of this engine are designed for 350 lbs. boiler pressure, but if required they can be made for as low a pressure as 200 lbs., below which it is scarcely worth while to quadruple. For racing purposes machinery of this type may be built not to exceed 20 lbs. weight per I.H.P., this weight being taken with steam up, and includes everything excepting coal and reserve water. For ordinary cruising purposes, where no special attention is paid to lightness, the weight under similar conditions is about 30 lbs. per I.H.P.

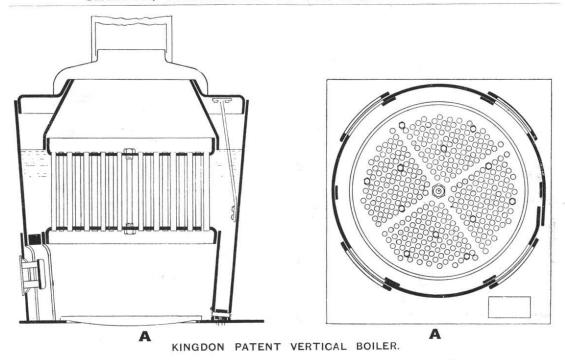
We have supplied considerable numbers of these engines to replace petrol engines which have proved quite unreliable. In every case the change has been perfectly satisfactory. One of our clients wrote to us from Australia—" Machinery gives no trouble, engine runs like a sewing machine." This referred to a 70 I.H.P. set supplied to replace a petrol engine.

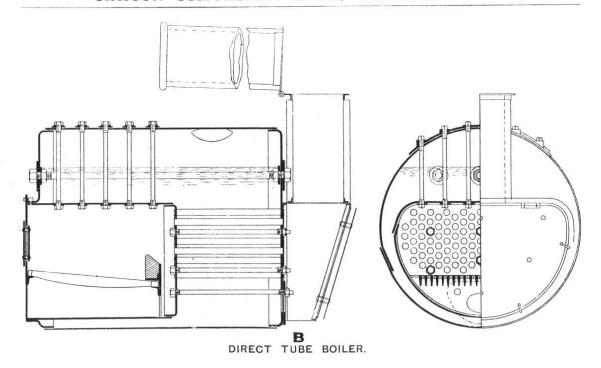
We have dealt somewhat fully on this engine owing to its being of a new type, and we may say that after exhaustive experiments extending over several years we have every confidence in recommending it as thoroughly satisfactory and reliable.

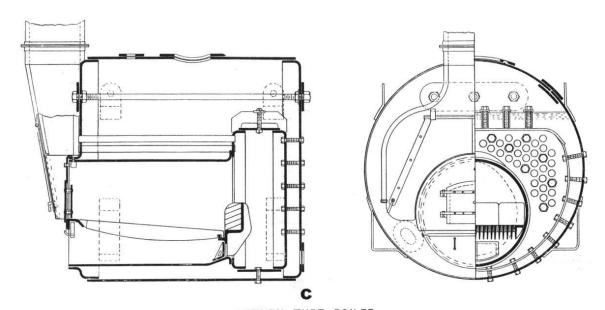
TYPES OF BOILERS.



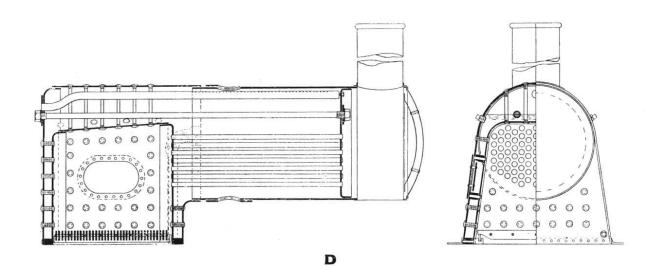
WATER TUBE BOILER (Large).



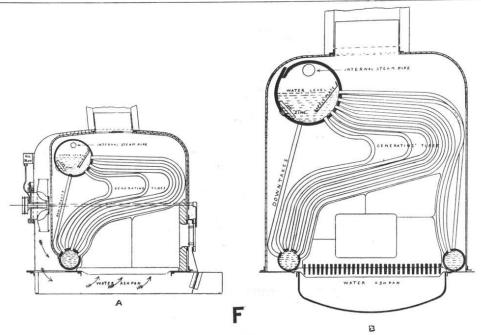




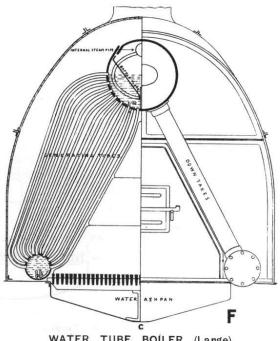
RETURN TUBE BOILER.



LOCOMOTIVE BOILER.



WATER TUBE BOILERS (Small).



WATER TUBE BOILER (Large)

NOTES.

BOILERS.

We build Boilers of many types to suit the circumstances of each case.

A type very largely used, more especially for small machinery up to about 80 I.H.P., is our Patent Kingdon Boiler, of which we have built a large number. This type as now made is illustrated on plate A, it stands low in the boat and takes up little room, steams freely, and owing to its large steam space is not liable to prime. For ordinary work it will be found to give perfectly satisfactory results, but it is not recommended for hard driving, nor for use with inferior qualities of coal.

The Direct Tube or Gunboat Boiler (plate B) is recommended for small powers where good coal cannot be easily procured.

For larger sizes the Return Tube or Scotch Boiler (plate C) is almost universally used (the illustration shows one of a small size with one furnace), but for sizes above 200 I.H.P. it is usual to fit two or more furnaces.

Another type of Boiler formerly very popular is the Marine Loco type (plate D) and which is still used in special cases; it is somewhat lighter per H.P. than any of the previous types, and owing to the large size of the fire-box is particularly suitable for burning wood.

Its place has however now been to a very large extent taken by the Water Tube Boiler, see plate F.

We believe we were one of the earliest to take up the manufacture of Water Tube Boilers of small size, and the types here illustrated are the result of many years' careful experimenting. Plate F, A is the type we usually employ for sizes up to about 50 H.P.; B is the same boiler slightly modified for powers from 50 up to 150 H.P., and C for all powers above 150 H.P. All these boilers are of the Thornycroft type, modified to suit our class of work, and are built by us under license from Messrs. Thornycroft.

Attention may be called to our Patent Fan Gear as shown in plate F, type A. In this arrangement the Fan revolves inside a false casing and blows directly down into the ashpan. By a suitable arrangement of levers and doors the fan draught must be shut off before the firedoor can be opened, this does away with the danger of the fireman being seriously burnt by the rush of flame coming out of the fire-door when opened without first cutting off the fan.

Water Tube Boilers can be worked with perfect safety at any practical pressure, and they will stand the hardest driving with impunity. A dangerous explosion is almost an impossibility, as in the event of a tube, or tubes, giving way suddenly, there is merely a cloud

of steam from the funnel top for a few seconds and then the engine stops, there is no noise, and in fact it is quite possible for such an accident to occur without the passengers being aware that anything was wrong. They are also extremely light in proportion to their H.P. On the other hand, owing to the small amount of water, they require more constant watching, they must have clean fresh water, and the tubes do not last so long as those in boilers of any of the previous types.

Spare Tubes and Expanders can always be supplied, and with these the job of retubing a boiler is not a very serious one.



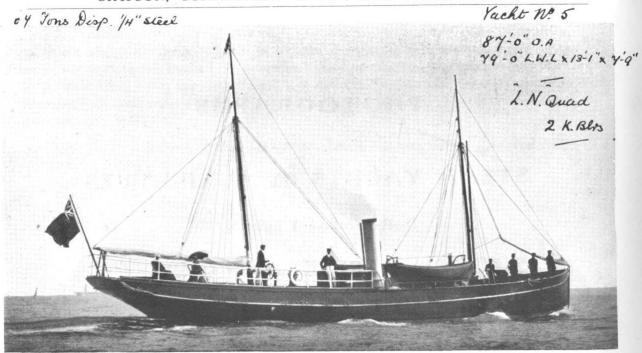
PHOTOGRAPHS

of some

STEAM YACHTS @ AUXILIARIES

Built and/or Engined by

SIMPSON, STRICKLAND & CO., Ltd.



S.Y. "NOMAD," 80' \times 13' \times 7' 4" /20. /.H.P.

Q.A. 17 \$ H.S. 375\$ C: N. 67.2 Diop 60 Tons Revs . 220 SIMPSON, STRICKLAND @ CO., Ltd., DARTMOUTH. €.110 Kry 10. 1132 SEANTLINGS KEEL 8 x 5 /2 E. 82-6"O.A X12-0" x TIMBERS MLO 2/2 x /2 A.E L. Quada R.T. B ORD 2 x 1/2" " SPACED 10" GUNWALES 10x2" RUBBERS 4×8/2 DECKS 3 x 13/4" B. STRINGER YX 21/2" BEAMS KEELSON 8x3" S.F5/12) 2"x2"

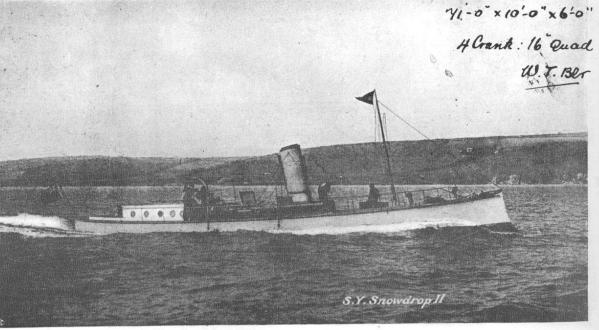
31

13/8" PINE 9.94 Knots 140 1.4.P.

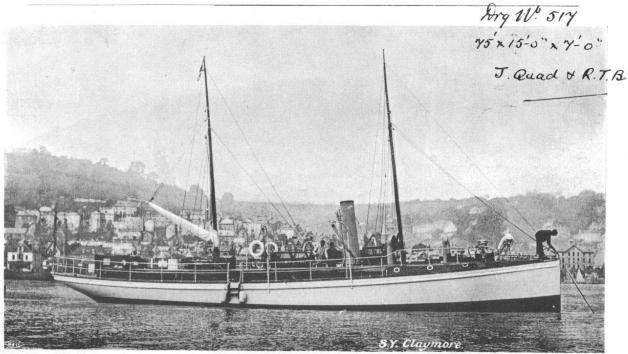
N:42.6

N.T = 9:04 SIMPSON, STRICKLAND @ CO., Ltd., DARTMOUTH.

Dr.9 Nº 1459



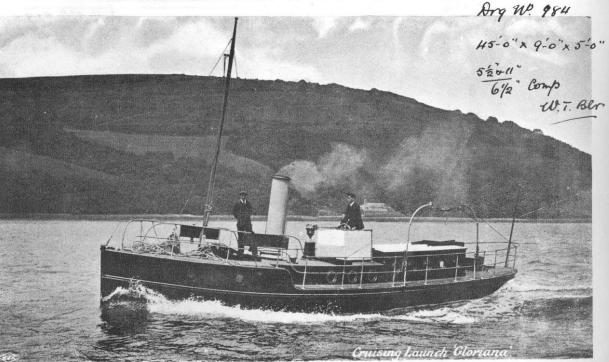
420 1.H.P 18 miles G.A. 200 350 W.P N.S. 937 \$

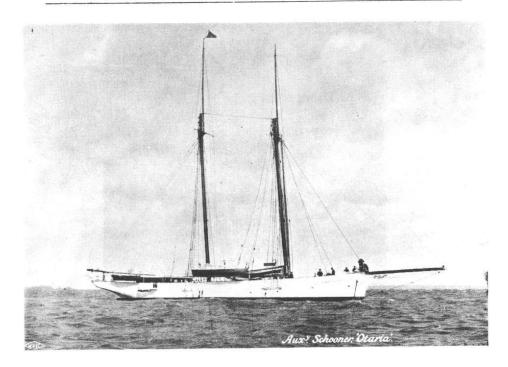


33

EX. VALDIVIA

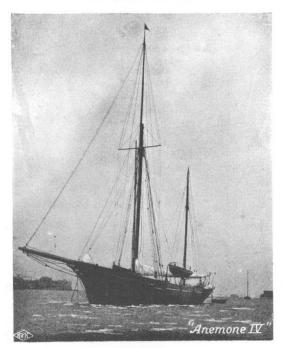
EX. WHITE BAIT.





F. Quaa W.T. Ber





120-0" O.A ... 90:6" h.W.L, H. Quad King & Blr

about 10: 4" draft.

B.D. Quad K. Ber.



LIST.

PAGE.	BOAT.	TONS. Y.M.	I.H.P.
30	S.Y. "NOMAD"	61	180
31	" "SIREN"	48	140
32	" "SNOWDROP II."	32	420
33	" "CLAYMORE"	69	90
34	" "GLORIANA"	14	50
35	AUXY. SCH. "OTARIA"	202	70
36	" " "GOIZEKO IZARRA"	164	70
37	" KETCH "ANEMONE IV."	167	70
38	" " "BOOMERANG"	22	20

OTHER PHOTOS AND DESIGNS.

C.N. 35.88 W.P. 350 Prop. D. 3.33 N.S. 4834 D.C .361

T.R. 90 P.S. 1050 P. 2.75 D. 18.02 T H.C . 205

65 900 SIMPSON, STRICKLAND & CO., Ltd., DARTMOUTH.

259 W. 1211 Hall Weigh 54-0"x10-6"x 6-0" 4 Crunk 16 quad W.T. Ber

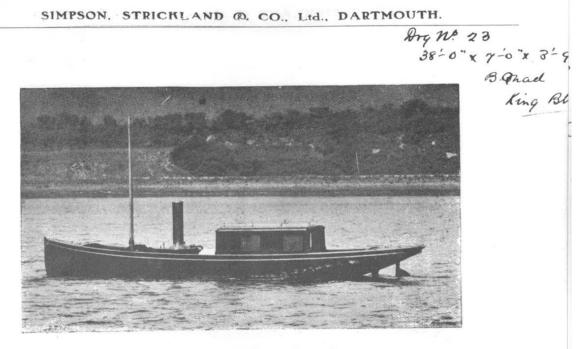
350 . T. H.P.

W.P = 150. C.A 8 d. N.C = 2 C.N = 10.95 C = 61.8 H.S 228 d. D.C = .5 SIMPSON, STRICKLAND @ CO., Ltd., DARTMOUTH.

Dry W. 1535 450" x 7-6 x 3-3" Screw in Junnel Light Draft Launch, 45ft. long.

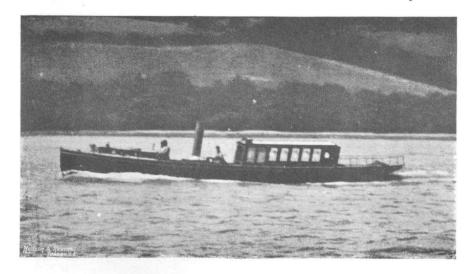
90 1. H. P. 12.04 Miles (Turbine Propeller)

1/8" Steel



38' x 7' Launch "Lorna Doone."

Like Dry W. 741



F. Duck

 $50' \times 7',$ Speed $12\frac{1}{2}$ Miles.

Like Dry Nº 215 [Republica]

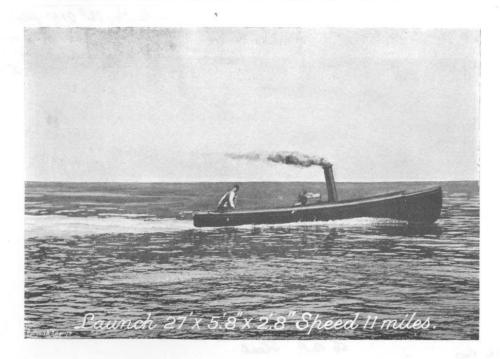


J. Quad R.T. Blr

Tug $60' \times 11'$ for Brazilian Government.

56 B.P. Steel

11.8 mices



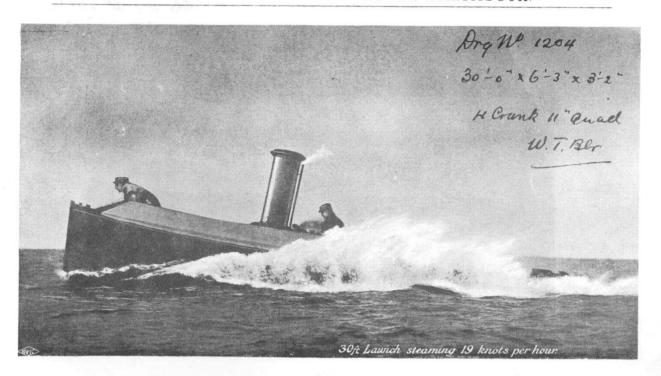
Like Dry NP. 1019

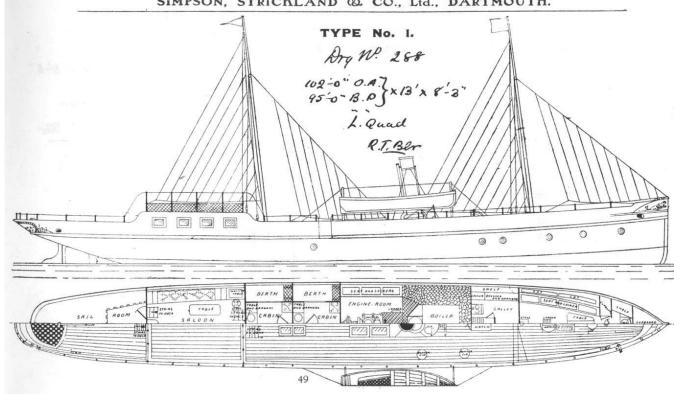
346

3/2 Comp

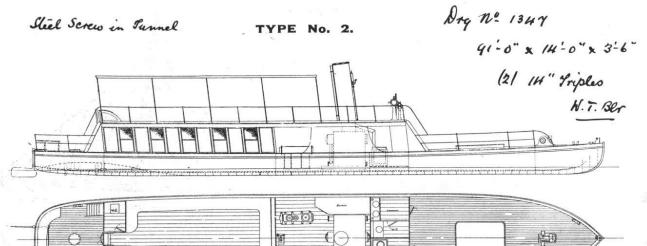
N.T. Blr



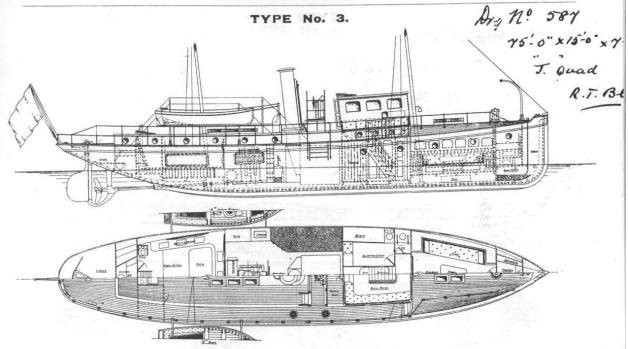


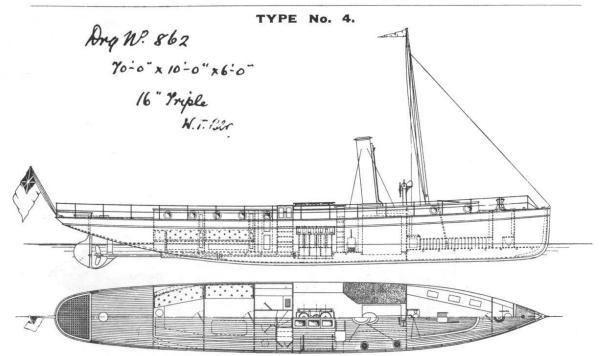


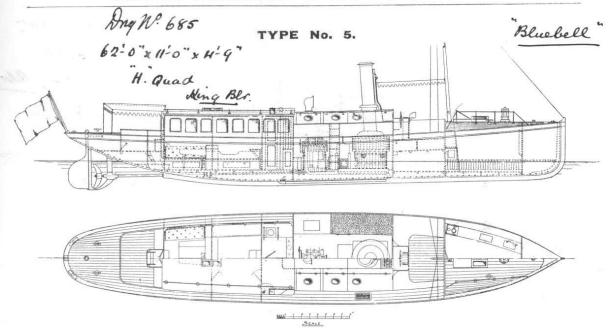
W.P = 2.1 Prop^T · 1-10/2 dia G.A. 19.6 & D = 28.7 1.H.P = 240 3-4" Pitch H.S. = 583 & C.N. = 44.59. V = 43.483 miles SIMPSON, STRICKLAND @ CO., Ltd., DARTMOUTH.

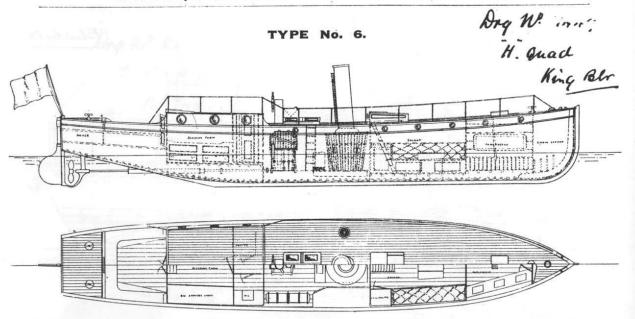


Dimensions ... $91' \times 14' \times 3' 6''$

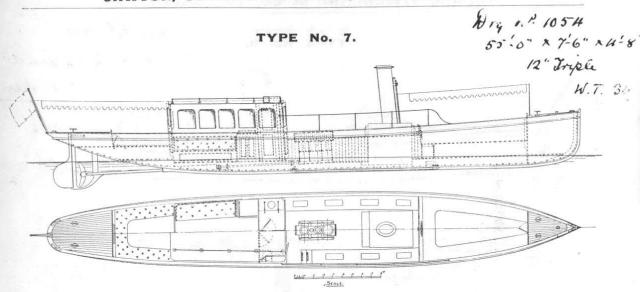


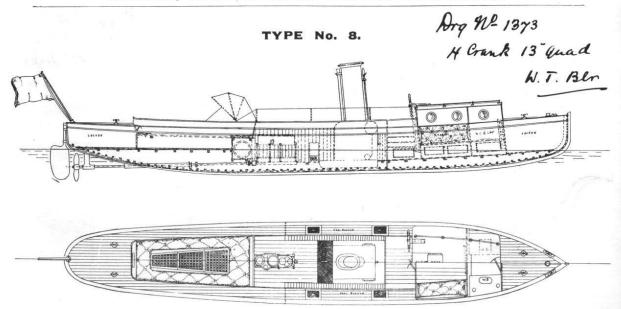






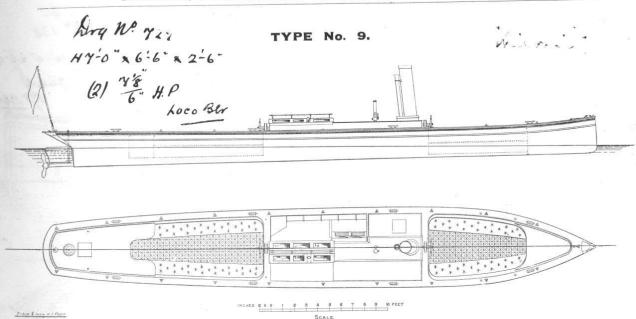
Dimensions ... $63' 6'' \times 11' 3'' \times 6'$

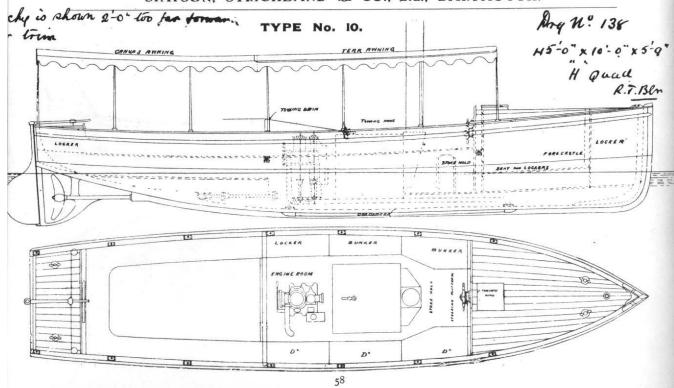


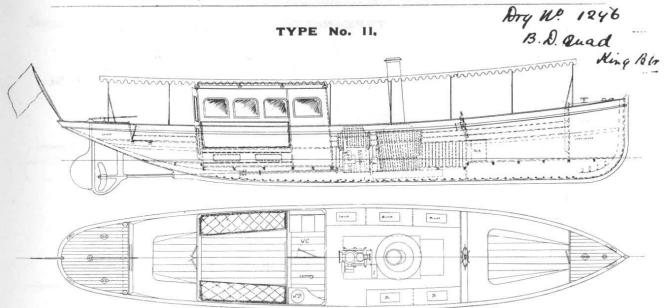


Dimensions

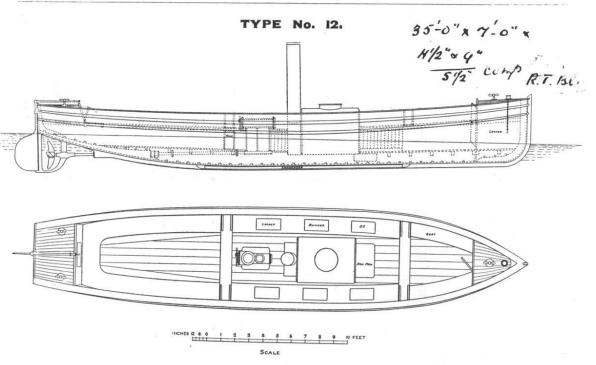
 $50' \times 8' \times 4'$



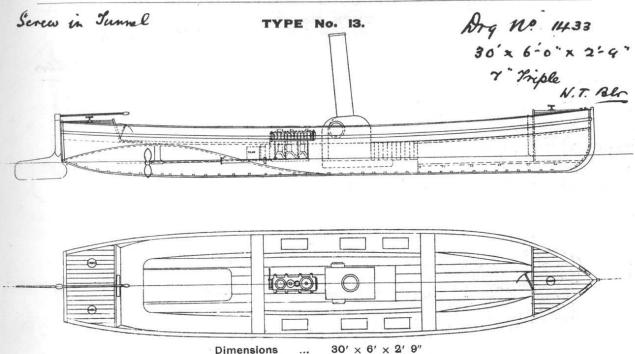


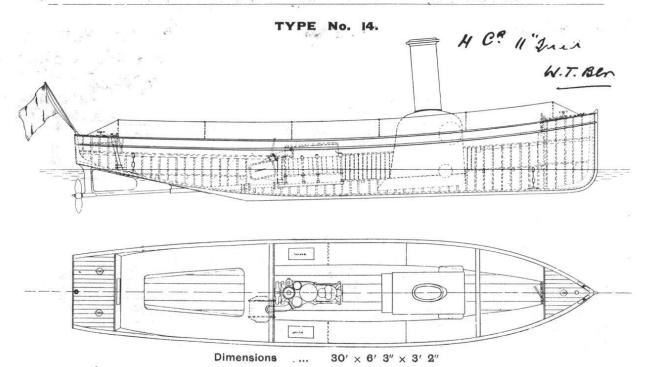


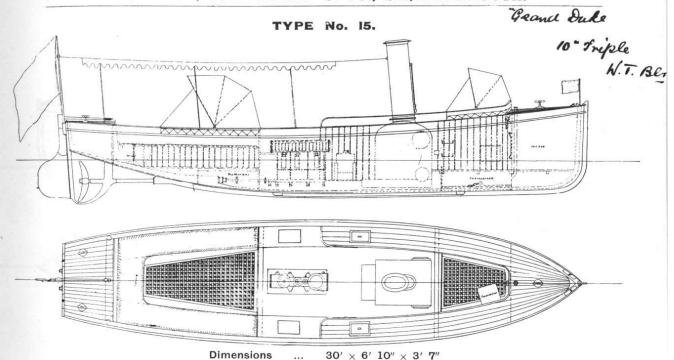
Dimensions ... $43' \times 8' \times 4'$ 2"



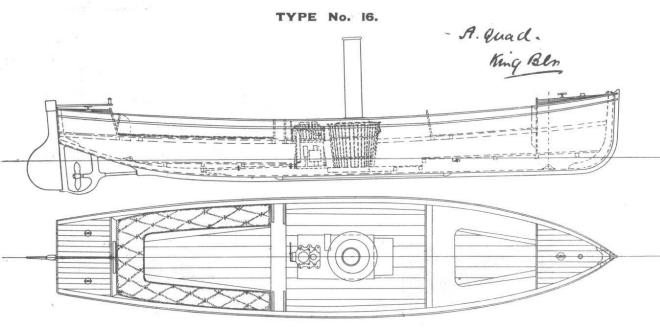
P.N. 4.85 R. = 736 W.P 260 V in miles 11.16 Prop. 1-6'dia D = 2 Tone
Vae = 23 1.4.P 26 C = 45
SIMPSON. STRICKLAND & CO., Ltd., DARTMOUTH.





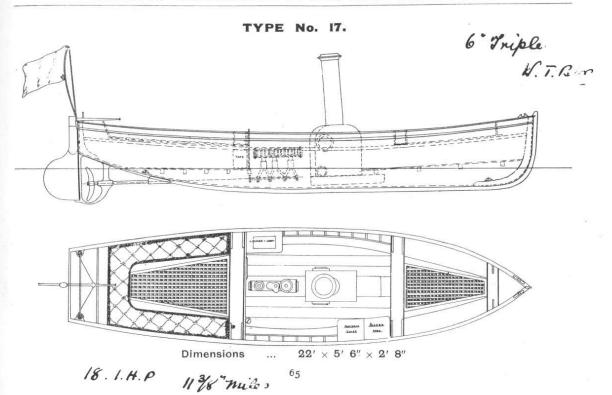


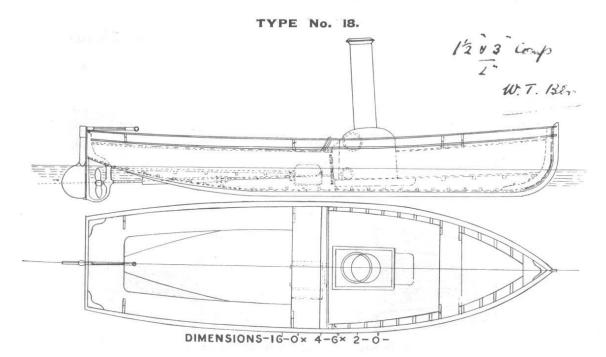
63



Dimensions

... 27' × 5' 8" × 2' 8"





DESCRIPTIVE LIST OF DESIGNS.

- No. 1.—60 Ton (about) Steam Yacht. Powerful and comfortable sea boat; Four Cabins, Saloon, Pantry, Galley, Forecastle. Shown as engined with Kingdon Quadruple Machinery and Return Tube Boiler, for 10½ knots (12 miles).
- No. 2.—91 ft. Shallow Draft Twin-Screw Passenger Launch, as built for Colonial use. Machinery Triple, and Water Tube Boiler (S.S. & Co.'s Patent), for 12\frac{3}{4} knots (14\frac{1}{2} miles).
- No. 3.—50 Ton Steam Yacht, very beamy. A wonderful sea boat; accommodation all forward, Deck House, Electric Light. Kingdon Quadruple Engines and Return Tube Boiler, for 9 knots (104 miles).
- No. 4.—30 Ton Steam Yacht, Snug Cruiser. Four Berths, two in Saloon. A fast boat. Triple Engines and Water Tube Boiler, for 13½ knots (15½ miles).
- No. 5.—63 ft. 6 in. Cruising Launch. Two good Berths in Saloon, large Lavatory and Pantry. Kingdon Quadruple Engines and Boiler, for 9½ knots (10½ miles).
- No. 6.—62 ft. Smart and Powerful Steam Yacht, has Saloon, Sleeping Cabin with two Berths, and two large Wells. A particularly nice boat, and excellent in dirty weather. Kingdon Quadruple Engines and Boiler, for 9\frac{1}{4} knots (10\frac{1}{2} miles).

- No. 7.—55 ft. Sea or River Cruising Launch, with Cabin; a favourite type. Triple Engines and Water Tube Boiler, for 14 knots (16 miles).
- No. 8.—50 ft. High-speed Sea-going Launch. A fine boat where speed is the primary consideration. Cross' Patent Four-Crank Engine and Water Tube Boiler, for 16 knots (18½ miles).
- No. 9.—47 ft. Non-Condensing Umpiring Launch, as used for coaching. Speed as required.
- No. 10.—45 ft. Tug for Colonial or other use, has proved a great success. Kingdon Quadruple Engines and Return Tube Boiler, for 9\frac{1}{4} knots (ro\frac{1}{2} miles). Excellent sea boat.
- No. 11.—43 ft. Powerful and Roomy Sea or River Launch. A very economical boat. Kingdon Machinery, for 7³/₄ knots (9 miles).
- No. 12.—35 ft. Commercial Launch. A good boat with small Machinery, for $7\frac{3}{4}$ knots (9 miles).
- No. 13.—30 ft. Shallow Draft "Screw-in-tunnel" Launch, for Colonial work. A good fast boat. Triple Engines and Water Tube Boiler, for $9\frac{3}{4}$ knots (11\frac{1}{4} miles).
- No. 14.—30 ft. Yacht's Racing Launch. A good, comfortable sea boat with exceptional speed. Engined with Cross' Patent Four-Crank Quadruple Machinery and Water Tube Boiler, for a mean speed of 19 knots (21\frac{3}{4} miles). For photo of boat of this type, see page 48.

SIMPSON, STRICKLAND @ CO., Ltd., DARTMOUTH.

- No. 15.—30 ft. Yacht's Launch. A powerful boat as used on Royal yachts. Can be fitted with air cases. Triple Engines and Water Tube Boiler, for 13½ knots (15½ miles).
- No. 16.—27 ft. Standard Type Yacht's Launch. Kingdon Machinery, for 8\frac{1}{4} knots (9\frac{1}{2} miles).
- No. 17.—22 ft. Yacht's Launch. Extra fast and a fine sea boat. Triple Engines and Water Tube Boiler, for $9\frac{1}{2}$ knots (11 miles).
- No. 18.—16 ft. Steam Dinghy. A useful and reliable boat, light and powerful for her size. Closed-in type, C.S.C. Engine (requiring little attention), and Water Tube Boiler, for 5½ knots (6 miles).

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SIMPSON, STRICKLAND & CO.'S Reversing Gear

FOR INTERNAL COMBUSTION ENGINES (INDER'S).

DURABILITY.
SIMPLICITY.
COMPACTNESS.

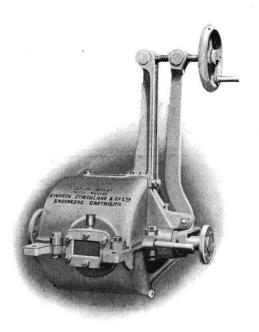
ONLY ONE Motion required for Ahead, Astern, or Neutral positions.

NO GEAR WHEELS or dogs to engage or break.

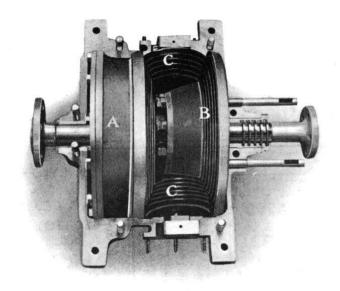
DIRECT DRIVE for Ahead Gear, and so perfect silence

NO PARTS RUNNING in Neutral position.
GRADUAL ENGAGEMENT for Astern gear.
CANNOT BE DAMAGED by careless handling.

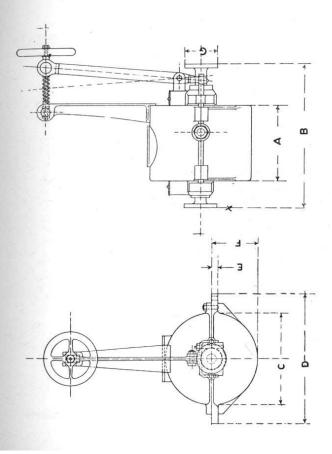
Innufactured solely by SIMPSON, STRICKLAND & CO., Limited, Engineers, Yacht and Launch Builders, DARTMOUTH, Eng.



Outside View of a set of Gear for 30 h.p.



- A —Female cone attached to engine shaft, and carrying grooved disc.
- B.—Grooved disc attached to propeller shaft and carrying male cone engaging with A for Ahead gear.
- C.—Grooved pinions, which engage with the grooved discs on A and B for Astern gear.



	Price.			Din	Dimensions.	ns.			Weight Approx.
	F	٨	а	O	۵	ш	Ŀ	O	Cwts.
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02	2 5	$10_{\overline{16}}^{5}$	1913	E.	19	П	$6\frac{13}{16}$	45.	1
30	35	124	$23\frac{7}{16}$	$14\frac{7}{8}$	22	t- 00	$7\frac{7}{16}$	43	*
40	45	$13\frac{7}{8}$	264	193		23	844	50	85 84

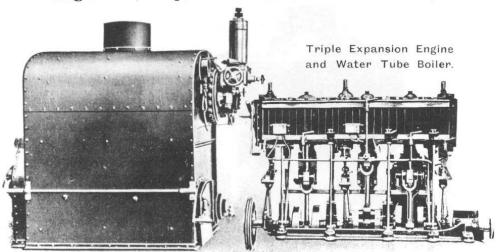
* Note, -- For the 10 h.p. size a lever is fitted instead of a worm and wheel.

Larger sizes on application.

Prices include packing and delivery f.o.r. any station in England.

SIMPSON, STRICKLAND & CO., LTD.,

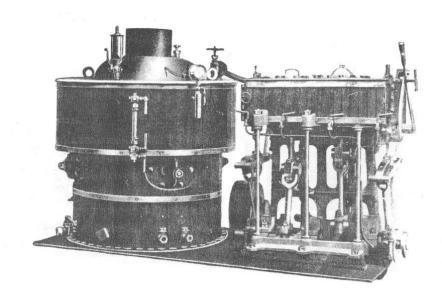
Engineers, Ship, Yacht and Launch Builders,



DARTMOUTH, ENGLAND.

Telephone: No. 2 DARTMOUTH.

Telegrams: "ENGINEERS, DARTMOUTH."



COMPOUND ENGINE & KINGDON BOILER

SIMPSON, STRICKLAND & CO., Ltd., DARTMOUTH, ENGLAND.

PRICES OF LAUNCH MACHINERY.

				I	PRICE.			150	EXTRAS.					
Type OF Machinery.	I.H.P.	Engine with Air and Feed Pump.	Conden- ser and Pipes as specified.	Stern Gear as specified.	Kingdon Boiler with Mount'gs and Fan.	Complete Set with Engine, Boiler, Condenser, Stern Gear, Bumps, &c.	Code Word per Complete Set.	Set— Non-con-	Shoe and Bracket for Cut- away Boat	Air Pressure Pumpfor Liquid Fuel.	For Donkey Pump.			
TWO CRANK AB KINGDON B.O. QUADRUPLE. D.	6 8 11 17 23 30 40 50 60 50 60 2 80 7 10 14 20 27 33 50 70	£ 66 77 85 97 117 132 145 167 180 206 75 103 124 140 170 200 240 320	£ 14 15 18 20 22 30 37 47 56 78 13 17 22 27 31 37 50 75	£ 10 11 15 19 24 27 29 36 43 57 12 15 15 18 23 30 38 50 75	£ 55 62 72 94 107 141 174 205 226 279 60 75 95 120 145 170 210 275	£ 145 165 190 230 270 330 385 455 505 620 160 210 259 310 376 445 550 745	Sonsacar Sonsaco Sonsaque Sonship Sonsonete Sonst Sonstige Sontico Sontico Sontico Soplar Sopletes Soplolas Sopolis Soporati Soporasto Soporati Soporeu	£ 141 160 184 223 262 320 372 437 485 596 153 202 250 299 363 430 530 721	\$\cdot \text{s.} \\ 3 \ 0 \\ 3 \ 5 \\ 4 \ 0 \\ 5 \ 15 \\ 6 \ 10 \\ 7 \ 10 \\ 12 \ 15 \\ 15 \ 0 \\ 3 \ 0 \\ 4 \ 0 \\ 5 \ 0 \\ 7 \ 0 \\ 9 \ 0 \\ 12 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 0 \\ 16 \ 16	\$\frac{\x}{5}\$ 10 \$\frac{5}{10}\$ 5 10 \$\frac{5}{10}\$ 6 10 \$\frac{6}{10}\$ 7 10 \$\frac{7}{10}\$ 7 10 \$\frac{10}{7}\$ 10 \$\frac{10}{5}\$ 0 \$\frac{6}{6}\$ 0 \$\frac{6}{0}\$ 0 \$\frac{8}{0}\$ 0 \$\frac{8}{0}\$ 0 \$\frac{8}{0}\$ 0	£ 10 10 10 10 15 15 15 15 10 10 10 15 15 15 15 15 15 15 15 15 15 15 15 15			
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SUBJECT TO ALTERATION WITHOUT NOTICE.

loky has since been made of these particulars including water Tube Bollers SIMPSON, STRICKLAND & CO., Ltd., DARTMOUTH, ENGLAND.

See Calculation Book handed down from S. D. PARTICULARS OF 100 10 M.P. ETC. of H. Surface of Boilers

Т		ÉNO	GINE.			P	ROPELLER, S	SHAFTING, 8	кс.	
Type OF Machinery,	I.H.P. Diam.	Cylinders.	Diam. L.P.	Stroke.	Approx. Weight.	Diam. of Propeller.	Length of Shafting from Face of En- gine Coupling to Front of Propeller.	Length of Stern Tube between Flanges.	Approx. Weight.	
WP. 150 TWO A.A. B. CRANKS.O COMPOUNITE	11 5503 K 11 5503 K 11 4503 K 23 444 K 30 400 4½-40 34 55-4	800 500 500 450 425 400 345	Ins. 4 5 6 6 7 8 9 10 11 12 14	Ins. 2½ 3 3½ 4¼ 5 5 5½ 6 6½ 7 8½	Cwts. 11/2 21/4 3 33/3/4 51/4 61/2 9 10 111/2 171/2	Ft. Ins. 1 4 1 5 1 5½ 1 9 2 0 2 6 2 9 2 11 3 1 3 3	Ft. 8 8 8 8 9 9 10 10½ 11 12	Ft. Ins. 2 6 2 6 2 9 3 0 3 3 3 6 3 9 4 0 4 3	Cwts. 1 14-504 1 1 1 2 1 2 1 2 2 2 3 3 3	9
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H.P. 250 THREE CRANK TRIPLE. W.P. 175	H.P. /3 18 600 2½ /9 26 750 3 2534 700 3½ 3548 650 3½ 4562 650 4½ 5576 550 4½ 6590 5505½	M.P. 4 4 ³ / ₄ 5 ⁴ / ₄ 6 6 ³ / ₄ 7 ⁵ / ₂ 8	L.P. 6. 7 8 9 10 11 12	3 3½ 4 4½ 5 5½ 6	21.5 30.4 5.4 6.4 9.4 11 13	1 7 1 9 1 10 2 0 2 6 2 7 2 9	8 9 9 10 11 12 13	2 6 2 9 3 0 3 3 3 6 3 9 4 0	$\begin{array}{c} 1 \\ 1\frac{1}{4} \\ 1\frac{1}{2} \\ 2 \\ 2\frac{1}{2} \\ 3 \\ 3\frac{1}{2} \end{array}$	KIN 2-13 3 3 4 5 5 4 5

94A. A.B. B.O. O.

SIMPSON, STRICKLAND & CO., Ltd., DARTMOUTH, ENGLAND.

LAUNCH MACHINERY.

Heating Surface Area Approx. Weight of pling Cocks Tank and Condenser. Total Weight of Machinery Space Boiler Space Surface Area Approx. Weight of Space Surface Area Approx. Weight in Steam up. I.H.F.	0° 11°T 12°T 14°T	4 1 4 5	3 6 4 1	3 3 4 0	199·0 250·0	5·9 8·0	21 27 35.	5	₩ d9, ₩ 482	11 6 12 9	76 90
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	EQUAL TO	Diam.	Height.	-			Weight in	Tank and	Machinery with	Engine and Boiler	I.H.P

OUTLINE SPECIFICATION OF COMPOUND ENGINES.

Cylinders, cylinder covers, slide valves, valve chest covers, bedplate, eccentric sheaves, and coupling are of best quality cast iron.

Piston rods, slipper guides, valve spindles, eccentric rods, connecting rods, links, weigh shaft, drag links, reversing lever and arms, columns and crank shaft are forged from best Siemen's mild steel and machined bright all over.

Main bearings, crank pin, little end brasses, eccentric straps and link blocks are of our special bearing metal.

The cylinders are carried on cast iron back frame and steel front columns, and have slide valves placed outside the cylinders so as to be easily accessible, and driven with link motion reversing gear of the slot link type.

Arrangement is generally similar to that of the engines built for H.M. Navy.

Bearing surfaces are of ample size to allow of engines being run at high speeds without heating or undue wear and tear.

The engines are provided with drain cocks and pipes to cylinders and valve chests.

Cylinders are lagged with teak and brass bands.

Vacuum gauge and necessary lubricators to all parts are provided.

The feed and air pumps are direct driven and suitably designed and constructed for their duty.

The condenser is of the outside type with solid drawn copper pipe and gunmetal connections for passing through the skin of the boat.

The pipes are supplied in straight lengths with loose flanges and consist of main steam, exhaust, air pump suction, air pump discharge, feed pump suction, feed pump delivery, hand or donkey feed pump suction, hand or donkey feed pump delivery, and blow down pipe and cock.

The stern gear consists of gunmetal propeller, propeller shaft, and stern tube, arranged for boat with solid deadwood.

Intermediate shaft of steel.

BOILER.—The boiler is of the "Kingdon" vertical type, lagged with teak and brass bands, with brass shrouding on top, and with painted iron funnel.

The shell, furnace, bedplate, and tube plates are of best Siemen's mild steel, with fire tubes of solid drawn steel. It is mounted complete with water gauge, main steam valve, spring safety valve, blow down cock, two non-return valves, pressure gauge, whistle, and blast cock and pipe.

It is built throughout for a working pressure of 150 lbs. per square inch, and tested by cold water to 300 lbs. pressure.

OUTLINE SPECIFICATION FOR KINGDON'S PATENT QUADRUPLE ENGINES.

Cylinders, cylinder covers, eccentric sheaves and coupling, slide valves, valve covers, bedplate and frame are of best quality cast iron.

Piston rods, valve spindles, eccentric rods, links, weigh shaft, drag links, reversing lever and arms, connecting

rods, column and crank shaft are forged from best Siemen's mild steel and machined bright all over.

Main bearings, crank pin and little end brasses, eccentric straps and link blocks are of our special bearing metal.

In the two smaller sizes the bedplate and frame are of gunmetal.

The cylinders are carried at the back on cast iron frame, and at the front on steel columns. Each pair of cylinders are placed tandem, with the steam to the two cylinders controlled by one valve.

The slide valves are placed outside the cylinders so as to be easily accessible, and driven with link motion

reversing gear of the slot link type.

Bearing surfaces are of ample size, so as to allow the engines to be run at a high speed without heating, or undue wear and tear.

Cylinders are lagged with teak and brass bands.

The feed and air pumps are direct driven, and suitably designed and constructed for their duty

Condenser is of the outside type with solid drawn copper pipe, and gunmetal connections for passing through skin of the boat.

The pipes are supplied in straight lengths with loose flanges, and consist of main steam, exhaust, air pump suction, air pump discharge, feed pump suction, feed pump delivery, hand or donkey feed pump suction, hand or donkey feed pump delivery, and blow down pipe and cock.

The stern gear consists of gunmetal propeller, propeller shaft, and stern tube, arranged for boat with solid

deadwood.

Intermediate shaft of steel.

BOILER.—The boiler is of the "Kingdon" vertical type, lagged with teak and brass bands, with brass shrouding on top, and with painted iron funnel.

The shell, furnace, bedplate, and tube plates are of best Siemen's mild steel, with fire tubes of solid drawn steel. It is mounted complete with water gauge, main steam valve, spring safety valve, blow down cock two non-return valves, pressure gauge, whistle, and blast cock and pipe.

It is built throughout for a working pressure of 175 lbs. per square inch, and tested by cold water to 350 lbs

pressure.

SIMPSON, STRICKLAND & CO., Ltd., DARTMOUTH, ENGLAND.

OUTLINE SPECIFICATION FOR TRIPLE EXPANSION ENGINES.

Cylinders, cylinder covers, slide valves, valve chest covers, and bedplate are of best cast iron.

Piston rods, valve spindles, eccentric rods, links, weigh shaft, drag links, reversing lever and arms, connecting rods, columns, and crank shaft are of best quality Siemen's mild steel and machined bright all over.

Main bearings, crank pin and little end brasses, eccentric straps and link blocks are of our special bearing meta-

The cylinders are carried on steel columns, and are provided with piston valve to the high pressure cylinder and slide valves to the intermediate and low pressure cylinders.

The reversing gear is link motion, of the slot link type.

Bearing surfaces are of ample size to allow the engines to be run at a high speed without heating or undue wear and tear.

The engines are provided with drain cocks and pipes to cylinders and valve chests.

Cylinders are lagged with teak and brass bands, with brass covers to cylinders.

Vacuum gauge and necessary lubricators to all parts are provided.

All bright work to be polished and other work painted a suitable colour.

Feed and air pumps in the smaller size engines are geared down by worm and worm wheel off end of shaft. In the larger engines they are driven by rocking levers from the crossheads.

The condenser is of the outside type with solid drawn pipe and gunmetal connections for passing through skin of the boat.

The pipes are supplied in straight lengths with loose flanges, and consist of main steam, exhaust, air pump suction, air pump discharge, feed pump suction, feed pump delivery, hand or donkey feed pump suction, hand or donkey feed pump delivery, and blow down pipe and cock.

The stern gear consists of gunmetal propeller, propeller shaft, and stern tube, arranged for boat with solid deadwood. Intermediate shaft of steel.

BOILER.—The boiler is of the improved water-tube type with iron casing neatly painted and provided with necessary ash pan and damper. The drums are best quality Siemen's mild steel, and the tubes are of solid drawn steel, each tube being tested to 1,000 lbs. water pressure. Access to the drums is by a manhole door or bolted cover.

The funnel is of double cased iron.

The boiler is mounted complete with the following mountings:—Asbestos packed water gauge, main steam valve, safety valve, blow off cock, pressure gauge, two non-return valves, one whistle and valve, one blast cock and pipe.

The boiler is built throughout for a working pressure of 250 lbs., and tested by cold water to 500 lbs.

DEVO 7 SOUTH E Or, J'RiCL DARTMOUTH,

PRICES AND PARTICULARS OF

CONDENSING SURFACE COMPOUND

With SIMPSON, STRICKLAND & Co.'s Patent Improved Thornycroft Water Tube Boiler, for a working Pressure of 180 lbs. per square inch, or Kingdon's Vertical Boiler.

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ENGINE L.R.P. 47160M.P. + 71217 24	H.P. Cylinder diam 14 L.P 3 Stroke 2 Revolutions per minute 1200	Approx. space in Boat re- quired for Machinery	A oprox weight of Fugines	Watertube Boiler, cwt.	PRICES:-	Engine with Outside Condenser, Pumps and Stern Gear £	Boilerwith Mountings £	Total, including all Pipes and Fittings	Spare Propeller of Gun Metal £

APPLICATION. 20 OF LARGER SIZES PRICES

inside Condenser add 12 per cent. Inside Cond for all Righes above develop 8 I.H.P. The three smallest engines are of our closed in type. can 6 I.H.P. Engine by working at 200 lbs. The

For Brass Funnel and Casing to Boiler add 71 per cent.

Nore.—With Engines up to 23 I.H.P. an Auxiliary Hand-feed Pump is fitted; all sizes above with a Blake & Knowles, or Worthington Steam Donkey.

For all sizes up to 30 I.H.P., Boilers fire forward; all larger sizes, fire aft. For

can t is preferred to fire the smaller sizes aft, the length of machinery space be reduced by about 10 per cent. If it

The Engine and Boiler are usually in one compartment for all sizes. Prices are subject to alteration without notice.

thing Vent Appe. All vivos alove have Marine R.T. Lipse Note: Shell Blos up to x-including the 66 1.4.P. are of

Co., SIMPSON, STRICKLAND

SURFACE CONDENSING MACHINERY, "KINGDON" EXPANSION PARTICULARS OF PRICES AND QUADRUPLE

With SIMPSON, STRICKLAND & Co.'s Patent Improved Thornycroft Water Tube Boller for a working Pressure of 250 lbs. per square inch, or Kingdon Vertical Boller for 175 lbs.

_		APPLICATION.	NO SHZ	THE RESERVE THE PERSON NAMED IN COLUMN 1	RICES OF I	· b		
	200 L 140	$8\frac{8}{1}$ 15 20 11 220	n. ft. in. 6 18 0	113.0	850	450	1300	27
	165 JL 115	74 10 13 13 18 11 240	ft.in. ft.in. ft.in.	93.0	714	396	1110 1300	22
	128 J 90	7 9 12 16 10 270	n. ft. in.	64	595	325	920	17
	100 H 70	$\begin{array}{c} 6 \\ 8 \\ 10\frac{1}{2} \\ 14 \\ 8\frac{1}{2} \\ 300 \end{array}$	·i. 44	9 1	3.5	276	748	12
	70 F	5. 7 9 12 6 ³ / ₄ 350	ft.in. ft	34.0	354	210	564	00
	47 D 33	41 51 71 10 10 51 400	ft.in. 9 9	-	296	156	452	6 10
	38 BD 27	3.3 5 6.3 9 5 42.5	ft. in. ft. in. ft. in. 8 3 9 0 9 9	## :	243	145	388	20
	28 B 20	331 66 66 411 450	ft.in. 8 3	12.3	24	115	314	3 10
	20 AB 14	3 4 5 7 4 500		8.6	7-73 161	100	261	60
	14 A 10	23 23 4 4 23 6 6 550	ft.in. ft.in.	8.5	140	7.0	210	2 10
	10 44 7	2 2 3 3 4 5 600	ft.in.	9.9	100	09	160	24
Engine—	LH P. @ 250 lbs Size LH.P. @ 175 lbs	No. 2 L.P. Cylinder dia L.P Stroke Revolutions per minute	Approx. space in Boat required for Machinery	Approx. weight of Engine and Water Tube Boller, cwts	Ψ.	Boiler with Mountings £	Torar, including all Pipes and Fittings £	Spare Propeller of Gun Metal

F. inside Condenser add 10 per cent.

L. Brass Funnel and Casing to Boiler add 5 per cent.

Norz.—With Engines

10.28 I.H.P. an Auxiliary Hand-eed Pump is fitted; all sizes above with a Steam Donkey For all sizes up to 47 I.H.P., Boilers fire forward; all larger sizes, fire aft. If it is preferred fire the cmaller sizes aft, the length of machinery space can be reduced by about 10 per cent. The Engire and Boiler are usually in one compartment I sizes.

Prices are subject to alteration wr nout not. can be for all

PRICES AND PARTICULARS OF

SURFACE MACHINERY **EXPANSION** CONDENSING TRIPLE HIGH-SPEED

With SIMPSON, STRICKLAND Co.'s Patent Improved Thornycroft Water Tube Boiler for working Pressure of 250 lbs. per square inch, or with Kingdon Vertical Boiler for 175 lbs.

400 4/20 0770 0077
25
3 34 34
44 54 6
8 2
33 4 43
800 750 700 650
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68 10 10 0 11 0 10 6 11 6 12 9 13
Approximate Weight of Engine and Water Tube Boiler, 7.25 10.25 13.25 18.75 21.5
1-7 1-9 1-10 2-0 23 2-42-62-93-03-43-9400 4-04-65-6
170 205 253 308.
90 107 130 156
260 312 383 464
3 3 10 5 6 10

For inside Condensers add 10 per Cent.

For Brass Funnel and Casing to Boiler add 5 per cent.

Nors.—Engines of two smallest sizes are fitted with Auxiliary Hand-feed Pump. All sizes above with a Steam Donkey. All sizes above 62 I.H.P. have Main Feed and Air Pumps, driven either by Reducing Gear or an Independent Engine. For all sizes up to 49 I.H.P. Boilers fire forward; all larger sizes fire aft. If it is preferred to five the small sizes at the length of the machinery space can be reduced by about 10 per cent.

The 190 I.H.P. machinery and larger sizes usually have the Engine and Boiler in

separate compartments.

Prices are subject to alteration without notice.

SIMPSON, STRICKLAND & Co., Ltd.,

DARTMOUTH, SOUTH DEVON.

PRICES AND PARTICULARS OF

COMPOUND SURFACE CONDENSING MACHINERY,

With SIMPSON, STRICKLAND & Co.'s Patent Improved Thornyeroft Water Tube Boiler, for a working Pressure of 150 lbs. per square inch, or Kingdon's Vertical Boiler.

Engine— 6 11 17	H.P. Cylinder dism. 2 3 3½ L.P 2½ 3½ 3½ Stroke 2½ 3½ 4½ Revolutions per minute 800 550	ft.in ft.in.	required for Machi- nery 6 10 7 6 8 0	Engine with Outside Condenser, Pumps and Stern Gear £ 99115·10148·10	Boiler with Mount.	Torar, including all Pipes & Fittings £ 159 192·10 257·10
23 30	2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	ft. in. ft. in. ft. in	8 9 6 8	 10 167 187-10	133 160	10 300 347·10
40 50	10 6 400	ft.in ft.		201	198 22	0 399 472
. 09	51 6 11 12 62 7 875 350	in ft. in	6 14 0	250 278	222 258	72 536
80 1	7 14 83 300	ff. in ff.	912 614 015 016			
100 15¢	8 9 16 18 10 13 250 220	in ft. in	0 81 9	-		
200	10 20 15 200					

PRICES OF LARGER SIZES ON APPLICATION.

For inside Condenser add 12 per cent.

For Brass Funnel and Casing to Boiler add 72 per cent,

Nore.—With Engines up to 23 I.H.P. an Auxiliary Hand-feed Pump is fitted; all sizes above with a Steam Donkey.

For all sizes up to 30 I.H.P., Boilers fire forward; all larger sizes, fire aft.

If it is preferred to fire the smaller sizes aft, the length of machinery space can be reduced by about 10 per cent.

The Engine and Boiler are usually in one compartment for all sizes. Prices are subject to alteration without notice.

If preferred Direct Tube Boiler will be supplied at the same price.

1907.

Co., Ltd., SIM SON, STRICKLAND

DARTMOUTH

PRICES AND PARTICULARS OF "KINGDON"

ACE SURF MACHINERY **EXPANSION** CONDENSING QUADRUPLE

With SIMPSON, STRICKLAND & Co.'s Patent Improved Thornycroft Water Tube Boiler for a working Pressure of 250 lbs. per square inch, or Kingdon Vertical Boiler for 175 lbs.

	APPLICATION,	Sizes	ивсек	OE T	RICES	Ъ	
L 200 140	8\frac{1}{2} 11 15 20 11 220	ft.in.		850	450	1300	
JL 165 115	$\begin{array}{c} 7\frac{3}{4} \\ 10 \\ 13\frac{1}{2} \\ 18 \\ 11 \\ 240 \end{array}$	ft.in.		714	396	1110 1300	
J 128 90	7 9 12 16 10 270	n. ft. in.		595	325	920	
H 100 70	$\begin{array}{c} 6 \\ 8 \\ 10\frac{1}{2} \\ 14 \\ 8\frac{1}{3} \\ 300 \end{array}$	ft.in. 14 0		472	276	748	
F 70 50	5 7 9 12 6 ² / ₄ 350	ft.in.		354	210	564	
D 47 33	41 51 72 10 53 400	ft.in. 9 9		296	156	452	
BD 38 27	33 5 5 6 4 9 5 125	ft.in. 9 0		243	145	388	
B 28 20	31 41 6 6 8 8 41 45 0 45 0	ft.in. 8 3		199	115	314	
AB 20 14	3 5 ¹ 7 7 500	ft.in.		161	100	261	
A 14 10	2 3 4 4 5 5 5 0 5 0 0	ft.in.		140	7.0	210	
10 7	2 2 ³ 3 ³ 5 5 600	ft.in.		100	09	160	
Size I.H.P. @ 175 lbs I.H.P.	No. 2 " " " " " " " " " " " " " " " " " "	Approx. space in Boat required for Machinery	Prices:—	Engine with Outside Condenser, Pumps and Stern Gear £	Boiler with Mountings £	Total, including all Pipes and Fittings £	æ

For inside Condenser add 10 per cent,

For Brass Funnel and Casing to Boiler add 5 per cent,

Nore.—With Engines up to 28 I.H.P. an Auxiliary Hand-feed Pump is fitted: all sizes above with a Steam Donkey. For all sizes up to 47 I.H.P., Boilers fire forward; all larger sizes, fre aft. If it is preferred to fire the smaller sizes aft, the length of machinery space can be reduced by about 10 per cent. The Engine and Boiler are usually in one compartment for all sizes.

Prices are subject to alteration without notice.

SURFACE MACHINERY **EXPANSION** CONDENSING TRIPLE HIGH-SPEED

With SIMPSON, STRICKLAND & Co.'s Patent Improved Thornyeroft Water Tube Boiler for working Pressure of 250 lbs. per square inch, or with Kingdon Vertical Boiler for 175 lbs.

	482	350	12	18}	28	14	215	n. ft.in.	these	zes tion.	
	345	250	10	16	24	12	250	n. ft.in.		and rer Si.	
	290	220	6	144	22	11	275	n. ft.in. 6 24 3	Prices of	and Larger Sizes on Application,	
	235	170	œ	131	20	10	300	n. ft.in.			
	180	140	7	12	18	6	330	n. ft.in. 6 21 0	852	370 456 1076 1308	
	152	110	63	103	16	œ	375	n. ft.in. 1	706	370	
	135	92	4.6	93	15	15°	400	t.in. f	848	339	
	117	85	9	94	14	4	420	n. ft.in. ft.ii 6 14 3 15	590	307	
	100	75	ON Pales	.ajso 000	13	$6\frac{1}{2}$	160	t.in. f	527	276 803	
-	06	92	14	00	12	9	500 460	t.in. ft.in	482	252 734	
	92	55	614	72	11	52	550	t.in. ft.ii 1 6 12	413	218	
	62	15	44	63	10	10	009	in, fi.in, fi.i	366	192	
	84	35	48 48	9	6	40	650		308	156	
	34	25	33.1	54	00	Ť.	200	ft. in. ft. 10 0 10	253	130	
	56	19	80	$\frac{4}{4}$	7	25.	750	ft. in.	205	312	
	18	13	6.3 -164	4	9	m	800	ft in ft.	170	90	
Engine-	I.H.P. @ 250 lbs	I.H.P. @ 175 lbs	H.P. Cylinder, dia.	M.P. " "	L.P. " "	Stroke	Revolutions per minute	Approximate space in Boat required for machinery	Es:— , with enser, Stern (Boller with Mountings £ TOTAL, including all Pipes & Fittings &	43

For inside Condensers add 10 per Cent.

Casing to Boiler add 5 per cent. For Brass Funnel and

Nore.—Engines of two smallest sizes are fitted with Auxiliary Hand-feed Pump. All sizes above with a Steam Donkey. All sizes above 62 I.H.P. have Main Feed and Air Pumps, driven either by Reducing Gear or an Independent Engine. For all sizes up to 48 I.H.P. Boliers fire forward; all larger sizes fire aft. If it is preferred to fire the small sizes aft the length of the machinery space can be reduced by about 10 per cent.

Engine and Boiler in the usually have The 190 I.H.P. machinery and larger sizes separate compartments.

Prices are subject to alteration without notice,

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