SECRETARIAT

(Formerly)

1905	1905

CONSTRUCTION OF ADDITIONAL OIL STORAGE TANK. STANLEY.

CONNECTED FILES.

NUMBER	
1905/A	Site for new storage tank.
2121.	Proposed Gas Oil Tank.

SAVING TELEGRAM.

From: The Officer Administering the Government of the Falkland Islands.

To: The Secretary of State for the Colonies.

Date: 28th October, 1958.

No. 191. SAVING. COLONY.

777m.001/12

Your Savingram No. 71 of the 31st July, 1958.

Supply of diesel oil to Admiralty.

Government has at present two diesel tanks each of 300 tons capacity. Annual consumption varies between 300 and 350 tons and supplies are obtained from Admiralty tankers which call every 18 months to two years. In the event of a prolonged delay in the arrival of a tanker it would be necessary to purchase diesel oil from Montevideo at a considerably higher price.

2. In the circumstances I much regret that it is not possible to lease one of the existing tanks to the Admiralty or to arrange to supply an H.M. Ship with a quantity up to 200 tons.

3. I wish, however, to make a proposal for consideration by the Admiralty. In view of the limited capacity of the present tanks it would be advantageous to the Colony and Dependencies if another tank were to be built. If this were sufficiently large, arrangements could be made to hold a minimum of 200 tons of diesel oil for Admiralty use. Advantage would also be taken of refuelling in Stanley the two Royal Research Ships "John Biscoe" and "Shackleton" which at present obtain their diesel oil requirements in South Georgia at a price approximately 50% higher than the cost in Stanley.

4. It is suggested, therefore, that the Admiralty might be prepared to consider meeting a proportion of the cost of erecting a 900 ton tank adjacent to the existing tanks near the Power Station. Of the 900 tons, 200 tons would be reserved for the Admiralty, 250 tons for the Falkland Islands Government and 450 tons for the Falkland Islands Dependencies Survey, costs to be shared in proportion.

5. The Crown Agents have provided me with an estimate of £3,200 f.o.b. for a 900 ton all welded tank. To this would have to be added freight charges, estimated at £800 and approximately £1,500 for welding, erection and welder's passages, a total of approximately £5,500.

6. In making this suggestion for shared costs of the new tank I must emphasise that the Colony's contribution would be subject to the approval of the Legislature, and that the contribution by the Dependencies would be subject to your approval.

7. If, as the Director of Stores, Admiralty, says in his letter of the 14th July, a copy of which was enclosed with your Savingram under reference, circumstances might preclude diesel-burning ships from re-fuelling at South American ports for

political/...

political or perational reasons, it would probably be advantageous to have reasonable reserves available here and it might well be possible at certain times to provide diesel oil in excess of the 200 tons requested.

8. I should be grateful if you would be good enough to ascertain the Admiralty's views on these proposals.

GOVERNOR.

AGDT/LJH.

E.

5

I am afraid that I had not appreciated that you had not finally made up your mind as to subject of the criticism costs and the proportion of costs to be paid by each party. Consequently the Summons has been framed for this mail - but it can be changed easily enough.

4

~~822~~

I am so.

29.10.56

ON ADMIRALTY, WAR OFFICE, AIR MINISTRY AND CROWN AGENT LISTS.
ON LLOYDS CLASS I LIST
(LONDON OFFICE : 82 VICTORIA STREET, S.W.1)

TELEGRAMS: MOTHERWELL
MOTHERWELL
MOERICK, LONDON

TELEPHONES:
MOTHERWELL
VICTORIA, LONDON

THE MOTHERWELL BRIDGE & ENGINEERING Co. Ltd.

PATENTED FLOATING ROOF OIL TANKS
SPECIAL SECTIONS, SHIPS' BULKHEADS
BRIDGE BUILDERS, PRESSURE VESSELS, SPHEROID VESSELS

STRESS RELIEVING FURNACE
X-RAY EQUIPMENT
LABORATORY

P.O. Box No. 4
Motherwell

YOUR REF. EC.3/Falkland Is.80
OUR REF. DB/MHC/4367A. (UK)

13th November, 1958.

The Crown Agents,
for Overseas Governments & Administrations,
4 Millbank, LONDON. S.W.1.

Dear Sirs,

Oil Fuel Storage Tanks.

Further to our quotation dated 10th ult., we have been advised by our associates, The Motherwell Bridge Contracting & Trading Co., Ltd., that they propose to tender for the erection of this tankage.

We would refer you particularly to the paragraph under the heading "Erection Equipment" wherein we state that spacer bars only are included in our price. Our associates request that blank nuts be supplied with the tank material, and in this instance, we are prepared to supply this item at no extra charge to your goodselves.

Trusting this meets with your approval,
Yours faithfully,

D. Baxter

D. BAXTER.
CHIEF ESTIMATOR - (Tanks).

ON ADMIRALTY, WAR OFFICE, AIR MINISTRY AND CROWN AGENT LISTS,
ON LLOYDS CLASS 1 LIST
(LONDON OFFICE : 82 VICTORIA STREET, S.W.1)

TELEGRAMS
BRIDGE, MOTHERWELL
MOSRICOLIM, LONDON

TELEPHONES
MOTHERWELL 40
VICTORIA, LONDON 4183

THE MOTHERWELL BRIDGE & ENGINEERING Co. LTD.
PATENTED FLOATING ROOF OIL TANKS
SPECIAL SECTIONS SHIPS' BULKHEADS
BRIDGE BUILDERS, PRESSURE VESSELS, SPHEROID VESSELS

STRESS RELIEVING FURNACE
X-RAY EQUIPMENT
LABORATORY

P.O. Box No. 4
Motherwell

8056/1.
YOUR REF EC3/Falkland Islands
OUR REF DB/MHC/4367A (DK).

10th October, 1958.

The Crown Agents
for Overseas Governments & Administrations,
4 Millbank, LONDON. S.W.1.

Dear Sirs,

Oil Fuel Storage Tanks.

We refer to your enquiry, reference as above, dated 23rd. ult., and have pleasure in submitting our offer, viz:-

Item 1:

One (1) M.S. Tank 40'0" dia. x 28'0" high, 900 Tons capacity, of all welded construction and equipped with Fixed Cone Roof all as per attached specification.

Price ... £3,420. 0. 0. (Three Thousand, Four Hundred & Twenty Pounds Stg Lump Sum Nett delivered FOB Glasgow.
Approx. Wt. : 33¼ Tons.

Item 2:

One (1) M.S. Tank 40'0" dia. x 36'0" high, 1200 Tons capacity, of all welded construction and equipped with Fixed Cone Roof all as per attached specification.

Price ... £3,860. 0. 0. (Three Thousand, Eight Hundred & Sixty Pounds Stg Lump Sum Nett delivered FOB Glasgow.
Approx. Wt. : 38 Tons.

/...

Note: In the event of stoppage of Works caused by strikes, accidents, or other uncontrollable causes, contracts may be suspended but not cancelled.
Inspection to be made prior to leaving the Works, and same to be passed

Item 3:

One (1) M.S. Tank 48'0" dia. x 32'0" high, 1500 Tons capacity, of all welded construction and equipped with Fixed Cone Roof all as per attached specification.

Price .. £4,475. 0. 0. (Four Thousand, Four Hundred and Seventy-Five Pounds Stg.)
Lump Sum Nett delivered FOB Glasgow.
Approx. Wt. : 46 Tons.

For delivery, terms and conditions - see attached specifications.

Erection Equipment

Our price does not include for any spacer ... require further information as to your erection programme to enable us to compile the necessary quantities of erection equipment.

Our Subsidiary Company, Motherwell Bridge Contracting & Trading Co.,Ltd., will be pleased to quote you for the erection of these tanks or the supervision of the erection if you desire.

We would be pleased to receive further copies of Crown Agents General Conditions of Contract dated June, 1957, and Crown Agents Specification No. 210, dated 1956.

Trusting this ... your approval,

Yours faithfully,

Motherwell Bridge and Engineering Co. Ltd.

.....

D. BAXTER.
CHIEF ESTIMATOR - (Tanks).

KE MOTHERWELL BRIDGE CONTRACTING AND TRADING Co. Ltd.

eel bridges & buildings
age tanks & floating roofs
& Civil Engineers

P.O. BOX No. 4,
MOTHERWELL BRIDGE WORKS
MOTHERWELL.

Our Ref: FDM/MHC/4367A.
(DK).

12th November, 1958.

The Crown Agents
for Overseas Governments & Administrations,
4 Millbank, LONDON. S.W.1.

Dear Sirs,

Oil Fuel Storage Tank.

We have received from our associates, The Motherwell Bridge & Engineering Co., Ltd., a copy of their quotation to you dated 10/10/58 for the supply of tankage for Falkland Islands, and we are taking the liberty of submitting an erection price for your kind consideration, viz:-

Erect, weld and test on your prepared foundations:

1 M.S. Cone Roof Tank 40'0" dia. x 28'0" high,
1 M.S. Cone Roof Tank 40'0" dia. x 36'0" high, and
1 M.S. Cone Roof Tank 48'0" dia. x 32'0" high.

Price ... £8,400. 0. 0. (Eight Thousand, Four Hundred Pounds Stg.) Lump Sum Nett.

Responsibilities of The Crown Agents:

1) Provide free access for personnel and material to site.

2) Supply all tank materials, free of charge to Mothercat, to within 100 ft. of erection site. All materials to be stacked in an orderly manner to obviate any delays.

3) The construction of all grades and foundations for tanks, stairways etc., and their completion at a rate to avoid any delay to tank erection schedule.

4) Provide tank grades to a level of plus or minus 1/4" on perimeter of tank.

...

Supply, free of charge, necessary temporary pipework and water to enable us to water test the tanks to schedule. [illegible] to arrange for disposal of water.

6) Supply all necessary electrodes free of charge.

7) Mothercat to be reimbursed at cost plus 25% for lost or waiting time due to incomplete grades and foundations, non-delivery of steel, or any other delays reasonably considered to be beyond our control.

8) Payment of customs duties, port, wharfage or other charges incident to the importation of our erection equipment into Falkland Islands.

9) Payment of all transport charges for our erection equipment from port in Falkland Islands to site and, on completion of the contract, the transport charges from site to port.

10) Any authorised overtime will be charged at nett cost.

11) Supply blank nuts and spacer bars for erection of tanks.

Responsibilities of The Motherwell Bridge Contracting & Trading Co.Ltd.

1) Supply and remuneration of staff and workmen, together with the necessary administration for the execution of the work.

2) Supply and maintenance of all construction plant and equipment.

3) Provide all messing and accommodation for imported personnel.

4) Insure all personnel under workmen's compensation acts as required by local laws.

5) Water test and clean out after testing.

6) Supply of fuel and lubricants for plant, equipment and transport.

7) We do not include for painting of tanks.

Erection terms: Complete 2-3 months from arrival of erection crew and plant on site.

Terms: Payment by instalments as work proceeds.

Conditions: As per C.F. 2 Form attached.

We have assumed that the above tankage will be erected in the same site. In the event of the tanks being erected in different areas, we may/-

may require to revise our price.

Trusting to be favoured with an order, which would be esteemed and receive our best attention.

Yours faithfully,

For The Motherwell Bridge Contracting & Trading Co. Ltd.

Director &
Secretary

WHESSOE LIMITED

ESTABLISHED 1790

DARLINGTON

TELEPHONE: 5315
TELEGRAMS:
WHESSOE, DARLINGTON

LONDON OFFICE:
25, VICT
T
ABE
TE
WHESSOE, S

YOUR REF

OUR REF

QUOTATION.

EC3/Falkland Islands 8056/1.

RM/EI/JEB/S.126.

The Crown Agents for Overseas
Government and Administrations,
4, Millbank,
LONDON S.W.1.

10th October, 1958.

Dear Sirs,

OIL FUEL STORAGE TANKS.

In response to your enquiry of the 23rd September we have pleasure in quoting for the three tanks in accordance with our standard design and construction and in sizes giving capacities close to those specified by you.

For the supply and delivery F.O.B. Liverpool of fabricated materials, marked for erection, despatched in plates and bars, complete with fittings and site electrodes, roof bolts and huts, all packed, bundled and/or protected for shipment to make:

Oil Storage Tanks of welded construction having Self Supporting Cone Roofs, Roof Slope 1 in 5.

Our prices would be:

ITEM 1.
ONE - 35'-0" dia. x 35'-0" high, capacity 882 tons of Oil (Sp.G.0.95) as described on the enclosed Tank Specification No. TS.21/45. Code BLP.357 .

..... £2,800. 0s. 0d.

Approximate Dead Weight 28 tons.

ITEM 2.
ONE - 40'-0" dia. x 35'-0" high, capacity 1154 tons of Oil (Sp.G.0.95) as described on the enclosed Tank Specification No. TS.21/46. Code BLP.407.

..... £3,390. 0s. 0d.

Approximate Dead Weight 36 tons.

ITEM 3.
ONE - 40'-0" dia. x 45'-0" high, capacity 1483 tons of Oil (Sp.G.0.95) as described on the enclosed Tank Specification No. TS.21/47. Code BLP.409.

..... £3,975. 0s. 0d.

Approximate Dead Weight 44 tons.

cont'd....

The Crown Agents for Overseas Government and Admin

The foregoing prices include for the tanks havin thick shell plates where permissable by our specifica

If you desire the minimum shell plate thickness to 1/4" thick our alternative prices would be:

Item 1.	1 - B.L.P. 357	...	£3025. Os. Od.	3
Item 2.	1 - B.L.P. 407	...	£3590. Os. Od.	40
Item 3.	1 - B.L.P. 409	...	£4175. Os. Od.	48n

Materials: All mild steel materials would conform to B.S.13-1942 28/33 tons tensile.

We do not include for any special private chemical, physical or mechanical tests or inspection but would supply copies of the normal mills certificates.

Drawings:- We include for providing copies of our standar Drawings in the sizes that are existing. The copies would be reproductions on linen exactly as supplied to our own works.

Shop Pickling & Painting: The quoted prices include for the mild steel materials being pickled to remove millscale and subsequently painted on internal and external surfaces one coat of Red Lead Graphite Primer, welding margins being coated with Brown Chromate Primer.

Site Electrodes:- We have included for supplying site electrodes of Messrs. Murex Welding Processes Manufacture in Fastex 5 and Vodex qualities in 4,6,8 and 10G sizes, packed in hermetically solder sealed tins, 25 lbs. to a tin and then repacked 8 tins to a wooden case.

Erection Equipment:- Our extra prices for sufficient keyplate equipment to carry out a progressive method of erection and welding would be as follows:-

Tank Size.	Quantities in one set.		
...	357	407	409
2 Way Keyplates	80	92	92
Blank Nuts	336	384	384
Carrots	328	376	376
Shim Plates.	490	560	720
Flat Wedges.	420	480	480
Stron Backs.	4	4	4
Price	£181.	£205.	£210.
Approx. Dead Weight	0.95 tons.	1 ton.	1.05 ton.

cont'd....

The Crown Agents for Overseas Government and Administrations.

Workmanship:- We do not include for shop erection. The Tanks would be fabricated to proved standard templates and checked for accuracy during the course of manufacture.

Fittings:- Fittings would be supplied as small sub assemblies ready for attaching to the tanks at site. We do not include for attaching the reinforcing rings to the manholes as we recommend that the rings should be attached to the tanks at site before the bodies are welded in position.

Holes for the reception of the fittings would be left for location and cutting at site.

Delivery:- We could have the materials ready for despatch in 4 months from receipt of your instructions to proceed.

Terms of Payment:- Nett cash - against invoices when materials are ready for despatch.

Price Variation Clause:- See printed slip attached.

Any order resulting from this quotation will not be binding unless accepted by us in writing.

We hope you find our offer acceptable and look forward to receiving your further instructions.

Yours faithfully,
WHESSOE LIMITED.
Engineering Division.

R. Mansfield

for Chief Engineer.
Storage Group.

cc. LO.
NF.
PS.
EI.
EST.
FILE.

No. 1

21/4

WHESSOE LIMITED, DARLINGTON

Specification

WHESSOE STANDARD WELDED TANK Code BLP.357.

The Crown Agents for Overseas Government and Administrations.

STORAGE CAPACITY AND PRODUCT	882 tons (allowing 3" ullage) Sp.G. 0.95 Fuel Oil.
DIMENSIONS	35'-0" dia. x 35'-0" high on Straight Shell.
MATERIAL	to BS 13-1942 (28/33 tons tensile) Siemens' Martin Open Hearth Steel of British Manufacture.
BOTTOM PLATES	1/4" nom. Rectangular and Sketch Plates.
SHELL PLATES	7 Plates in circumference per course.
NO. OF COURSE	1st 2nd 3rd 4th 5th 6th 7th 8th 9th
THICKNESS	3/16" 3/16" 3/16" 3/16" 3/16" 3/16" 3/16"
TOP CURB	3" x 3" x 1/4".
ROOF PLATES	3/16" Rectangulars and Sketches.
ROOF DESIGN	Self Supporting without Columns to carry a superimposed load of 30 lbs. per square feet (including 2½"W.G. Vacuum") and to withstand 8" W.G. pressure.
ROOF CONSTRUCTION	7 Main Rafters with 14 Intermediate Rafters and 1 Ring of Chordal Purlins.

FITTINGS

1 - Outside Spiral Stairway having Grill Treads.
1 - Set Angle Type Handrail with Angle Standards.
1 - 20" Whessoe Design Roof Manhole Fig.WT.160.
1 - 24" S " " Shell "
3 - 6" 3 Flange Shell Nozzles.
1 - 6" Swing Arm, Swivel Bend, Baffle Bend Pulley Gear and Winch.
1 - 6" Sump.
1 - 6" Roof Stool with Combined Dip and Vent.
1 - Dial Type Thermometer.
1 - Hydrometer.
1 - Sampling Can and Tape.

PAINTING	Pickled and Painted One Coat Red Lead Graphite Primer.
CONSTRUCTION AND WELDING	Bottom plates laid direct on foundations, annular plates of tanks 48' 0" dia. and over provided with backing strips for butt welding radial seams, remainder of bottom plates rectangular for lap welding top side only. Shell to Bottom joints fillet welded inside and out (no bottom curb). Shell plate edges prepared for butt welding. Roof Plates arranged for fillet welding top side only.
GENERAL CONDITIONS	The tender to which this specification refers deals with: delivery, dispatch and packing arrangements, water for testing, electrodes and power for welding, erection conditions, time for completion and terms for payment.

No. 21/46.

WHESSOE LIMITED, DARLINGTON

Specification

WHESSOE STANDARD WELDED TANK Code BLP.407.

The Crown Agents for Overseas Government and Administrations.

STORAGE CAPACITY AND PRODUCT	1154 tons (Allowing 3" Ullage) Sp.G. 0.95 Fuel Oil.
DIMENSIONS	40'-0" dia. x 35'-0" deep.
MATERIAL	to BS 13-1942 (28/33 tons tensile) Siemens' Martin Open Hearth Steel of British Manufacture.
BOTTOM PLATES	1/4" nom. thick Rectangulars and Sketch Plates.
SHELL PLATES	8 Plates per course.

NO. OF COURSE	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
THICKNESS	3/16"	3/16"	3/16"	3/16"	3/16"	1/4"	1/4"		

TOP CURB	$3\frac{1}{2}$" x $3\frac{1}{2}$" x 3/8".
ROOF PLATES	3/16" nom. thick. Rectangulars and Sketches.
ROOF DESIGN	Self Supporting without Columns to carry a superimposed load of 30 lbs. per square feet (including $2\frac{1}{2}$"W.G. Vacuum") and to withstand 8" W.G. pressure.
ROOF CONSTRUCTION	8 Main Rafters with 16 Intermediate Rafters and One Ring of Purlins.

FITTINGS

1 - Outside Spiral Stairway having Grill Treads.
1 - Set Angle Type Handrail with Angle Standards.
1 - 20" Whessoe Design Roof Manhole Fig. WT.160.
1 - 24" " " Shell "
3 - 6" 3 Flange Shell Nozzles.
1 - 6" Swing Arm, Swivel Bend, Baffle Bend, Pulley Gear and Winch.
1 - 6" Sump.
1 - 6" Roof Stool with Combined Dip and Vent.
1 - Dial Type Thermometer.
1 - Hydrometer.
1 - Sampling Can and Tape.

PAINTING	Pickled and Painted one coat Red Lead Graphite Primer.
CONSTRUCTION AND WELDING	Bottom plates laid direct on foundations, ~~annular plates of tanks 48'-0" dia. and over provided with backing strips for butt welding radial seams, remainder of~~ bottom plates rectangular for lap welding top side only. Shell to Bottom joints fillet welded inside and out (no bottom curb). Shell plate edges prepared for butt welding. Roof Plates arranged for fillet welding top side only.
GENERAL CONDITIONS	The tender to which this specification refers deals with: delivery, dispatch and packing arrangements, ~~water for testing~~, electrodes ~~and power for welding~~, erection conditions, time for completion and terms for payment.

839 19

824 for your comments Sgl.
6/11/58

Hon. C.S. 840 20

It will be seen that the cheapest tank by comparing the capacities is the largest.

If a 1500 ton tank is obtained our maximum storage capacity will be 2100 tons, broken down into 2 X 300 ton tanks and 1 X 1500 ton tank giving us three years supply for the Colony, one and a half seasons for FIDS, and the Admiralty their 200 tons asked for.

If at some future date,(and I dont think it will be far off), the Government decide to convert the existing peat furnaces to oil, then one of the 300 ton tanks could be used to store a years supply of heavy furnace oil. This would reduce the Colonies capacity to 700 tons or two years reserve, which,in view of the other stocks held would be adequate. However there are still other considerations which it would be wise to get a definite answer to, demurrage is one, cost of a separate pipe line for the furnace oil another., advisability of erecting at the present site etc.

Supt. P.E.Dept.
7-11-58.

Supt. P.W.D. 21.

I'll discuss next week. Monday morning 11.30 am would be convenient to me - that is half an hour before you bring Bacon by.

13/11/58.

22

14-11-58

23

Ass G.S.

Regarding the new clause of the new 1500 ton tanks offered, that specified by the Motherwell Bridge Co. would be the better of the two.

24.10.58.

24

P.S. Space available for erection is sufficient

24.12.58.

H.C.S.

25

I have checked with the Master "John Biscoe" who is satisfied that the grade of fuel oil which will be available in the tanks is satisfactory for use in the R.R. ships

5/1/59

AGENTS
GOVERNMENTS AND ADMINISTRATIONS
giving reference and the date
of this letter being quoted.

4, MILLBANK,

LONDON, S.W.1.

EC3/Falkland Islands 8056

TELEGRAMS { INLAND: "CROWN SOWEST LONDON."
OVERSEAS: "CROWN, LONDON."

TELEPHONE ABBEY 7730.

21st October, 1958.

Sir,

Oil Fuel Storage Tanks

798 in 0014/IV

I am directed to refer to your telegram dated 20th September, which requested that F.O.B. prices for all welded oil fuel tanks of 900, 1200, and 1500 tons capacity be obtained.

818 in 0014/IV

2. The despatch of the telegram dated 14th October giving brief particulars of the most favourable quotation received, is now confirmed. Fuller details are now provided.

3. Two firms specialising in the supply of all welded tanks, Whessoe Ltd. and The Motherwell Bridge and Engineering Co.Ltd., were invited to submit quotations for tanks of the required capacity, and were asked to include for fittings and fastenings normally supplied with tanks of this type, i.e. handrailing, manholes, staircase, pipe connections, swing pipe, drainage sump, dip and vent, thermometer, hydrometer and electrodes. The firms were informed that all tank materials were to be phosphoric acid pickled and painted one coat of paint before despatch, also that shims, scaffold brackets, clamps, wedges etc. for use in erection of the tanks at site were to be included in the quotation.

~~833~~ 618

4. Copies of both these firms' quotations, which are detailed and largely self-explanatory, are enclosed herewith for your reference.

5. The Motherwell Bridge and Engineering Co.Ltd.'s quotation, slightly the less favourable, is based on tank shell plates of $\frac{1}{4}$" minimum thickness. The firm's price does not include for erection equipment other than the supply of spacer bars. It will be seen that this firm can arrange for the erection of the tanks or the supervision of the erection, through their subsidiary company, The Motherwell Bridge Contracting and Trading Co.Ltd. The delivery offered by this firm of 6 to 7 months is less favourable than that offered by Whessoe Ltd.

. It is mentioned that Whessoe Ltd.'s quotation specifies tanks of apacities slightly less than 900, 1200 and 1500 tons. Whessoe Ltd. have quoted prices for tanks with shell plates of 3/16" or alternatively $\frac{1}{4}$ minimum thickness. They have also quoted (as a separate item) for te cost of erection equipment, and the cost of this equipment was included in the prices given in the telegram dated 14th October. The delivery offered by this firm is 4 months from receipt of an order.

7. It is trusted that this letter and the enclosures give sufficient information for your present requirements. If further details are required these will be provided in response to your request. If an indent should be forwarded or in any future correspondence, it would be appreciated if the reference at the head of this letter is quoted.

I am, Sir,
Your obedient servant,

The Colonial Secretary,
Port Stanley,
FALKLAND ISLANDS.

LWB

WHESSOE LIMITED, DARLINGTON

Specification

WHESSOE STANDARD WELDED TANK Code BLP.409.

The Crown Agents for Overseas Government and Administrations.

STORAGE CAPACITY AND PRODUCT	1483 tons (Allowing 3" Ullage) Sp.G.0.95. Fuel Oil.
DIMENSIONS	40'-0" dia. x 45'-0" deep.
MATERIAL	to BS 13-1942 (28/33 tons tensile) Siemens' Martin Open Hearth Steel of British Manufacture.
BOTTOM PLATES	1/4" nom. thickness Rectangulars and Sketches.
SHELL PLATES	8 Plates in circumference per course.

NO. OF COURSE	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
THICKNESS	3/16"	3/16"	3/16"	3/16"	3/16"	1/4"	1/4"	5/16"	5/16"

TOP CURB	3½" x 3½" x 3/8"
ROOF PLATES	3/16" thick Rectangulars and Sketches.
ROOF DESIGN	Self Supporting without Columns to carry a superimposed load of 30 lbs. per square feet (including 2½"W.G. Vacuum") and to withstand 8" W.G. pressure.
ROOF CONSTRUCTION	8 Main Rafters with 16 Intermediate Rafters and One Ring of Purlins.

FITTINGS

1 - Outside Spiral Stairway having Grill Treads.
1 - Set Angle Type Handrail with Angle Standards.
1 - 20" Whessoe Design Roof Manhole Fig.WT.160.
1 - 24" " " Shell "
3 - 6" 3 Flange Shell Nozzles.
1 - 6" Swing Arm, Swivel Bend, Baffle Bend, Pulley Gear and Winch.
1 - 6" Sump.
1 - 6" Roof Stool with Combined Dip and Vent.
1 - Dial Type Thermometer.
1 - Hydrometer.
1 - Sampling Can and Tape.

PAINTING: Pickled and Painted One Coat Red Lead Graphite Primer.

CONSTRUCTION AND WELDING: Bottom plates laid direct on foundations, ~~annular plates of tanks 18'-0" dia. and over provided with backing strips for butt welding radial seams, remainder of~~ bottom plates rectangular for lap welding top side only. Shell to Bottom joints fillet welded inside and out (no bottom curb). Shell plate edges prepared for butt welding. Roof Plates arranged for fillet welding top side only.

GENERAL CONDITIONS: The tender to which this specification refers deals with: delivery, dispatch and packing arrangements, ~~water for testing~~, electrodes ~~and power for welding~~, erection conditions, time for completion and terms for payment.

Communications to be addressed to
THE CROWN AGENTS
FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS
the following reference and the date
of this letter being quoted.

/Falkland Islands 8056

INLAND : "CROWN SOWEST LONDON."
OVERSEAS : "CROWN, LONDON."

NE : ABBEY 7730.

4, MILLBANK,
LONDON, S.W.1.

28th November, 1958

Sir,

Oil Fuel Storage Tanks.

I am directed to refer to the letter from this office under the above reference dated 21st October 1958, and in particular to paragraph 5 of same.

2. The Motherwell Bridge & Engineering Co. Ltd's subsidiary company, The Motherwell Bridge Contracting & Trading Co. Ltd. have submitted an estimate for the erection of one tank of each size, (900, 1200 and 1500 tons capacity respectively) and a copy of their quotation reference FDM/MHC/4367A (DK) dated 12th November, 1958, is enclosed herewith for your consideration. Also enclosed is a copy of The Motherwell Bridge & Engineering Co. Ltd's letter reference DB/MHC/4367A(DK) dated 13th November 1958, which relates to erection of the tanks.

3. If it is decided that advantage be taken of the firm's offer to erect the tanks, an erection contract document would be drawn up by this office. This document would incorporate the terms and conditions normally stipulated when erection contracts are placed by this office, which would differ in some respects to the terms and conditions set out in the firm's letter.

I am, Sir,
Your obedient Servant,

The Colonial Secretary,
Port Stanley,
FALKLAND ISLANDS.

Your Ref. 8056/1. Our Ref. DB/MHC/43674.

MOTHERWELL BRIDGE & ENGINEERING COY., LTD.,

SPECIFICATION FOR WELDED TANK.

Item No. 3

No. off. 1

Size:— 48'0" dia. x 32'0" high.

Material:— B.S.S. 13 26/32 T.T. for Plates.
B.S.S. 15 28/33 T.T. for Sections.

Bottom Plates:— 1/4" thick Sketch [illegible]

Arranged for lap-welding.

Shell:— 6 Tiers arranged for butt-welding.

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Tier Thicknesses:—	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"				

Roof Type:— Fixed Trussed Non Pressure Roof.

Roof Sheets:— 3/16" thk.

Tank Fittings:— See Sheet (2)

Shop Painting:— Sulphuric/Phosphoric Acid Pickling all steelwork and thereafter painting all surfaces one coat Red Lead Primer.

Site Paint:— Nil

Delivery:— Six to Seven months from receipt of order. This will require to be confirmed when ordering.

Electrodes Supplied:— YES [illegible].

Terms:— Nett cash against mate's receipts.
[illegible]
[illegible] month of delivery.

Conditions:— *As per C.F. 2 Form attached.*

Our price covers for the materials supplied fabricated, despatched knocked down, marked for erection, including the necessary permanent bolts and nuts, plus spares; packed or bundled if required for shipment.

Copies :-

Orig.	Est.	L.O.	D.O.	Erect.	JLA	T.C	Spare
1	1	1	1		1		1

TANK FITTINGS

No.	DESCRIPTION	Drawing Number.
1	Circum. Handrail.	
1	Radial Handrail.	
1	24" Roof Manhole.	
1	24" Shell Manhole.	
1	Circum. Stairway.	
3	6" Shell Nozzles S/F ASA 150 lbs.	
1	4" Draw off and sump.	
1	6" Comb. Vent and Dip.	
1	6" Swing Pipe.	
1	Thermometer.	
1	Hydrometer.	
1	Set Spacer Bars.	
	NOTE: We do not include for surface or edge inspection of plates.	

REMARKS:—

INSPECTION

If this information is obtained please [illegible] on your official order or letter of intent. State "Nil" if none required.

Date _____ Your Ref. EC.3/Falkland Islands/8056/1. Our Ref. DB/MHC/4367A (DK)

MOTHERWELL BRIDGE & ENGINEERING COY., LTD.,

SPECIFICATION FOR WELDED TANK.

Item No. 1

No. off 1

Size:— 40'0" dia. x 28'0" high.

Material:— B.S.S. 13 26/32 T.T. for Plates.
B.S.S. 15 28/33 T.T. for Sections.

Bottom Plates:— 1/4" thick Sketch ~~xxx~~ ~~xxxxxxxxxxxxxx~~ ~~thick rectangulars~~

Arranged for lap-welding

Shell:— 5 Tiers arranged for butt-welding

Tier Thicknesses:—

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1/4"	1/4"	1/4"	1/4"	1/4"					

Roof Type:— Frameless Non Pressure Roof.

Roof Sheets:— 1/4" thick.

Tank Fittings:— See Sheet (2)

Shop Painting:— Sulphuric/Phosphoric Acid Pickling all steelwork and thereafter painting all surfaces one coat Red Lead Primer.

Site Paint:— Nil

Delivery:— Six to Seven months from receipt of order. This will require to be confirmed when ordering.

Electrodes Supplied:— YES ~~or NO~~.

Terms:— Nett cash against mate's receipt.
~~Nett cash on delivery~~
~~less 2½%~~ discount for cash by end of month following month of delivery.

Conditions:— As per C.F. 2 Form attached.

Our price covers for the materials supplied fabricated, despatched knocked down, marked for erection, including the necessary permanent bolts and nuts, plus spares; packed or bundled if required for shipment.

Copies:- Orig. 1 Est. 1 L.O. 1 D.O. 1 Erect. 1 JLA 1 T.C 1 Spare.

TANK FITTINGS

No. Off	DESCRIPTION	Drawing Number.
1	Circum. Handrail.	
1	Radial Handrail.	
1	24" Roof Manhole.	
1	24" Shell Manhole.	
1	Circum. Stairway.	
3	6" Shell Nozzles S/F ASA 150 lbs.	
1	4" Draw Off & Sump.	
1	6" Comb. Vent & Dip.	
1	6" Swing Pipe.	
1	Thermometer.	
1	Hydrometer.	
1	Set Spacer Bars.	
	NOTE: We do not include for surface or edge inspection of plates.	

REMARKS:—

INSPECTION

If this quotation is successful please give particulars on your official order or letter of intent. State 'NIL' if none required.

Your Ref. 8056/1 Our Ref. DB/MHC/A3674

MOTHERWELL BRIDGE & ENGINEERING COY. LTD.

SPECIFICATION FOR WELDED TAN

Item No.: 2

No. off: 1

Size:— 40'0" dia. x 36'0" hig.

Material:— B.S.S. 13 26/32 T.T. for Plates.
B.S.S. 15 28/33 T.T. for Sections.

Bottom Plates:— 1/4" thick Sketch xxx - xxxxxxxxxxxx

Arranged for lap-weldi..

Shell:— 6 Tiers arranged for butt-welding.

Tier Thicknesses:—	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"				

Roof Type:— Frameless Non Pressure Roof.

Roof Sheets:— 1/4" thick.

Tank Fittings:— See Sheet (2)

Shop Painting:— Sulphuric/Phosphoric Acid Pickling all Steelwork and thereafter painting all surfaces one coat red lead primer.

Site Paint:— Nil

Delivery:— Six to seven months from receipt of order. This will require to be confirmed when ordering.

Electrodes Supplied:— YES xx NO.

Terms:— Nett cash against mate's receipts.
xxxx cash on delivery.
xxxx 2½% discount for cash by end of month following month of delivery.

Conditions:— As per C.F. 2 Form attached.

Our price covers for the materials supplied fabricated, despatched knocked down, marked for erection, including the necessary permanent bolts and nuts, plus spares; packed or bundled if required for shipment.

Copies:- Orig. 1 Est. 1 L.O. 1 D.O. 1 Erect. 1 JLA T.C Spare 1

TANK FITTINGS

No. Off	DESCRIPTION	Drawing Number.
1	Circum. Handrail.	
1	Radial Handrail.	
1	24" Roof Manhole.	
1	24" Shell Manhole.	
1	Circum. Stairway.	
3	6" Shell Nozzles S/F ASA 150 lbs.	
1	4" Draw Off & Sump.	
1	6" Comb. Vent and Dip.	
1	6" Swing Pipe.	
1	Thermometer.	
1	Hydrometer.	
1	Set Spacer Bars.	
	Note: We do not include for surface or edge inspection	
	of plates.	

REMARKS:—

INSPECTION

If this quotation is accepted please give particulars on your official order or letter of intent. State "Nil" if none required.

DECODE.

TELEGRAM SENT.

From GOVERNOR *to* SECRETARY OF STATE.

31

Despatched: 7. 1. 59. *Time:* 1600. *Received:* . . . *Time:* . . .

1

No. 10. My Colony Savingram 191 of 28th October, 1958.

Oil Storage.

I have considered further question of oil storage in Stanley in the light of likely requirements for civil, Admiralty and F.I.D.S. purposes and conclude it would be advisable to erect 1500 ton tank instead of 900 ton tank. Cost is estimated at approximately £10,000. Capital Expenditure of the order of £22,500 will be required in due course to purchase the oil.

2. F.I.D.S. will want approximately one third of the total storage capacity to meet one seasons requirements and assuming Admiralty do not contribute I propose to allocate initial costs on basis of £6,500 from Colony and £3,500 from F.I.D.S. respectively. Legislature have already approved principle of expenditure from Colony funds. Cost of oil would be shared in similar proportion. I cannot say at present what expenditure is likely to be incurred this financial year but think it probable that greater part will have to be provided for in 1959/60 estimates. Both contributions would be reduced proportionately by equivalent of Admiralty contribution.

3. There is one further point. Admiralty tankers cannot always discharge direct ship to shore and all oil is moved by barge. With increased storage now proposed tanker might have to remain up to four days longer in Stanley and this time would only be partially reduced by provision of another barge. This raises possibility of demurrage which could increase oil costs very considerably depending on demurrage rates. Grateful if you would take this matter up with Admiralty for confirmation that in these circumstances demurrage will not be charged.

GOVERNOR.

GTC:IM
Typed FH

Copy to Sec. F.I.D.S.

32

C.T.

To see pl.
D.R. Rumford
12/1/59

33

Y.H.

Noted. Provision is made in the Estimates, 1959/60 for (a) Tank, £6,500. (b) Tug £15,000.

9
P.U. 12/1/59

D. 12/1/59

DECODE.

TELEGRAM SENT.

From SECRETARY OF STATE *to* GOVERNOR

Despatched: 9th March *Time:* 1515 *Received:* *Time:*

~~destroyed~~ 31

No: 21. Your telegram No: 10. Oil storage.

Am still awaiting reply from Admiralty.

SECER

P/L : PT

F.O. prior to 1st
D.U. 1 month.
6/37

B.U. after Lydd.
D-Day
29.4.59.

B.U. ~~7/1959~~ 1965

DECODE.

TELEGRAM SENT.

35 34

From GOVERNOR to SECRETARY OF STATE

Despatched : 28:5:59 Time : 1100 Received : Time :

SECRET.

34

No. 85. Your telegram 21. Oil Storage. I regret that for the time being and as an economy measure we shall have to postpone consideration of this project unless Colony's share could be met from C.D. and W. allocation. Most grateful to know however whether in view of increased requirements for diesel oil (e.g. diesel driven frigates) there is now any prospect of one of the large Admiralty tanks being turned over from fuel oil to diesel oil. If this were to happen and Admiralty allowed Colony and FIDS to draw on stocks there would be no need for additional storage facilities.

OAG

CYPHER 'E' : SM

Reply at 36.
444

35A
Bell 20/6/7

DECODE.

TELEGRAM SENT.

From **SECRETARY OF STATE** *to* **GOVERNOR.**

Despatched : 26:6:59 *Time :* 1320 *Received :* 26:6:59 *Time :* 1430

SECRET.

No. 64.

35

Your telegram No. 85 Oil Storage.

Admiralty had already considered possibility put in your telegram under reference but had concluded impracticable because apart from question of cleaning satisfactorily and re-arranging pumping and pipeline facilities it would leave them inadequate capacity for reserve of furnace oil deemed necessary for their purpose.

37

CYPHER 'E' : SM

Y.H. I suppose we now await 38. C.A.T. 26/6 the outcome of C.D.W.S. discussion? 39

29.6.59. Yes. C.A.T. 30.6.59

See 44

B.U. Sept 4th. C.A.T. 30.6.59

K.I.V. 35A.

36

FST.123/78/03
Your Ref. 0014/IV

Saving.

From the Secretary of State for the Colonies.

To the Officer Administering the Government of FALKLAND ISLANDS

Date 27 May, 1959.

No. 55 Saving.

34

My telegram No. 21.

Oil Storage.

Your proposals have been under consideration by the interested Departments within the Admiralty and they hope to be able to let me have their final views very shortly.

Meanwhile, however, Admiralty have grave doubts about estimated cost of the tank and also suspect that figure of £1,500 quoted in your savingram No. 191 Colony as being the charge for welding, erection and passages, should read £15,000. Admiralty consider that a 1,500 ton tank complete with 8" pipeline would cost £30,000, although they are not certain about pipeline arrangements would be necessary in addition to those already there. They have asked if the estimated cost could be verified and if a rough sketch could be provided of the existing Government facilities.

SECER.

Reply at 66.

Saving.

From the Secretary of State for the Colonies.

To the Officer Administering the Government of

Date

No. Saving.

41

SLED

To see & discuss when next you are at Secretariat, pl.

20/1/59.

Hon.A.C.S.

With reference to your enquiry regarding the oil fuel problem, I have compiled the following notes for information.

1.	1500 ton capacity tank 1st. cost.		£4475	0 0
X.	Freight.		900	0 0
	Erection and preparation of site.		4625	0 0
		Total.	£10000	0 0

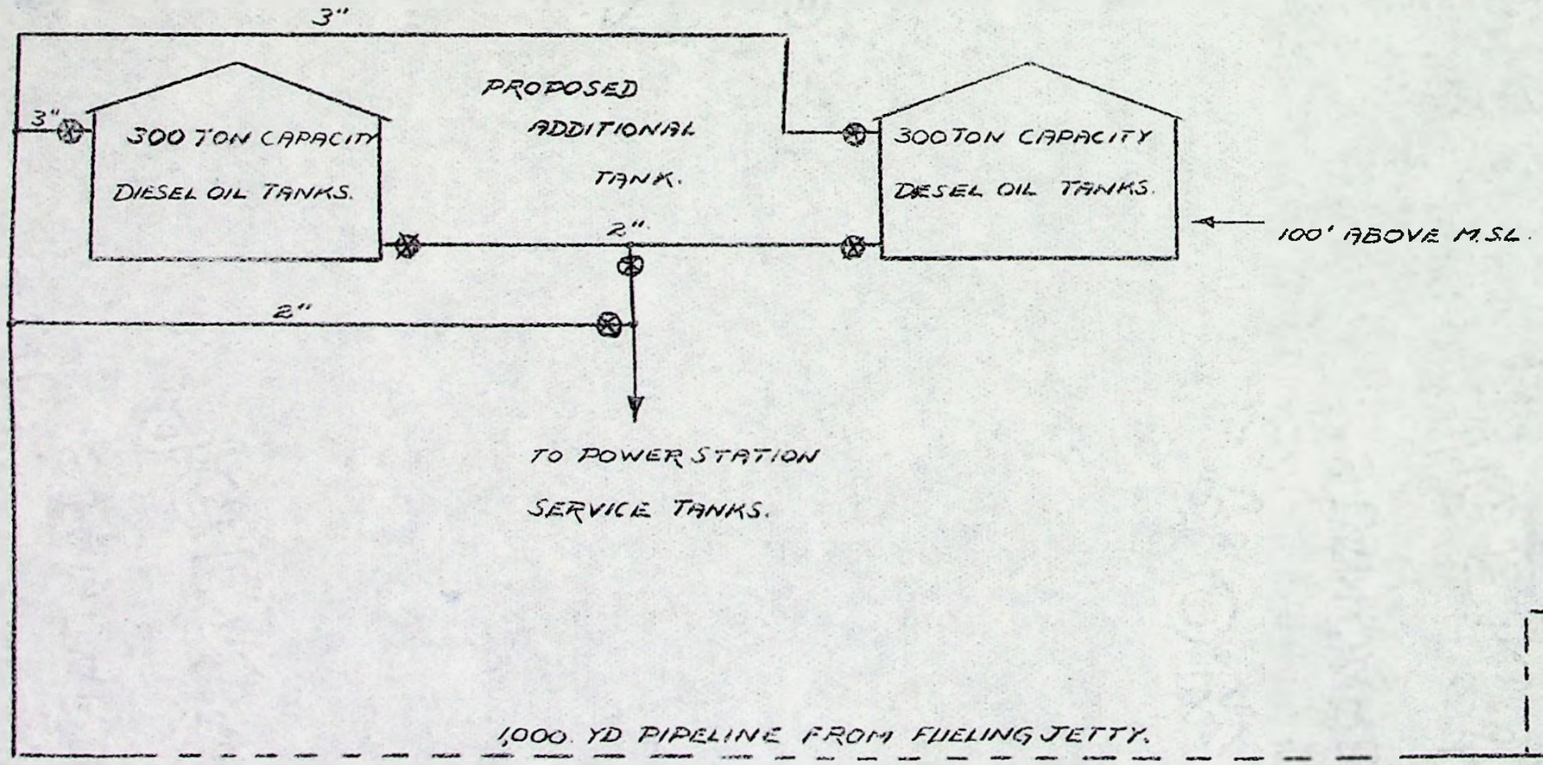
2.	Colony participation	775 tons.	£5166	13 4
	F.I.D.S. do.	525 do.	£3500	0 0
	Admiralty. do.	200 do.	£1333	6 8
		Totals 1500 tons.	£10000	0 0

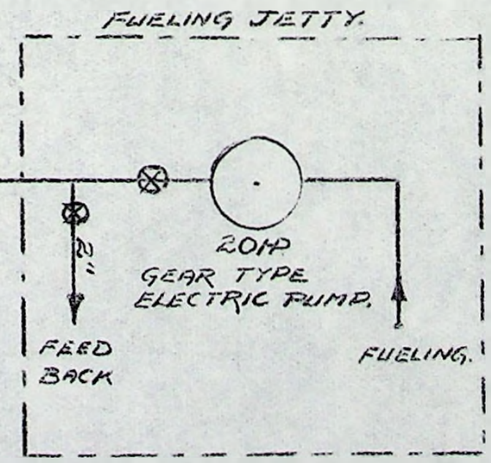
3. A large proportion of the cost is in the erection, if the Admiralty are prepared to undertake this, I suggest, we should waive their monetary contribution.
4. The whole project is very costly and may I understand have to be shelved owing to straitened financial circumstances, but it is something we need, it would be a pity if the Admiralty made other arrangements which did not benefit us, leaving us to go ahead at some later date to bear the full cost.

SCHEMATIC LAYOUT OF FALKLAND ISLAND GOVERNMENT FUELING ARRANGEMENT.

COLONIAL OFFICE REF 123/78/03.

OUR REF. 0014/IV.





⊗ VALVES.

NOTE 2" PIPING IS RELATIVEY SHORT & COULD BE ALTERED TO 3".

E.C. GUTTERIDGE
SUPT. POWER & ELECTRICAL DEPT.
27.7.1959.

DECODE.

TELEGRAM SENT.

From SECRETARY OF STATE *to* GOVERNOR

Despatched : 6:8:59 *Time :* 1710 *Received :* 7:8:59 *Time :* 1130

SECRET.

No. 78. Your telegram No. 85. Oil Storage.

Regret scheme not C D and W worthy. Admiralty now ask whether you expect to be able to go ahead with scheme in next two to three years.

CYPHER 'E' : SM

Dies gl.

7/8/59.

46

Y.H.

Rosarie - the answer is on the Sheep's back!

2. I will bring forward for discussion when Mr. D.T. returns.

47

Yes. HH ...9/8/59.

8/8/59.

48

Bill 15/8/59

Y.H.

I mentioned this briefly on your return. 10/8/59.

2. Use the reply on the lines of draft at 6c?

15/8/59.

Is you propose.

11.8.59.

(KIN 40)

DECODE.

TELEGRAM SENT.

49

From GOVERNOR *to* SECRETARY OF STATE

Despatched : 10:8:59 *Time :* 1600 *Received :* *Time :*

SECRET.

No. 126. Your telegram No. 78. (44) Oil Storage.

Scheme very much depends on financial position of Colony over next two or three years and it is therefore not possible to say at this stage whether scheme will be proceeded with.

O. A. G.

CYPHER 'E' : SM

Bu 25/1/61

Bu. 30/6 1/12/60 2/9

Hon C.S.,

The question of increasing our oil storage capacity is still with us, please see my minute at 122 file 0167. Matters came to a halt at 49 of this file.

At 40 of this file Admiralty doubted our costing of a 1,500 ton capacity tank. I prepared a break down of costs shown at 42 but I do not believe these were transmitted to S.of S.for Admiralty information. These costs were taken from firm quotations. The preparation of site and erection cost was calculated at £4,625, it will be noted however that "Mothercat" a subsidary of "Motherwell Bridge" had quoted £8,400 for erection only, but this was for 3 tanks, we only require one. However it would be wrong to reduce the quotation by one third. If Mothercat were asked to requote erection costs for one (1,500 ton tank), I believe the figure would be in the region of £6,000. Admiralty go even higher, see 40, and suggest £15,000 obviously someone is wide of the mark, it will be seen, that in all cases erection costs ride higher than the cost of the tank itself therefore I suggest the means of erecting should be attacked first. There are two ways I have in mind.

(a) Admiralty contribute their share by erecting a tank for us, they have the means. Only a year or so back two of their civilian employees, welder/erectors, spent several months repairing the Admiralty tanks at the Camber. These two men would I believe be quite willing to erect a tank for the Government if directed by their employers the Admiralty. If this course was adopted we would have to make certain that Admiralty also loaned erection gear, (not very cumbersone, could come out on Protector).

(b) We obtain the loan (winter time, off season), of two welders/erectors from South Georgia, again we would have to borrow erection equipment.

However the first thing to establish is whether the Government agree in principle to the need of another tank.

51.

I advise that we need to increase our diesel oil storage capacity for the following reasons:-

(a) We have 600 tons storage capacity. The Power Station and other minor needs will consume 400 tons annually.

(b) To maintain public services it is essential that the Power Station should have ample fuel stocks.

(c) There is no guarantee of a tanker visiting annually as has been the custom, to replenish stocks.

(d) If we had to purchase oil from Montevideo in R.M.S.Darwin the cost would be more than double.

(e) F.I.D.S. vessels would find it more economic and convenient to fuel in Stanley. (Sec F.I.D.S.).

(f) Admiralty require Diesel storage here for new frigates.

(g) The Colonial Government could use diesel oil to their advantage for heating Government buildings. (I have put forward suggestions regarding this in another file).

(h) It is likely that the Department of Industrial and Scientific Research (D.I.S.R.) will require oil for space heating, their estimated annual consumption is of the order of 100 tons, or they will substitute by using electricity, in either case more oil would be required. Depending upon the extent of the D.I.S.R. programme, and I believe it will not be small, they may become one of the larger consumers of oil/electricity. At this stage it might be wise to sound the DISR for possible contribution to a scheme, I have already spoken to the O/C.,R.R.S. along these lines, and his own opinion is that such a suggestion might receive favourable consideration.

I suggest Mr. Livermore should be asked to consider the oil storage problem as well and his views obtained on foundations and erection problems as this work or the supervision of it would be carried out by PWD personel.

Supt. P.E.Dept.

52

G.E. I think that we should again consider the question of increased storage.

= Refer to S/PW as suggested

8/4/60

H.C.S.

In a letter dated the 28th July, which I received on the 19th September, the C. in C., writing from Cape-town, said:

> "I am continuing to press the Admiralty to improve fuelling arrangements for H.M. Ships at Stanley, and have now suggested that a joint Admiralty/Colonial Office venture might be adopted, and that the facilities might be shared by H.M. and F.I.D.S. Ships."

I replied on the 7th October, saying:

> "I was very interested to hear that you are continuing to press the Admiralty about the improvement of fuelling arrangements here, and I hope that something will eventually be worked out. I am sure it is most important from a Naval point of view, and also it would be of advantage to the Colony and F.I.D.S. Ships."

I had not seen this correspondence for some time, and was unaware of the latest developments which took place when I was on leave. I think a joint venture, preferably with the Admiralty undertaking the erection, would be well worth while. Although our financial position has not improved, we might well regard this as an investment, for our present tanks do not hold an adequate reserve, and if by any chance a tanker was unable to visit Stanley, we should be in a bad way. Please consult Mr. Livermore as you suggest, and prepare a memorandum for consideration in Ex.Co. and S.F.C.

I am expecting a visit from the new C. in C. in March, and no doubt he will also wish to discuss the problem when he is here.

9th November 1960

54

HCS

I consider this scheme to be an investment and would like to point out that the whole of Stanley Water supply depends on Oil. We have no other way of getting water to Stanley other than Electricity.
P.W.D can do the Concrete Base and I would like to start soon as possible as this will be mason work.
I have received a letter from Mr Price Devonport Dockyard and he says he would be willing to come here to do the job for us (Mr Price was one of the Welders at the Cambet) Price told me that when asking for men for this work we should ask for

A. WELDER - ERECTOR.

I think it would be fair if Govt paid for the Base and the Lords of the Admiralty paid for Erection.

A.E. Luxmore
16/11/60.

54.

~~I think we should~~ afterwards the Admiralty
again ~~I suggest~~ that we pay for the tanks
~~I believe~~ to here and that they should do the
erecting. We might suggest the name of Mr.
Price who knows the terrain

67/4/60

55

S.P.E. Would you please 'vet' the draft at back cover & see that my facts are all correct & make what I have included all essential points & whether you have any suggestions

Sd
28/4/60

56

Hon.C.S.

Reference your minute at 55 regarding draft at cover.

Para.2.(1a). You may wish to add lighting and power. Medical services would also be considerably reduced.

Para.3. Tabulated cost. Third item might read. Erection of tank and preparation of site.

Para.4. I dont think it an investment to bring in a return unless we were to charge Admiralty and F.I.D.S. above cost of oil, I cannot see how we could do that when we ask them to participate in the capital cost. It might be regarded as an investment to offset purchasing from Montevideo. The main purpose is to ensure continuity of supply of electrical power on which so many other public services depend and at the same time provide facilities for fueling H.M.Ships etc.

Refering to H.Es. minute at 53 I would like to discuss technical problems with C in CS. Engineering Officer when he visits, Assuming an agreement in principle to the erction of another tank, there would remain the problem of supply from tanker to shore in the then larger quantities.

29-11-60. Supt. P.E.D.

57.

S.E. Draft memo to Exco Submitted.

I have slightly amended para 4. If consumption went up so that we could not meet it without recourse to Monte with present storage then the additional tanks would save us money.

As regards last para of 56, Supt P.E.D is most anxious that if this goes through the Admiralty should supply a separate ~~barge~~ lighter for Diesel oil

otherwise the question of demurrage might arise.

The other thing which SIPED wishes to discuss with C in C's Engineering Officer is that if only the Admiralty would clean out one of the tanks at the Camber and make it available for Diesel Oil the whole of this scheme of erecting a new tank would be unnecessary. I had not realised that this possibility existed.

However there would be no harm in the memo going to Ex C

Sm

30/4/60

59

Telegraphic Address :—
"ADMIRAL, YOUNGSFIELD."

*Telephone :—*71-1181
No.

**OFFICE OF THE COMMANDER-IN-CHIEF,
SOUTH ATLANTIC AND SOUTH AMERICA STATION,
YOUNGSFIELD, WYNBERG, CAPE.**

30th December, 1960.

S.A.61/45/1028

Your Excellency,

I am enclosing a copy of Admiralty Letter M.II/161/3/59 dated 2nd November, 1960, concerning the improvement of fuelling facilities at Port Stanley.

2. I will of course keep you informed of any further developments in this matter.

I have the honour to be,

Sir,

Your Excellency's obedient Servant,

for VICE ADMIRAL

His Excellency E.P. Arrowsmith, Esq., C.M.G.,
Governor of the Falkland Islands and
Dependencies,
Government House,
Port Stanley.

60

BY AIR

Admiralty,
London, S.W.1.

2 November, 1960.

Please address any reply to
The Secretary of the Admiralty

quoting "M.II/161/3/59"

Commander-in-Chief, South Atlantic and South America.

Copy to:- The Commanding Officer, H.M.S. PROTECTOR.

FALKLAND ISLANDS - FUELLING FACILITIES AT PORT STANLEY

I am to refer to your letter S.A.232/61/45 of the 23rd May, 1960, and to inform you that in order to improve the fuelling facilities at Port Stanley, approval has been given for the provision of an additional 500 ton dumb lighter solely for diesel storage, with its own pumping arrangements for making issues direct to H.M. Ships. The lighter will be towed out to Port Stanley in the spring of 1961. This will enable the full capacity of the existing lighter (C.505) to be used for F.F.O.

2. I am to add that material for the new mooring which will be required for the additional lighter will be shipped to the Falkland Islands as soon as possible and it is proposed that this should be laid by H.M.S. PROTECTOR concurrently with the laying of a replacement for the original lighter mooring which parted some years ago.

BY COMMAND OF THEIR LORDSHIPS,

COMMANDER-IN-CHIEF
-8 NOV 1960
S. ATLANTIC & S. AMERICA

J.H. Taylor.

61

H.C.S.

You will see from 60 that the Admiralty are proposing to send a 500 ton dumb lighter to Stanley, solely for diesel storage.

I again discussed this problem of oil storage with Captain Forbes the other day. He agrees that since a frigate would take 500 tons on one refuelling having journeyed to Stanley from the Cape, there are obvious advantages in increasing our storage capacity. He also agrees that probably the best way to do this would be to use one of the large tanks on the Camber. One tank is sufficient for Protector's requirements of F.F.O., and were any large amount to be needed, e.g. by an aircraft carrier task force, any such force would be accompanied by R.F.A. tankers. He suggests that we should probably start again on this from scratch, and take advantage of the C.in C.'s visit in March to discuss it with him.

28th January 1961

TBH

note to BU
before C.in C.'s visit
TBH 30/1/61

BU 17.3.61

62.

g.2 submitted
TBH 17/3

Your Excellency,

I refer to our conversation of the 29th March regarding tankage and fuel.

There is a prepared base for a third tank at the Camber site.

If a tanker is only to deliver oil at three year intervals a tank of 5,000 ton capacity would be required to meet Admiralty, F.I.D.S. and F.I.Government needs.

Annual requirements are estimated (see Protectors letter at cover)

(a)	Frigate	500 tons
(b)	F.I.D.S.	525 "
(c)	F.I.Govt.	400 "
		1,425 tons
3 Year Period		4,275 tons.

A fair proportion may be, one third of costs to each of the participants.

Cost of an installation at the Camber is difficult to estimate as it must also include pipelines etc. For this I go back to 40 of this file and quote Admiralty figure of £30,000, add a further £5,000 for increase in tank size i.e. 1,500 ton to 5,000 ton, and the figure is £35,000. If costs are to be equally shared the Colony's contribution would be of the order of £12,000. In actual fact if this figure is near correct we are getting off lightly as the Admiralty are apparantly bearing whole cost of fueling lighter which forms an essential part of fueling arrangements.

If a Tanker is only to visit at three yearly intervals then the Colony's oil storage capacity will require increasing to 1200 tons to meet present demand, or 1500 tons to meet future demands. This does not include FIDS requirements.

64

At 42 you will see that local estimate for a 1,500 ton tank is £10,000 under the former idea of all three participating. This idea catered for replenishment once every year.

There is not room at the Power Station site for a 5,000 ton tank to cater for all needs over a three year period. I think it would be unwise to store this quantity at this site even if it were possible.

A tank at the Camber with all three participating will be a more suitable arrangement for all concerned but it may be a more expensive initially for the Colony.

There is room at the Power Station for a tank of size sufficient for Colony needs only over a three year period. The installation of which should not cost more than £10,000.

I am afraid the forgoing appears a little confusing, however to summarize for Government.

The proposal for this Government to contribute towards the cost of erecting an oil storage tank of sufficient size to ensure Colony's fuel oil requirements over a period of three years is a sound one and one which will be necessary if a Tanker only delivers oil at three yearly intervals. No estimate has yet been arrived at but it is thought that the Colony's contribution will not be less than £12,000.

To summarize for Admiralty.

This Government are aware of the need for increasing oil storage facilities in the Colony and consider that the most economic and practical method of accomplishing this is a joint plan in which Admiralty, FIDS and the Colonial Government participate, each bearing one third of the cost. Provisional approval for the principle of this plan and for funds to meet the cost will be sought in the Executive and Legislative Councils.

63.

A tentative figure of £36,000 has been suggested in which each participant would be required to contribute £12,000.

Suggestion for siting the tank is at the Camber alongside the existing 8,000 ton capacity F.F.O. tanks where a third prepared base is already available.

It is thought that plans of the existing Admiralty Tank Farm and the associate pipelines will be held in the appropriate Admiralty Dept. Should this scheme be given favourable consideration It would be helpful if a provisional estimate of the cost be made available

30-3-61.

65A

H.M.S. PROTECTOR,

At Marguerite Bay.

13th March, 1961.

No. 203A/ /

COMMANDER - IN - CHIEF,
SOUTH ATLANTIC AND SOUTH AMERICA.
H.M.S. AFRIKANDER.

FALKLAND ISLANDS - FUELLING FACILITIES AT PORT STANLEY

References:- (a) A.L. MII/161/3/59 dated 2nd November 1960.

(b) H.M.S. PROTECTOR's letter No. 5/294/203A dated 24th April, 1960.

(c) H.M.S. PROTECTOR's letter No. 203A dated 13th June, 1960.

(d) H.M.S. PROTECTOR's letter No. 203A dated 7th February, 1961.

The approval for a second fuel lighter to be provided at Port Stanley (reference (a)) solves the problem of maintaining an emergency supply of 500 tons of dieso at Port Stanley for the use of diesel frigates whilst at the same time retaining a lighter of 500 tons capacity for replenishing ships with F.F.O. from the shore tanks. This latter is contingent on action being taken to refit the existing lighter (reference (d)).

2. Two fourth class moorings for these lighters have been laid. The requirements in paragraph 6(a) and (b) of reference (b) have therefore been met or are about to be met.

3. There remains the question of a suitable diesel fuel storage tank at Stanley to provide for the operational needs of a diesel frigate should it be necessary to station one at Stanley and at the same time provide storage for diesel fuel for F.I.D.S. ships and the Government Power Station (paragraph 6(c) of reference (b)).

4. There would appear to be two alternatives for providing this dieso storage:-

(a) to use one of the two existing 8,000 ton tanks at present used for F.F.O.

(b) to build a new tank of 5,000 tons capacity.

In both cases a diesel pipe line from the tank to the Camber jetty would be a requirement.

Converting one of existing F.F.O. tanks to Dieso.

5. The maximum requirement of F.F.O. for H.M.S. PROTECTOR during a season is estimated to be 5,500 tons. (The average requirement for the last six years has been 5000 tons per annum). It is presumed that any large ship visiting the Falkland Islands would be accompanied by an R.F.A. since fuelling in Port William with a 500 ton dumb lighter would be a long and tedious procedure.

/ If one .....

If one tank was converted to dieso storage there would be a balance of 2,500 tons of F.F.O. over H.M.S. PROTECTOR's requirements, for fuelling other smaller ships annually. One disadvantage of transferring one tank to dieso is that even if the PROTECTOR is the only user of the F.F.O. it will be neoessary to replenish the tank annually. If both tanks continue to contain F.F.O. it will probably only be necessary to replenish them every three years. A further disadvantage is the labour involved in cleaning an existing tank since it is unlikely that sufficient men will be available locally.

Building a new tank for Dieso.

6. If a new tank for dieso is built it is considered that it should be of sufficient size to require replenishment only every three years assuming that it is used for transiting diesel frigates only. The annual requirements are estimated to be:-

(a) For one transiting frigate annually 500 tons

(b) For F.I.D.S. ships 525 tons

(c) For Government Power Station 400 tons

A tank of 5000 tons capacity would therefore be required.

7. There are already a number of sites for fuel tanks cleared and levelled near to the existing tanks.

Recommendation.

8. In view of the considerable saving that would accrue from only having to replenish stocks every two or three years it is recommended that a new tank of 5000 tons capacity, should be built. It is suggested that the Colonial Office be approached with a view to sharing the cost of this project, which will be of considerable benefit both to the Falkland Island Government and Falkland Island Dependencies Survey.

D.N. FORBES

(D.N. FORBES)
CAPTAIN.

FST 123/78/03

Your Ref. 1905

CONFIDENTIAL

68

Saving

From the Secretary of State for the Colonies.

To the Officer Administering the Government of FALKLAND ISLANDS (COLONY)

Date 24 May 1961

No. 44 **Saving**

66

Your savingram No.85 (Colony) of 5th April.

Oil Storage

69

I enclose a copy of a letter received from the Admiralty Naval Store Department in reply to my approach to that Department on the subject of your savingram under reference.

I will let you have the Admiralty's further comments as soon as they have received and examined the Commander-in-Chief's report.

SECER

CONFIDENTIAL

F. I. ref: 1905
C. O. ref:

66

SAVING TELEGRAM.

From: The Officer Administering the Government of the Falkland Islands.

To: The Secretary of State for the Colonies.

Date: 5th April 1961

No. 85 SAVING. COLONY

CONFIDENTIAL

OIL STORAGE

40 Please refer to your savingram No.55 of 27th May 1959, and subsequent correspondence on the above subject.

I discussed the problem of oil storage with the Commander in Chief during his recent visit, and I understand he will be submitting proposals to the Admiralty to increase stocks of diesel fuel here. An Admiralty tug is about to leave the United Kingdom with a second fuel lighter for Port Stanley in tow. This will ensure that an emergency supply of 500 tons of diesel fuel is available at Stanley for the use of visiting frigates, but this amount would provide no reserve for any operational needs should a frigate be here for some time. The Admiralty are, therefore, considering the erection of a storage tank, which would not only provide a reserve of fuel for Naval needs, but also for the use of F.I.D.S. ships and the Government Power Station. It is estimated that this tank would be filled by a B.P.A. tanker every three years, and the annual requirements would be as follows:-

For one frigate	500 tons
For F.I.D.S. ships	525 tons
For Government requirements	400 tons

A tank of 5,000 tons capacity would be required, to allow for some reserve.

It is not easy for us to calculate the cost of such a tank, but it has been suggested that the most suitable location for it would be near to the present Admiralty tanks in Port Stanley, where there is already a prepared base for a third tank on the Camber site. It is suggested that the Admiralty must have a record of the costs of installation of the two 8,000 ton tanks at the Camber site, and could furnish more accurate figures than we could hope to produce here. I may add that these tanks are sheathed in concrete, and it is possible that this would not be necessary for a new tank.

Once an estimate of the cost of the tank and its erection is available, it would be necessary to consider the shares to be paid by the Admiralty, F.I.D.S. and the Colony, and I should be glad to learn what the Admiralty's views on this would be. I understand that the Admiralty employs civilian steel erectors, who may be able to undertake the work. I would, of course, have to consult Executive and Legislative Councils before committing the Colony, but I am hopeful that they would regard such a proposal with favour. F.I.D.S. share of the cost, which would result in economies compared with refueling in South America and South Georgia, would have to be met with funds over and above the present ceiling.

Seen 3/4/61 Bill for supply 30.7.61

GOVERNOR

67

No further action taken

Remainder of course will NOT

go to Ex Co and can stay at base

f.c. in case we want any books from

it

JS 12/4/61

BU 30.7.61 (mail)

Naval Store Department,
ADMIRALTY,
Whitehall,
London, S.W.1.

69

12 May, 1961.

Dear Whitefield,

Thank you for your letter of 4th May, ref. F.S.T.123/78/03, about the storage of diesel oil in the Falkland Islands. We have not yet received the report from the Commander-in-Chief referred to by the Governer in his savingram, but I will let you know as soon as his proposals have been received and examined.

2. You will recall that the original idea was to build a 1,500 ton tank on a shared-cost basis to provide storage for 800 tons of diesel for the Colony, 500 tons for the F.I.D.S. and 200 tons for the Admiralty. Further study of our requirements showed a need for a reserve of 500 tons of diesel for the Admiralty and we estimated that it would cost some £32,000 to build a 1,800 ton tank to allow for this increased stock. This scheme was, however, dropped when it was stated that the Colony's share of the cost could not be met and we have now placed a 500 ton Lighter at Port Stanley to hold our reserve. Until the views of the Commander-in-Chief are received, I am unable to comment on the need now to provide shore tankage in addition, or to estimate when funds could be made available for such a project, but I assume that, if undertaken, the costs of construction would be shared between the users in proportion to their allocations.

Yours sincerely,

(A.T.J. THOMAS)

G. H. Whitefield, Esq.

EBB/CCB/38

70

g.c.

68 & 69 submitted. We did not definitely state that we could not meet other than f the cost - vide 49 - but anyhow the position is explained now by 66 and we can only hope that after C in C's recommendation they will get on with it. No action needed now.

S
9/6/61

71

HCS

Since the old barge has been taken away, the Admiralty is no better off. I had thought the idea was to have two barges, one for f.f.o & the other for diesso.

72 TSA 9.6.61

Shown. We believe that the old barge is to be replaced - await further communication B.U in a month
S 10/6/61

B.U. 10.7.61,

BU after mail has been seen
S 10/7/61

73

YH.

We have not received the expected communication.

9.8.61

BU 19.7.61 mail

No mail
YH 19/7/61

BU 8.8.61 (mail)

No mail
YH 9/8/61

BU 16.9.61 BU 16.9.61. BU 16/9/61

74

y.e.

See 68 We have heard nothing more.

I wonder whether y.e. got any information

sm

16/9/61

60

19th September 1961

(Dear Admiral)

When I was in England, I enquired about the provision of additional fuelling facilities at Stanley. I understand the Admiralty view is that since a second fuel lighter has been provided, the requirements of the Royal Navy have been met.

2. I do not know if you contemplate taking any further 65A action as a result of Forbes' minute No. 203A of March 13, but should you do so, I am very interested from the point of view of F.I.D.S. ships and the Government Power Station.

Yours sincerely,

(signed Edwin Arrowsmith)

Vice Admiral Sir Nicholas Copeman, K.B.E., C.B., D.S.C.

Repeat at 82.

H. C. S.

I took up the question of oil storage with the Admiralty while I was in England, and I am afraid because we were unable to agree to spending money on new oil storage facilities in 1959, they went ahead with providing a second barge, and they think this is sufficient for their requirements here. They had not, however, received any recommendation from the Commander-in-Chief, which might have followed from the memorandum at 65a and 65b in this file. Possibly if he considers that additional storage space is desirable, the Admiralty might reconsider their decision. I shall write to the Commander-in-Chief to find out the position.

2. I understand that H.M.S. Protector will be towing down the old barge which has been renovated in Buenos Aires on her trip out here.

18th September 1961

PM.

P.U. 18.11.61

From: VICE-ADMIRAL SIR NICHOLAS COPEMAN, K.B.E., C.B., D.S.C.

82

COMMANDER-IN-CHIEF,
SOUTH ATLANTIC AND SOUTH AMERICA
STATION,
YOUNGSFIELD, WYNBERG, CAPE.

11th October, 1961.

No. S.A.61/45/3035

Dear Sir Edwin,

80 Thank you for your letter of 19th September regarding the fuelling facilities at Port Stanley.

As you were informed by the Admiralty, the provision of the additional lighter for diesel fuel has met our requirements for the time being, so long as we do not operate diesel ships from Stanley.

Even if we should operate diesel ships from Stanley, the most suitable course would appear to be to turn over one of the 8,000 ton F.F.O. tanks to Diesel fuel, and I have forwarded Forbes' letter No. 203A/1 of
65A 13th March to the Admiralty supporting this proposal in his paragraph 4(a).

I think it is unlikely that we should ever instal a floating pipe line since the depth of water would preclude it being of any use for large ships e.g., Cruisers and above.

Yours sincerely

Nicholas Copeman

File & return.

His Excellency Sir Edwin Arrowsmith,
K.C.M.G.,
Government House,
Falkland Islands.

Y.E. See para 3 of 4A & 64A.
? await further developments
8/11/61

Y. E.

83 & 84 for your information as requested.

29-11-61.

Hon.C.S.,

H.E. discussed the following fuel problems with me this morning.

Admiralty have dropped out of the fueling question for the time being, their forseeable needs having been met by the storage afforded by an additional oil barge.

It is probable that an Admiralty tanker will now only visit once every two, possibly three years.

In view of the above it is necessary that the question of increasing the Colony's oil storage capacity should be reconsidered.

The Colony's total annual needs in order of priority are:-

Power Stn., Philomel, PWD. etc.	500 tons	Essential
F.I.D.S. Vessels.	525 tons	Desirable Essential
Darwin School	100 tons	Desirable
Private Consumers	270 tons	Desirable
Government Buildings Stanley	300 tons	Projected
TOTAL =	1,695 tons	

Existing storage capacity is 600 tons.

	Essential	Essential & Desirable	Essential Desirable Projected.
Replenishment two yearly period	1,200	2,990	3,590
Replenishment three yearly period	1,700	4,385	6,075

(200 tons being added to above figures.)

It will be seen from the above tabulation that it is essential to double our storage capacity and a likely essential that we may have to increase it to 1,700 tons to allow for a three year period. The other combinations can also be seen going to a maximum of 6,000 odd tons. This last figure is somewhat formidable but is not fanciful as may be seen from its composition.

2390
1050
1340

1695
525
1170
600
570

84.

Estimated capital cost for tank purchase and erection is from £6,000 for the smallest size to £30,000 for the largest. There would also be additional costs depending upon the siting, for oil pipes and pumping arrangements. A further sum would also be necessary for stocking with oil, this would amount to £15,000 minimum to £75,000 maximum, allowing cost at £15 per ton.

There is a remote possibility that a Camber tank may become available for purchase or hire, however in such an event caution would be necessary before accepting such an offer, should one be made, as these tanks may need extensive overhauls before they were made diesel oiltight, also there is the problem of thoroughly cleaning them.

Assuming it is decided to build an additional tank or tanks the question of siting occures. There is only room on the existing site to meet the smallest requirement i.e. 1,000 tons. A larger tank or tanks would need to be sited either at the Camber were extensive piping and pumping facilities would be necessary and there would be the need to replenish the existing storage tanks by barging oil over periodically. Or another site might be found on this side, preferably near the water side as it must be remembered that quite a large quantity of the oil would need to be re-transhipped to F.I.D.S. vessels, and to R.M.S.Darwin for transportation to the camp.

To summerize, decision is needed to agree in principle to increase our capacity. Then to decide on the most economical size, bearing in mind size of tanker likely to call here. Finally siting. I have spoken to the Hon C.T. and briefly explained the nature of the costs involved, his major comment was to be informed as early as possible of any decision in order that he might withold sufficient funds

Supt P.W.D.
28.11.61

85

H.C.S.

I discussed the problem of oil storage with the S.P.E. on his return, and he has addressed a minute to you at 83 and 84.

2. Apart from Government needs, the matter of refuelling our F.I.D.S. ships is immediately urgent. They have, as you know, refuelled at Salvesens in South Georgia in the past. Now Salvesens have ceased to operate, and very probably they may never operate their shore station at Leith Harbour again, this means that arrangements will have to be made for F.I.D.S. ships to refuel at Grytviken. There is no immediate reason to suppose that Albion Star will close down, but should they have a bad season at any time Ryan might well decide to do so. This could cause an immediate crisis in the refuelling of F.I.D.S. ships, unless the Navy were prepared to help by allowing them to refuel from the barge in Stanley. They could only do this if the barge could be immediately refilled from a tanker. Apart from these considerations, the purchase of fuel in South Georgia is expensive.

3. It is clearly in the interests of both the Colony and F.I.D.S. that our storage capacity should be increased, and I think the first thing to learn is how often we can rely on an Admiralty tanker visiting the Falklands. I hope that we may have an annual visit, but it would probably be best to provide storage for a two year period in case a tanker is, for any reason, unable to come here in any one year. I will discuss this with Captain Graham on his return, and would like to have this file back then.

Extracted to 0270/EE

4. Apart from gasoil requirements, Secfids is interested in obtaining aviation fuel from an Admiralty tanker. The carriage of aviation fuel in F.I.D.S. ships from England is dangerous and unsatisfactory. I would think that aviation fuel from an Admiralty tanker would be better than from Montevideo, and we might like to go in on this for our own Air Service if it could be arranged. Would you discuss with D.C.A.

5. There is no need for this file to be classified secret or confidential.

December 16 1961

TRH

Declassify & destroy 30/12/61

86

J.S.

DCA reckons that it costs nearly twice as much what with one thing or another, to get fuel via Monte as it would to get it direct from a tanker.

The question of storage would arise. They now get about 60 drums every two months. If we have to provide for 2 years storage we would need to be able to store about 800 drums. But this should not prove an insurmountable problem.

Extracted to 0270/EE.

8th 21/12/61

S 7.

Y.E.

Reference 83,84,85, I have drafted letter to C.As. and telegram to A/O South Georgia as requested, at cover for your approval please.

12-1-62.

88

HCS

We shd. get off letter to C.As by next mail & also Telegram to A.O. South Georgia.

16.1.62

DECODE.

TELEGRAM.

From Colonial Secretary, Stanley.

To Administrative Officer, South Georgia.

Despatched : 17th January, *19* 62. *Time :* 1515

Received : *19* *Time :*

No. 11. Government are considering purchasing two mild steel welded oil fuel tanks each of 1,000 tons capacity to be erected in Stanley. No erectors are available here. Would it be possible to arrange contract with Albion Star for one or two welder/erectors to come here at end of season (say April 1963) erect tanks and be returned Norway or by winter Darwin to South Georgia? Unskilled labour available here to assist and also welding equipment. Special jacks as recommended by erector to be hired from Albion Star. Grateful if you would consult Ringdahl and if he considers this idea feasible please give approximate cost of hiring erectors.

Colonial Secretary

G.T.C. : EPA/LH

Reply at 91.

1905

22nd January, 62.

Gentlemen,

I am directed to ask you to refer to your letter of enquiry to the Motherwell Bridge and Engineering Co. Ltd. under your reference EC3 Falkland Islands 8056/1 dated the 23rd September 1958, and their letter of reply reference DB/MHC/4367A(DK) dated the 10th October 1958.

It is now considered essential that our fuel storage capacity should be increased by at least 2,000 tons. I am therefore to ask you to obtain from Messrs. Motherwell's a quotation for two mild steel welded tanks each of 1,000 tons capacity suitable for the storage of diesel oil of specific gravity of 0.85. The quotation should include costs of electrodes and erection equipment. Further to this enquiry the Motherwell Bridge Contracting and Trading Co. Ltd. should be asked to quote for the contract of erecting two such tanks on a prepared base at Port Stanley. It would also be of interest to us to know the additional cost involved if the two tanks were to be each of (a) 1,250 tons and (b) 1,500 tons capacity.

The exact site for these tanks has not yet been chosen but wherever it may be pipework to and away from the tanks will be necessary. It would be of great assistance if you are able to supply information relating to the types of piping, and fittings including plastic if suitable, and of pumping machinery from the following information in order that an indent may be prepared once the site has been fixed. Prices wherever possible should be given. These need not be firm but are needed to serve as a guide when estimating.

Total maximum length of the pipe line may be 2,500 yards rising to a static head of 40 feet to tank base. The method of filling will be from a dump lighter. The rate of discharge received will be not less than 120 tons per hour. Length of suction pipe is 45 feet, suction head 15 feet. An electrically driven pump would be required, also standpipe and flexible piping on the suction side of the pump.

It has been noticed that several of the oil tanks erected at South Georgia by the whaling companies are built on a series of long concrete plinths, this it is understood is to facilitate repairs should leakage occure on the tank bottom. I would be pleased to learn whether this is common practice and whether you would recommend its adoption here.

I am,
Gentlemen,
Your obedient servant,

(Sgd.) H.L. Bound

for COLONIAL SECRETARY.

Reply at 107.

See 105.

Crown Agents for Oversea Governments and Administrations,
4, Millbank,
LONDON, S.W.1.

Copy to: S/PE.

BU 10.2.62 (By)

ECG/LH

DECODE.

TELEGRAM.

From Administrative Officer, South Georgia.

To Colonial Secretary, Stanley.

Despatched : 25th January, *19* 62. *Time :* 1730

Received : 26th January, *19* 62. *Time :* 0945

89

No. 19. Your telegram No. 11. Have received long letter from Ringdal setting out terms and conditions under which he would undertake steel-works erection tanks. Copy forwarded by Kista Dan for your consideration. Estimate not including travelling expenses board and lodgings £900 per tank plus men's wages from the date of departure from South Georgia to commencement construction and from the date of completion of construction until the return to Norway or South Georgia at the rate of £150 per man per month. Hire of special jacks £175 for the period of 6 months. Also mention insurance workers for the period.

Administrative Officer

G.T.C. : TB
TYPED. : LH

92.

SPL

I do not think any decision can be made on 91 till we (a) get the full report on Mister Dar (b) get a reply to 90.

However it looks as though in any case for 2000 tons storage would be between £2000 & £3000. Whereas the SG think for medium storage of 1,200 tons would cost £6000 Please consider & speak to me tomorrow

JR 31/1/62

93

Ref G.S.

2 erections

The quotation received from the Motherwell Bridge Co for these tanks was £8,400 in 1955. It might well be £10,000 now. S.G. would at present prices be well below half of this. CC 90. You will note 6 Bs have been asked to quote for 2 × 1000 ton and 2 × 1500 ton tanks. This quotation will I believe be between £8,000 & £10,000. Say £10,000 with £4,000 more for erection, making £14,000. To this must be added foundations & piping and painting.

J.S. 1-2-62.

94.

Y.E. Discussed with SPE.

The position is as follows.

1. Cost of tanks. We await reply to 90.
SPE mention £10 000

2. Erection (a) By Albion Steam. (see 91)
SPE has done some calculations & allowed for 2 men for 3 months & possible fares to have work & worked it out at £4000

(b) By men from England. SP.E says that previous rate quoted was £8,400 & also he would consider that it would probably be above £10 000.
again we must await reply to 90 but it would appear that Albion Steam would be the answer.
✓ We should now thank A.O for 91 & indicate interest & that further reply will follow.

3. Construction of base & installation of inlet line.
Before we can start estimating for this we will have to decide on a site. SPE says ✓ that the only site he can think of is East of the Rubbish Dump. Shall I now go into this question with SP & SPE and report further?

Sm 1/2/62.

1.2.

95

To A O as ad b/c R
received
8.1/2/62.

96

Psy 2.2.62

etat ADMINOFF SOUTH GEORGIA DEPSA/c

91 No. 22. Yourtel 19 read with great interest will communicate further after arrival of Kista Dan

Secretary

KIV 95

RHDM/LH

Diesel Oil for King Edward Point South Georgia

It may be necessary to make arrangements to refuel ships from stocks by BAS ship on Darwin in South annual consumption 200 tons. This is dealt with in D/3/62. We must also note this as a possible requirement & consider whether our bulk storage tanks can hold enough to outlast our return 200 tons a year.

5.

SPC

98

Please see 97

Could you please arrange for the removal of this file to us.

Does 90 want reconsidering also?

DH

2/2.

99

For CS.

As above, we spoke. The question of supplying S.G. should Albion Star close down was not considered when estimating tank capacity here. Should Albion Star close down, there is the possibility that we might supply S.G. from here in B.A.S. ships, this of course would depend upon their tankering capacity. I do not think we need do anything until we receive C.A.S. reply re 90.

2-2-62.

100

Shown. Noted at Lunch

8/2/62.

27.2.62

Bu 96 27/2/62

Kiel Canal

MEMO

S.G. No. 154

C.S. No.....

1st February 19 62

From :—

THE ADMINISTRATIVE OFFICER,

SOUTH GEORGIA.

To :—

The Honourable,

The Colonial Secretary,

Port Stanley.

Erection Oil Tanks Stanley.

Attached herewith please find letter from Albion Star on the above subject.

With reference to the last paragraph. Ringdal mentioned to me that he hoped to be able to visit Stanley on his way home in early April . He felt it would be a good opportunity to meet his fellow Directors Barton and Harding and I feel sure they would also like to meet Ringdal. Apart from such a visit giving an opportunity to discuss the erection of the oil tanks, it would also allow more general discussions on Albion Star.

Stalevan

ALBION STAR (SOUTH GEORGIA) LTD.

10 2J

Grytviken, 22nd January 1962.-

The Administrative Officer,
King Edward Cove,
SOUTH GEORGIA

Dear Sirs,

Erection of Oil Tanks - Port Stanley.

With reference to your letter of the 18th inst., we beg to give you the following information in connection with your proposal.

Provided our Company decide to operate Grytviken next season, we should be able to supply two welder/erectors to go to Stanley at the end of the season 1962/63, on the following conditions:

We are supposing that the tanks have been prefabricated as usually on such occasions and also that the concrete foundations for the tanks have been completed in beforehand.

All materials should be available at the site, also an electric winch or a tractor enabling to lift and move the steel plates and other heavy goods.

Assistance of local unskilled labourers is required until completion of the work.

Water filling of the tanks for testing and necessary pumping equipment to be arranged by the Government under the erectors' supervision and control. Piping outside the tanks excluded.

We estimate the cost of hiring two welder/erectors to be approximately £ 900.- per tank. In addition to this the pay for each man will be £ 105.- per month (or pro rata for part thereof) from departure South Georgia until commencement of the job. The same amount to be paid from the time both tanks have been erected and until the two men have arrived in Norway or back here at Grytviken. The monthly pay is subject to alteration according to agreements between the Norwegian Unions for the season 1962/63.

All travelling expenses and also board and lodging in Port Stanley to be paid by the Government. The welder/erectors have also to be insured against sickness and accident, during the whole period. This insurance may be excluded provided a Norwegian Insurance Company accept to insure the welder/erectors on this special contract. If so, we will inform the Colonial Secretary accordingly.

The special type "Jack" together with the accessories to be collected at Grytviken and to be returned in due course, for account of the Government. For this service there will be a charge of £ 175.- for a period of 6 months.

In connection with the erection of the tanks a special type of steelring to withstand a certain concentration of stress is required. This steelring could be supplied by us, and made according to your drawings of the tanks. The cost of this ring to be included in the final settlement.

We notice from your letter the advantage of discussing various matters on the spot. We entirely agree with this as details could then be discussed and clarified to the satisfaction of both parties. The undersigned, however, is unable to state at this stage whether such a visit can be arranged. Nevertheless it is a matter on which discussions could be arranged with fellow Directors.

Yours faithfully,

ALBION STAR (SOUTH GEORGIA) LTD.

104-

SPG

Lords Com. Study re. Thurrock please

N. Ps also question of site

JR 24/2/62

105

JE. 102 for information

We still await a reply to EO. One meanwhile I could get on to SPG & the three of us could choose a site or sites so that when Principal comes we can work everything out.

Ex Co might be told next meeting?

We can acknowledge with thanks and say we should be very pleased indeed if Principal would come

JR 2/3/62.

2.3.62

Note for Ex Co & reasons

JR.

Noted for Ex Co.

6.3.62.

1905

5th April 62.

To: Captain Turnbull,

From: The Colonial Secretary, R.R.S. Shackleton,

at STANLEY.

Proposed additional storage for Diesel Oil Stanley

I should like to consider the question of the site for the new tank if additional storage is provided and the method to be adopted for fuelling the B.A.S. ships.

2. If it is convenient could you kindly discuss this at my office on Friday 6th April at 2.15 p.m.

Copy to SPW. Could you please be present too. After the meeting I should like to inspect with you the Public Jetty and the Gymnasium. (Sec BAS, HM & SPT have been informed and will be there)

R.H.D.Manders.

(Sgd) ~~H.L.Beund.~~

~~for~~ COLONIAL SECRETARY

RHDM/FH

THE FOLLOWING REFERENCE AND THE DATE OF THIS LETTER SHOULD BE QUOTED IN COMMUNICATIONS.

107.

EC2/Falkland Is. 9084.

CROWN AGENTS
FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS

4, MILLBANK,
LONDON, S.W.1.

TELEGRAMS { INLAND: "CROWN, SOWEST, LONDON."
OVERSEA: "CROWN, LONDON S W 1"

TELEPHONE: ABBEY 7730

TELEX No. 24209

23rd March, 1962.

Sir,

90 I am directed to refer to your letter No. 1905 dated the 22nd January asking for up to date quotations for Oil Storage Tanks from the Motherwell Bridge & Engineering Co. Ltd. It is regretted that the matter has been somewhat protracted but it was found, on receipt of your letter, that the original correspondence which took place in 1958 was no longer available in this office. However, an immediate approach was made to the Motherwell Bridge & Engineering Co. Ltd. and they were asked to forward a quotation for the required items and at the same time to furnish this office with copies of the original correspondence if still available. The firm's quotation has now been received and a copy is enclosed herewith for information. Also enclosed herewith are copies of quotations for Pumping Equipment which have been received from the following firms:-

(i) Berry Hill (Engineers) Ltd.
(ii) The Drum Engineering Co. Ltd.
(iii) Worthington-Simpson Ltd.

The enquiry which was issued to the pumping manufacturers was of a tentative nature as it was not known at that time the dimensions of the tank and the exact head against which the pump would have to operate. There are certain aspects in connection with the enclosed quotations which are the subject of correspondence with the firms, but it was felt that in view of the delay which has occurred the offers should be forwarded to you at this stage.

An enquiry was issued to Stewarts & Lloyds Ltd. and they have quoted for the following:-

Hot Finished Seamless Steel Linepipe to API. 5 L, Grade 'A' or 'B' with ends bevelled and in random lengths.

Approximate Feetage	:	7,500
O.D.	:	6.5/8"
Thickness	:	.188"
Price per 100 feet	:	£43.2.2d.
Delivery	:	4 - 6 weeks.

The question of alternative types of piping is still being investigated.

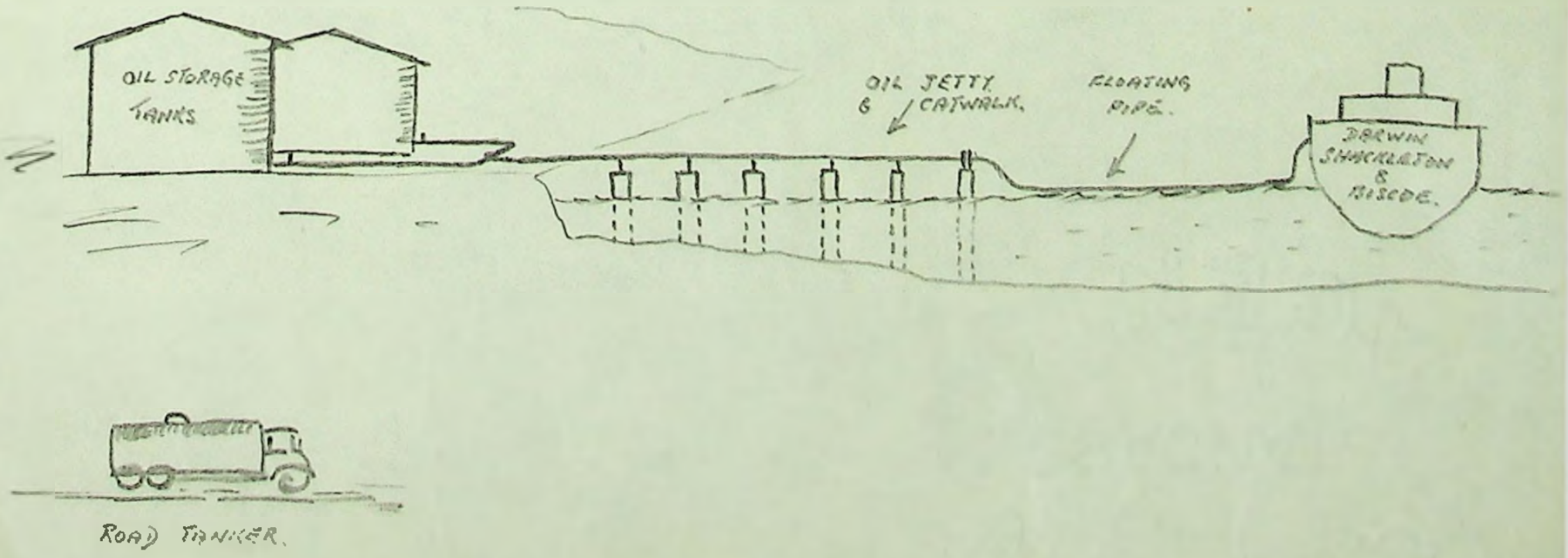
I am, Sir,
Your obedient servant,

The Colonial Secretary,
Colonial Secretary's Office,
Stanley,
Falkland Islands.

JF/FJH

Oil Storage, Delivery & Discharge.

The only means of delivery and dicharge of oil from the proposed oil storage tanks to be situated somewhere east of the Stanley Cemetery to be considered has been by pipeline. After studying the problem further I beleive there may be an alternative method which would be cheaper, involve much less civil work and be perhaps more effective. Itbis ;
That a narrow oil jetty built on concrete piles and carrying only the pipeline and a catwalk be built close to where the tanks are to be erected. That the oil jetty be taken as far to sea as is practical and that a floating rubber hose is used to disharge oil for bunkers to B.A.S. vessels and for delivery purposes to R.M.S.Darwin, the vessels could be anchored or buoyed off the jetty. When the storage tanks need replenishing the lighter carrying the fuel should be able to come alongside and pump, using her own pumps. Oil required by the Power Station and for other services could be transported by a diesel driven road tanker capacity of six tons, weekly rate of consumption at the Power Station is approximately twelve tons per week. The advantage of this method would I believe be a large reduction in capital cost and civil engineering works, a further advantage would be that should the Government adopt oil firing for Government buildings we would have the means of delivery of the oil to the various installations.



Oil Storage.

Two schemes are proposed regarding the reception and delivery of oil fuel from the proposed oil storage tanks to be situated close to the Town rubbish dump.

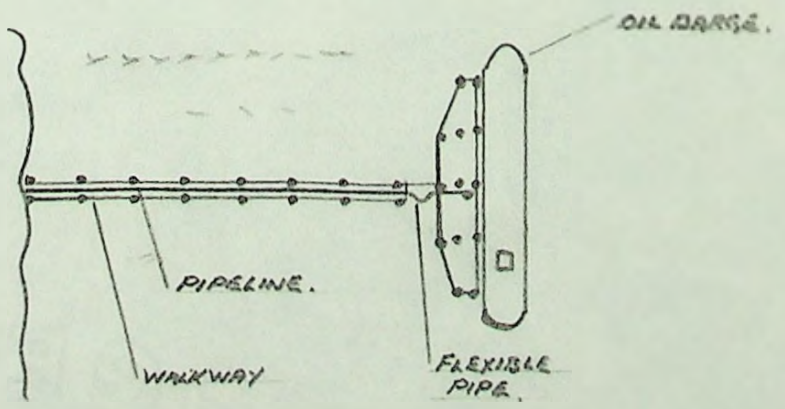
Scheme A.

That a pipeline is laid from the proposed tank site to connect with the existing oil pipeline at the Government jetty. Stand pipes being erected at the Public and F.I.C. jetties. Reception of oil would be accomplished by the oil barge discharging at any of these jetties including the Government jetty to the tanks. Delivery of oil would be accomplished by pumping back toany of these stand pipes to ships or via the existing pipeline to the Power Station.

Scheme B.

That an oil jetty is built at the tank site seawards to a point where there is sufficient water for the oil barge to come alongside, see sketch. Reception of oil would be direct from the barge through the pipe along the jetty to the tanks. Delivery would be the reversed process but if to a ship a floating pipeline would also be used as the ship would be required to lay off a short distance to avoid possible damge to the jetty and lack of sufficient water. Delivery to the Power Station would be in the same manner but to the oil barge which would then be towed to the Government jetty where the oil would be dicharged in the usual way.

It would be an advantage to have a tractor towed road tanker or bowser for the delivery of small amounts of up to six tons to other installations or to a ship alongside one of the jetties if only a small amount was required.



Oil Storage Provisional Costing

Costs applicable to both schemes.

Tanks, inluding freight and erection charges.	2,000 ton.	2,500 ton.	3,000 ton.
By Motherwell Bridge.	£20,454.	£23,860.	£26,076.
By South Georgia Labour.	£13,154.	£14,360.	£15,376.

Construction and preparation of base and site. £4,000.+

Tank pipework. £1,000.+

/13.838

Scheme A.

Pipeline. Pipe only 12" £36,000. 6" £3,225. add pipe fittings and construction £5,000.+

Pump. £1,500.

Scheme B.

Jetty. £6,000+

Piping for jetty and to tanks £800.+

Floating pipe. £500.+

Pump. It may with this scheme be possible to use barge pump for discharging and gravity for feeding back.

Optional both schemes, bowser trailer. £2,000.

N.B.Figures marked + are approximate only.

EXTRACT FROM MINUTES OF EXECUTIVE COUNCIL MEETING

HELD ON 20TH 21ST AND 22ND MARCH, 1962

Oil Storage (1905)

The necessity to increase the facilities for oil storage was discussed and it was generally accepted that it was necessary to provide two additional storage tanks. These would be erected jointly at the expense of Government and British Antarctic Survey.

Clerk of Executive Council

LH

Minute from His Excellency the Governor to the Honourable the Colonial Secretary.

112

I attach papers regarding the oil storage scheme. Provision is being included in the B.A.S. estimates for ~~their~~ our share, but it will be some time before we know whether or not this has been approved. There should be no difficulty as the arguments in its favour as far as B.A.S. ~~are~~ is concerned are overwhelming, but one never knows with the Treasury. In the meantime we should look again at the Albion Star proposals, and it might not be too early to enquire whether we could anticipate that two welders would be available at the end of the whaling season next year.

EBA

April 17, 1962

113

See

SPG ; re alternative site at Cambe

Sent see 1905/A. Send telegram as suggested by him.

We will now get on to Albion Star

R 30/4/62.

114

THE FOLLOWING REFERENCE AND THE DATE OF THIS LETTER SHOULD BE QUOTED IN COMMUNICATIONS.

Q/EC2/Falkland Islands 9084

CROWN AGENTS
FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS

4, MILLBANK,
LONDON, S.W.1.

TELEGRAMS { INLAND: "CROWN, SOWEST, LONDON." / OVERSEA: "CROWN, LONDON S W 1"
TELEPHONE: ABBEY 7730
TELEX No. 24209

9th April, 1962.

107
90
115-17

Sir,

Further to this office letter dated 23rd March, in connection with your letter 1905 dated 22nd January, I am now directed to enclose herewith a copy of a supplementary quotation which has been received from the Motherwell Bridge & Engineering Co. Ltd. You will note that the firm are now putting forward 8 in. diameter pipe as being suitable for this requirement. It is pointed out however that in the event of an Indent being forwarded for the tanks and piping a separate enquiry would be issued to pipe manufacturers with a view to obtaining more competitive prices.

I am, Sir,
Your obedient servant,

D Fulton

The Colonial Secretary,
Colonial Secretary's Office,
Stanley,
FALKLAND ISLANDS.

JF/JW

115

THE MOTHERWELL BRIDGE & ENGINEERING CO. LTD.

TELEPHONE: MOTHERWELL 5241
TELEPHONE: LONDON KNIGHTSBRIDGE 0701
TELEX: 77137 (MOTHERWELL)
24193 (LONDON)

LONDON OFFICE
23, PRINCES GATE, S.W.7.

P.O. BOX No. 4
MOTHERWELL
SCOTLAND

TELEGRAMS: BRIDGE, MOTHERWELL
TELEGRAMS: MORRICOLIX, LONDON

YOUR REF. Q/EC2/Falkland Islands 9084.

OUR REF. DB/MM/9600A (DK).

2nd April, 1962.

Crown Agents
for Oversea Governments and Administrations,
4 Millbank,
LONDON, S.W.1.

Dear Sirs,

Oil Fuel Storage Tanks.

We refer to our quotation dated 19th ult., together with your subsequent telex of 26th ult., and have pleasure in submitting our revised approximate price for item 4, as follows:-

Item 4.

2,500 lin.yards of 8" dia. piping supplied in 20'0" lengths with slip-on flange welded each end, and complete with bolts and nuts and gaskets; two pipe supports will be supplied for each 20'0" length of piping; 16 expansion joints 10'0" mean radius; exclusive of valves and painting.

Supply.

Price.. £17,706. 0. 0. (Seventeen thousand, seven hundred and six pounds Stg.) Lump Sum Nett, delivered FOB Glasgow.
Approx. Wt. 102.1/2 Tons.

Erection.

Price.. £ 3,020. 0. 0. (Three thousand and twenty pounds Stg.) Lump Sum Nett.

All other terms and conditions remain unchanged.

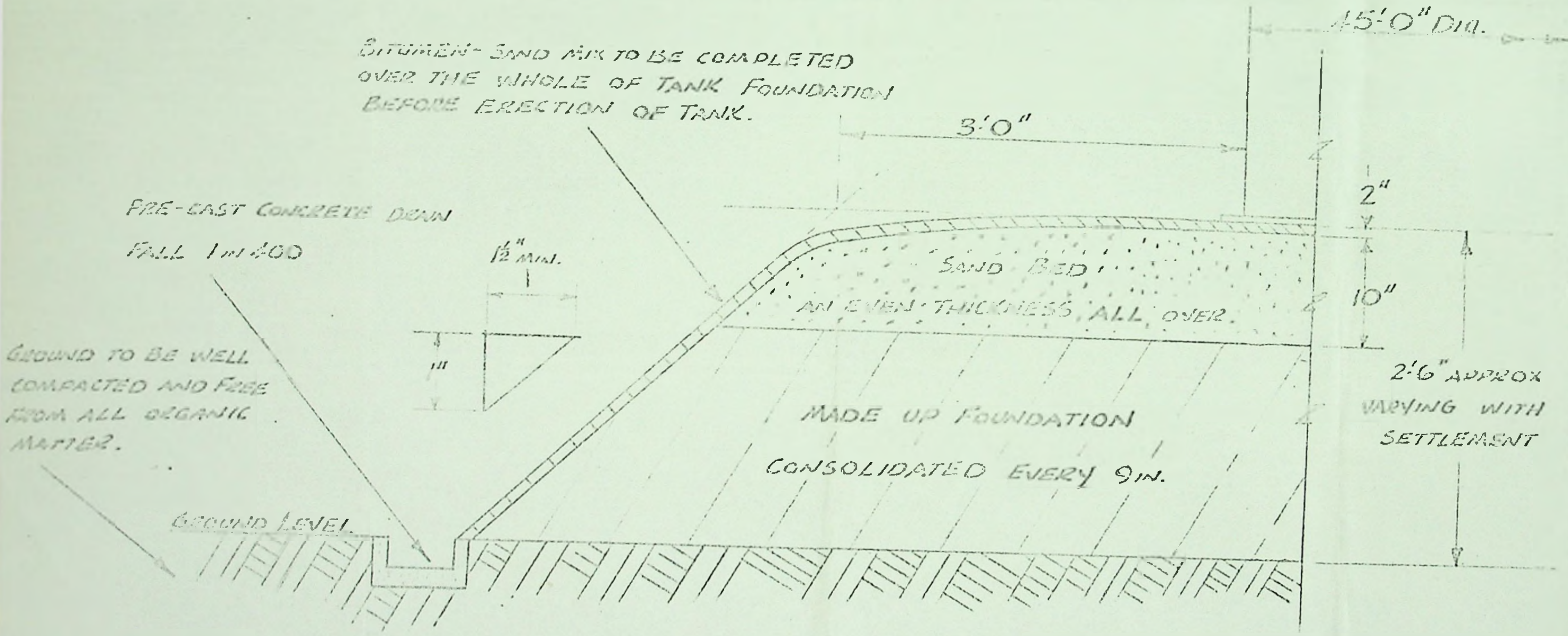
-/-

With regard to the foundations for the tanks, we enclose herewith copy of our sketch No. E.2802 showing the type of foundation required by BS.2654. The standard practice of the major oil companies is to coat the underside of the bottom plates with bitumastic paint before the plates are placed on the foundations.

We trust the above information meets with your requirements.

Yours faithfully,

D. BAXTER.
Chief Estimator - (Tanks).



DETAIL OF TANK FOUNDATION.

BITUMEN-SAND MIX. IN PREPARING THIS BITUMEN-SAND MIX IT IS NECESSARY FOR THE ENGINEER IN CHARGE TO MAKE SURE THAT THE MIX USED GIVES THE DESIRED RESULT. i.e. A LAYER WHICH IS AS WATERPROOF AS POSSIBLE BUT AT THE SAME TIME SUFFICIENTLY FIRM TO CARRY THE NECESSARY TRAFFIC AND TO PERMIT THE WELDING OF THE BOTTOM PLATES. TO OBTAIN THIS RESULT IT IS GENERALLY NECESSARY TO MAKE ONE OR TWO TRIAL MIXES AND IT IS EMPHASISED THAT THE PREPARATION OF THIS SURFACE SHOULD BE GIVEN GOOD SUPERVISION

THE MOTHERWELL BRIDGE & ENGINEERING COY. LTD.

CONTRACT

JOB OR EST. No. 96344.

ORDER No.

MADE BY M.K.T. CHKD. BY

SKETCH No. E.2902

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS

SENT

Wt. P2809 5/61

Number	Office of Origin	Words	Handed in at	Date
	Psy			7.5.62

To

etat ADMINOFF SOUTH GEORGIA DEPSA/c

101 No. 87. Your memorandum 154 of 1st February Grateful to learn if Albion Star are now in position to confirm two welder erectors available end 1962/63 season stop Matter now under consideration stop What dates would suit

Secretary

BW 21.5.62

Time HLB/LH

Reply at 119.

DECODE.

No. 94.

TELEGRAM.

From Administrative Officer, South Georgia.

To Colonial Secretary, Stanley.

Despatched : 15th May, *1962* *Time :* 1725

Received : 16th May, *1962* *Time :* 1115

118 No. 127. Reference your telegram No. 87. Albion Star welder erectors. Regret delay but manager Grytviken awaiting reply from Albion Star Norway. Will inform you just as soon as received.

Administrative Officer

Sea 8 c 18/5/62.

P/L : TB

THE FOLLOWING REFERENCE AND THE DATE OF THIS LETTER SHOULD BE QUOTED IN COMMUNICATIONS.

Q/EC2/Falkland Is. 9084.

CROWN AGENTS
FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS

4, MILLBANK,
LONDON, S.W.1.

TELEGRAMS { INLAND: "CROWN, SOWEST, LONDON."
OVERSEA: "CROWN, LONDON S W 1"

TELEPHONE: ABBEY 7730

TELEX No. 24209

24th April, 1962.

Sir,

3-4 90 in main file
125-6

I am directed to refer again to your letter reference No. 1905 dated 22nd January and to enclose herewith a copy of a further quotation which has been received from Stewarts & Lloyds Ltd.

The enquiries into the suitability of plastic piping as mentioned in paragraph 3 of your letter have been somewhat negative but further enquiries are being issued and you will be advised of the outcome as soon as possible.

I am, Sir,
Your obedient servant,

The Colonial Secretary,
Colonial Secretary's Office,
Stanley,
Falkland Islands.

JF/FJH

125 3

QUOTATION

STEWARTS AND LLOYDS, LIMITED

TELEGRAMS
LAPWELD GLASGOW TELEX

41 OSWALD STREET
P.O.BOX 5
GLASGOW C.1

EXPORT DEPARTMENT

BRANCH OF

OUR REF. XW.367/62/JOD/AM
YOUR REF.

Crown Agents for Oversea
Governments and Administrations
4 Millbank,
London. S.W.1.

12th April, 1962

Dear Sirs,

Q/EC2/Falkland Islands 9084

Further to our quotation of 2nd March, 1962 and your subsequent telephone conversations with our London Office we have pleasure in quoting the following alternatives.

Hot Finished Seamless Steel Linepipe, screwed and coupled to A.P.I. 5L, 18th Edition, 1960 and Supplement 1, January 1961 Grade "A" or "B" (our option) in random lengths 18/28 feet.

Approx. feetage	7500	7500
O.D,	8.5/8"	10.3/4"
Thickness	.277"	.279"
Price per 100 feet	£89.2.5d	£115.3.5d
Approximate shipping weight lbs per 100ft.:	2688	3434

Alternatively :

Hot Finished Seamless Steel Tubes having a minimum tensile strength of 27 tons per sq. inch with ends grooved for Victaulic Joints (no joints included) in random lengths 18/28 feet.

Approx. feetage	7500	7500
O.D.	8.5/8"	10.3/4"
Thickness	1/4"	1/4"
Price per 100 feet	£71.15.10d	£93.7.5d
Approximate shipping weight lbs per 100ft :	2348	2944

Contd/-

4

126

C 29

STEWARTS AND LLOYDS. LIMITED CONTINUATION SHEET NO. 1.

The Crown Agents,
London.

Grooved Victaulic Joints to suit the foregoing

Approx. quantity	326	326
Size	8"	10"
Price each	51/6d	55/-d
Shipping weight lbs each:	19	22.1/4

Basing on a flow of 120 tons/hour we calculate that the friction loss per 100 feet would be approximately 1.14 feet for the 8" size and 0.37 feet for the 10" size.

F.O.B. U.K. Port for shipment to Falkland Islands.

Terms : Less 1% provided payment is made within 14 days from date of Bill of Lading.

Delivery : Ready for shipment - Screwed and coupled in 12/14 weeks, Grooved in 10/12 weeks, subject to confirmation on receipt of order.

Our prices quoted are firm.

This quotation is valid for 30 days only from date of this letter.

Yours faithfully,

STEWARTS AND LLOYDS, LIMITED.

127

SPW

6/6/62.

128

H.C.S. Noted, please keep with original file,

Shanks.

L Picton. S.P.W

4/6/62.

129

THE FOLLOWING REFERENCE AND THE DATE OF THIS LETTER SHOULD BE QUOTED IN COMMUNICATIONS.

Q/EC2/Falkland Is. 9084

TELEGRAMS { INLAND : "CROWN, SOWEST, LONDON."
OVERSEA : "CROWN, LONDON S W 1"

TELEPHONE : ABBEY 7730

TELEX No. 24209

CROWN AGENTS
FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS

4, MILLBANK.
LONDON, S.W.1.

1st June, 1962.

Dear Sir,

40 We refer again to your letter No. 1905 dated 22nd January, 1962, regarding the proposal to increase the fuel storage capacity by at least 2,000 tons.

We have taken up with various manufacturers the question of the suitability of plastic piping for this installation and would point out that Yorkshire Imperial Metals Ltd. have confirmed in principle that plastic piping would be suitable, but they would like to have the following additional details in order to enable them to come to a final decision in the matter.

1) Will the piping be buried or installed above ground? Buried

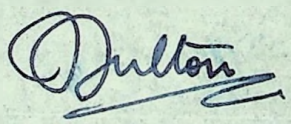
2) Will the diesel oil be pumped through the pipeline at infrequent intervals?

3) Will the tube be under continuous pressure or only occasionally? No.

4) What are the maximum and minimum ambient temperatures at site? 80°F 72°F.

On receipt of the above additional information we should be glad to take up the matter once again with Yorkshire Imperial Metals and obtain a firm quotation.

Yours faithfully,



for the Crown Agents.

See 145

SPW ~~Bd 29.6.62~~
8/7.

The Colonial Secretary,
Colonial Secretary's Office,
Stanley,
FALKLAND ISLANDS.

JF/MUR

130

4th July 1962.

Hon. C.S.

During the Supt. Works and my visit to South Georgia we contacted a Mr Thor Thorsen, Manager/ Works Master and Mr Leif Hamer, Forman Plater, Employees of the Albion Star Whaling Company. These two men are those Mr Ringdaal had earmarked to erect and weld the oil storage tanks this Goverment propose to build here.

We discussed fully the whole project with Mr Thorsen the senior of the two men and came to a complete understanding regarding the following;

a. The likelihood of the scheme being carried out.

b. The proposed sites.

c. The nature of the sites.

e. The equipment available in the Islands useful for erection purposes.

f. The equipment needed from South Georgia.

g. The construction of the foundations.

h. The estimated time to complete the project.

i. Remuneration and repatriation.

Mr Thorsen who's wife is wintering with him in South Georgia asked if his wife might accompany him to the Falklands and return to Norway with him, on the understanding that he would pay all expenses. It was thought that there would be no objection to this. It was also agreed that a copy of the minutes on the items dicussed and agreedcto should be sent to Mr D.J.Clark in order that he might be fully informed.

Draft of letter to Mr Clark.

Dear Mr Clark,

During the mid-winter visit of R.M.S. Darwin to South Georgia the Supt's of Public Works and Electrical Dept's contacted ~~your~~ Mr Thorsen and Hamer regarding their availability to accept a contract to erect two oil storage tanks in these islands on completion of their tour of duty with your Company on or about March of 1963 and as previously discussed and agreed with ~~your~~ Mr Ringdaal. The purpose of this letter is to inform you of the subject of the matters discussed and agreed to during the visit.

Minutes of the Discussion.

It was first explained that the proposal to purchase and erect two oil storage tanks still awaited final approval and that consequently no firm order had yet been placed for the tanks although quotations had been received. Mr Thorsen said he had noted that the tank sizes had been increased from those previously mentioned and consequently he would need to increase in proportion the tender figure that had been quoted. It was agreed that this was fair and reasonable.

The Tank site it was explained had still to be fixed, two sites had been chosen but the better site awaited approval from the Admiralty. The nature of the subsoils of both sites were discussed and Mr Thorsen suggested the type of base he would recommend to be built to hold the tanks. The Supt. Works noted these recommendations and could forsee no difficulty in the construction. It was explained that only unskilled labour would be available to assist Mr Thorsen and Hamer. Mr Thorsen noted this and enquired whether electric power would be available for welding sets. It was explained that this might be possible on one site only but that it would be better to plan for none. The S.W. said that ~~to~~ two engine-driven electric welding sets would be available, Mr Thorsen was a little doubtful as to whether they would stand up tp the continious running that would be imposed upon them and thought it likely that he would need to bring amongst his aquipment an additional set. Mr Thorsen asked that directly the scheme became certain ~~that~~ he should be informed and that a copy of the plans of the tank should be sent to him in South Georgia in order that he might construct there certain special erection gear.

Mr Thorsen asked if, provided he met the expenses, his wife who was wintering with him in South Georgia, might accompany and stay with him in Stanley. He was told that it was possible for him to do this. He went on to say that provided nothing unforseen occurred he would be available on or about March of 1963 and that he wished Mr Clark to be informed of what had taken place for his information and approval.

Draft letter to Mr Clark continued/

The provisional plan is now to get final approval as quickly as possible to build the tanks, inform Mr Thorsen, place a firm order for the tanks, and gain approval for the site.

Assuming all of this is done Mr & Mrs Thorsen and Mr Hamer will be repatriated to Norway on completion of the contract, possibly if all goes well in July.

I would be pleased to hear of any comments you may have regarding this matter or know of any objections. A copy of this letter will be sent down at the first opportunity to South Georgia.

etc. etc.

RF

Done

Done — see 134.

133

I Draft to Mr Grantham's office

II Copy to H-L

2 copies also to PO (one for himself to send for the Manager)

III Telegram to HE as ab/c.

~~DL 5/7/62~~

IV By i/c to SPW.

V On other action on III is completion file to

See PJS for information

DL.
5/7/62.

P34

DECODE.

TELEGRAM SENT.

From GOVERNOR *to* SECRETARY OF STATE

Despatched : 7.7.62 *Time :* 1110 *Received :* *Time :*

No. 87. Please pass following to Governor. Begins. Additional oil storage tank Stanley. Gutteridge and Picton had satisfactory interview with welders at South Georgia they propose to start work here about March 1963. Delivery of tanks will take time so confirmation that BAS funds will be available desired most urgently and reply to our 66 of 3/5/62 re availability of Camber site urgently. Ends.

3 of 6
1905/A

Officer Administering the Government

P/L : TB

Original in : 1905/
Copy in : 1905/A

Reply at 139

135

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS

SENT

Wt. P2809 5/61

Number	Office of Origin	Words	Handed in at	Date
	PSY			10.7.62

To

etat ADMINOFF SOUTH GEORGIA SGA/c

No. 135. FOLLOWING FOR MR. THORSEN FROM GUTTERIDGE STOP TWO DIESEL DRIVEN WELDING UNITS AVAILABLE HERE MAXIMUM CONTINUOUS RATING 250 AMPERES PLATE THICKNESS ONE QUARTER INCH STOP WILL THESE BE SUITABLE PLEASE STOP

SECRETARY

Time ECG/TB Reply at 136. Copy to : SPED

~~136.~~

B5A

DECODE.

No. 46 .

TELEGRAM.

From Administrative Officer, South Georgia.

To Colonial Secretary, Stanley.

Despatched : 11th July, *1962* *Time :* 1730

Received : 12th July, *1962* *Time :* 1500

135.

No. 177. Your telegram No. 135. Following for Gutteridge from Thorsen. Suggest contact makers of tank as I am of an opinion that bottom and lower shell plating will be thicker than quarter inch.

Administrative

P/L : TB
Copy to SPED.

19th July, 62.

Sir,

During the mid-winter visit of H.M.S. 'Darwin' to South Georgia the Superintendent of Public Works and the Superintendent of the Power and Electrical Department contacted Messrs. Thorsen and Hamer regarding their availability to accept a contract to erect two oil storage tanks in these islands on completion of their tour of duty with your Company on or about March of 1963 and as previously discussed and agreed with Mr. Ringdahl. The purpose of this letter is to inform you of the subject of the matters discussed and agreed to during the visit.

Minutes of the Discussion

It was first explained that the proposal to purchase and erect two oil storage tanks still awaited final approval and that consequently no firm order had yet been placed for the tanks although quotations had been received. Mr. Thorsen said he had noted that the tank sizes had been increased from those previously mentioned and consequently he would need to increase in proportion the tender figure that had been quoted. It was agreed that this was fair and reasonable.

The tank site, it was explained, had still to be fixed, two sites had been chosen but the better site awaited approval from the Admiralty. The nature of the subsoils of both sites was discussed and Mr. Thorsen suggested the type of base he would recommend to be built to hold the tanks. The Superintendent of Public Works noted these recommendations and could foresee no difficulty in the construction. It was explained that only unskilled labour would be available to assist Mr. Thorsen and Mr. Hamer. Mr. Thorson noted this and enquired whether electric power would be available for welding sets. It was explained that this might be possible on one site only but that it would be better to plan for none. The Superintendent of Public Works said that two engine-driven electric welding sets would be available. Mr. Thorsen was a little doubtful as to whether they would stand up to the continuous running that would be imposed upon them and thought it likely that he would need to bring amongst his equipment an additional set. Mr. Thorsen asked that, directly the scheme became certain, he should be informed and that a copy of the plans of the tank should be sent to him in South Georgia in order that he might construct there certain special erection gear.

Mr. Thorsen asked if, provided he met the expenses, his wife who was wintering with him in South Georgia, might accompany and stay with him in Stanley. He was told that it was possible for him to do this. He went on to say that provided nothing unforeseen occurred, he would be available on or about March of 1963 and that he wished Mr. Clark to be informed of what has taken place for his information and approval.

2. The/.....

D.J. Clark, Esq.,
Albion Star (Southampton) Ltd.,
National Provincial Bank Chambers,
Canute Road,
SOUTHAMPTON.

CG/IM.

2. The provisional plan is now to get final approval as quickly as possible to build the tanks, inform Mr. Thorsen, place a firm order for the tanks, and gain approval for the site.

3. Assuming all of this is done Mr. & Mrs. Thomsen and Mr. Honor will be repatriated to Norway on completion of the contract, possibly if all goes well in July.

4. I would be pleased to hear of any comments you may have regarding this matter or know of any objections. A copy of this letter will be sent down at the first opportunity to South Georgia.

I am,
Sir,
Your obedient servant,

(Sgd.) R.H.D.Manders

Officer Administering the Government

Copies to: H.E. the Governor (C/o Col. Off.
Admin. Officer, South Georgia
(2 copies one for forwarding
to Manager Albion Star)

138

S.F.A.S.

129 + 133

In consultation with SFE would you please advise me regarding the questions posed at 129.

23.7.12

139

DECODE.

TELEGRAM SENT.

No. 10. *From* **SECRETARY OF STATE** *to* **GOVERNOR**

Despatched: 23.7.62. *Time*: 1400 *Received*: 24.7.62. *Time*: 1000

134

Your telegram No. 87. Oil Storage Tank. I will telegraph shortly on BAS Estimates. Provision for tank has not been cut.

2. Admiralty have no objection in principle to proposal subject to suitable agreement on financial side request details of proposal layout of new storage tanks and pipelines construction envisaged and manner of filling and issuing oil from tanks and use of Admiralty jetty and other facilities entailed.

Secretary of State

P/L:FH

Original filed in 1905
Copy filed in 1905/A

140

[illegible]05/A

24 July, 62.

To: Superintendent of Works and
Superintendent Power & Electrical Dept.,
STANLEY.

From: Officer Administering the Govt.,

Oil Storage Tank:

139 Telegram from Secretary of State forwarded herewith. I think we should start action on the assumption that we probably will be building the tanks at the Camber.

2. What we now want is -

(a) details and plans to send to the Admiralty next mail

(b) an estimate of the total cost of the scheme and our share so that we can obtain approval of S.F.C. at the next meeting which will probably be on 9th August.

3. Could you please let me have this information in consultation with each other.

KIV — 129 + 136.

S.P.W.

as at 138 please.

30.7.42

DECODE.

~~FCFS~~
142

TELEGRAM SENT.

From GOVERNOR *to* SECRETARY OF STATE

Despatched: 13.8.62 *Time:* 1100 *Received:* *Time:*

No. 97. Standing Finance Committee have voted £15,000 for half cost of purchasing and erecting two new oil storage tanks to accommodate three thousand tons diesel oil estimated two years supply plus. Half the oil will be consumed by British Antarctic Survey vessels the other half by Colony installations expenditure to be borne between Falkland Islands and British Antarctic Survey. BAS Head 3 Item 15 grateful your early approval to issue special warrent to incur £15,000 under Head XX Special Expenditure new item oil storage tanks. Site not finally decided on and there is possibility of further expenditure on piping etc.

Officer Administering the Govt.

See Reminder at 155

PL : TB
Copy to Treasury

Reply at 226 in II

1905

~~153~~. 143

3rd. August, 62.

Sir,

As you know, Government contemplate the erection of an extra storage tank for Diesel Oil. Negotiations are on foot for using a site at the Camber and estimates are now being prepared.

2. Transport will probably be required for men and materials for periods in November and December when the site is being prepared and again in March when the tanks are actually being erected.

3. This is to enquire whether it would be possible to charter the Company's scow for the periods required and if so what rate we should have to pay per day. It is hoped that the Company would be good enough to allow us cheap rates as the work will be for the benefit of the Colony as a whole.

4. I am informed that if the scow is used it would be required for such long periods that the levying of the normal rate of £2 an hour would work out very expensive indeed.

5. The information is asked for at this stage to enable the Superintendent of Public Works to frame his estimates. If you require any further information on the subject he will be able to furnish it.

I am,
Sir,
Your obedient servant,

(Sgd.) R.H.J. Manders.

Officer Administering the Government.

The Honourable,
A.C. Barton, C.B.E., J.P.,
Colonial Manager,
Falkland Islands Company Limited,
STANLEY.

RHJM/EM.

Copy sent to P.P.W.

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS

SENT

Wt P2809 5/61

Number	Office of Origin	Words	Handed in at	Date
	Psy			17.8.62

To

etat CROWN LONDON HOA/c

book copy

No. 274. Please refer to Motherwell Bridge and Engineering Company's letter and quotation comma reference DB/MM/9600A (DK) dated 19th March 1962 stop Quotation for two 1500 ton capacity MS tanks along with two sets of key erection equipment at a total f.o.b. figure of £10376 is accepted delivery if possible by December AES letter follows

Secretary

Time RHDM/TB

Ref: 1905

22nd August, 1962.

Dear Sir Edward,

I enclose a copy of the letters we have sent to the Secretary of State and the Crown Agents about the new oil tanks. Standing Finance Committee have voted the money for the tanks but there is opposition to the proposal to put them over at the Camber and we finally decided that a decision on this point should be deferred till the full Committee was here.

Provided that the tanks are ordered, as they now are, decision on the site can wait till November and I think it is really as well that we should consider all possibilities before deciding.

As I see it the question is whether we should be taking an unnecessary added risk in putting the new tanks a bit above the present tank and power station. If not it seems the obvious place. Otherwise I think the Camber would be best.

Yours sincerely,

(Sgd) R.H.D. Mauders.

His Excellency
Sir E. Arrowsmith, K.C.M.G.,
c/o Colonial Office,
The Church House,
Great Smith Street,
LONDON, S.W.1.

RHDM/LH

145

18th August, 62.

Gentlemen,

Oil Storage Tanks and Pipeline

I am directed to refer to my letter of 22nd January, and your subsequent correspondence on the subject of increasing the oil storage facilities here. I have to inform you that it has been decided to erect two 1,500 ton capacity tanks here, but their exact location for erection has not been finally decided by Government. In making this decision Government will be influenced by the decision of the Admiralty whether or not to allow Government to use the Camber site free of charge.

Arrangements for the employment of Welder Erectors have been made, using personnel from the Whaling Stations in South Georgia. These men and their equipment will be available during the period from the beginning of March to the end of June 1963. Therefore it will be seen that it is essential that firm orders must be placed for the tank material to be here some time before March of 1963. The site will be chosen later; enclosed with this letter are the various proposals and methods of operation for the three sites under consideration.

a b c.

Firstly then I am to ask you to place firm orders for the following material.

Item 1 - Tanks

Please refer to the Motherwell Bridge and Engineering Company's letter and quotation, reference DB/MW/9600A(DK), dated 19th March, 1962.

The quotation for two 1,500 ton capacity M.S. Tanks along with two sets of key erection equipment at a total f.o.b. figure of £10,376 (ten thousand three hundred and seventy six pounds) is accepted. This acceptance was telegraphed on 16th August 1962.

Item 2 - Electrodes

Sufficient electrical welding electrodes with 5% spare for electrically welding the two tanks of item number one should be supplied.

Erection

The quotation for erecting the two tanks of item one is not accepted.

General method now used for filling and transfer of oil

A dumb lighter of 500 ton capacity equipped with diesel driven pumps having six inch outlets receives oil from the supply tanker vessel moored in the outer harbour known as "Port William", and carries oil to the Dockyard Jetty, where it is pumped either by the Lighter pumps, or by a 20HP electric pump on the jetty to the two existing 300 ton tanks situated as shown on the plan of Port Stanley. For bunkering vessels, oil flows back under its own head.

Proposal/. . . . .

Crown Agents for Oversea Governments and Administrations,
4, Millbank,
LONDON, S.W.1.

See 157

Reply at 168

see for

Proposal No. 1 Camber Site

Please refer to drawing "Piping Arrangement". This drawing was copied from Admiralty Drawing No. 84/27. The original may be available from the appropriate Admiralty Department on which may be more accurate detail.

The height of the Mole approximates to that of the tank foundation base.

Proposed method of filling and arrangement at Camber Site

The Lighter will lie alongside the oiling jetty, and, using its own diesel driven pumps, will pump its oil cargo through a flexible pipe connected to a stand pipe on the Oil Jetty, and thence through a six inch pipe line to the storage tanks.

For unloading back to the oil lighter or other vessels the gravity head of the oil in the tanks will be used. The oil will flow back through the same pipe line, the time factor in the latter case not being so important.

It will be necessary to instal a flowmeter to measure both the oil received and that discharged. The most convenient point for this is thought to be close to the stand pipe on the Oiling Jetty. The meter should be of robust design as it will be subjected to salt water spray.

The sludge drain pipe will run parallel to, and in the same trench as the main fuel pipe, but will branch off at the shore line to Mole and be lead to the beach. Both pipes will be buried to a depth of 18 inches.

From the drawing it will be seen that the oil pipe runs along the outer edge of the Mole, the section of which has the shape of a frustum of a triangle, to the point 'A' where it crosses alongside the catwalk joining the Mole to the Oiling Jetty. The curved part of the Mole is a 90 degree section having a radius to the pipe centre of 110 ft. 6 inches. At point 'A' where the curved section of the pipe ends, a right angle turn is necessary to carry it across the catwalk. The exact positioning of the pipe is difficult to gauge here, both in respect of the main section coming around the Mole and that going across the catwalk, therefore it is suggested that the couplings, both at points 'A' and 'B' might be made with flexible pipe.

Enquiries were made regarding the use of plastic pipe. It is now considered that a protected seamless steel linepipe as quoted by Stewart and Lloyds might be the most suitable.

Accessories will consist of the flowmeter previously mentioned, which should be capable of recording flow in both directions. Should this not be possible, then two flowmeters will be required, or the pipeworks arranged so that the oil flows through the meter in one direction only, irrespective of whether the oil is being received or discharged.

Flexible hose for connection between the stand pipe and the barge will be required. This should be in lengths that are easy to manhandle, and total 100 feet. Couplers and tightening keys will also be necessary. Valves and expansion joints will complete the items needed.

Brackets/. . . . . .

Brackets for fixing the pipework to the Mole will be made locally.

Maximum and minimum ambient air temperatures are 80 deg.F. and 10 deg.F. maximum and minimum ground temperatures at a depth of 18 inches are 34 and 48 deg.F.

Provisional approval to build on the site which is on Admiralty property, has been given. Final approval is subject to the plans and details given in this letter being satisfactory.

Proposal No. 2

Is that the new tanks are situated at one of the points marked 'A' and 'B' on the plan of Port Stanley. That at the point chosen an oil jetty is built, constructed of concrete piles carrying a catwalk and oil pipe, the seaward end being built to accommodate the Lighter and M.F.Vs. only, as it would not be practical to construct a jetty long or strong enough to accommodate larger vessels, on-loading and discharging being accomplished in much the same fashion as the present method. The Power Station tanks would be replenished by the Lighter via the Dockyard jetty as at present. Larger vessels would either need to be buoyed off and bunkered by a floating pipe, or bunkered from the Lighter.

Proposal No. 3

That the tanks are situated as at proposal No. 2 and that no oil jetty is built but an oil pipe line is lead from the tanks along the sea wall, with spurs to stand pipes at the East Jetty, Public Jetty and the Dockyard Jetty, the tanks being replenished by the lighter pumping from the Public Jetty. At the Dockyard Jetty the pipe would connect to the existing 3 inch pipe leading to the Power Station tanks. These might be replenished by pumping from the main tanks using the existing 20HP electric pump installed on the Dockyard Jetty.

Proposal No. 4

That the tanks are situated at the site marked 'C' on the Stanley plan, shown South West of the 300 ton tanks at the Power Station, the existing 3 inch pipe line being replaced by one of 6 inches, discharging and on-loading being carried out as at present.

Advantages and disadvantages of each proposal as considered here are:

Proposal No. 1 Advantages. A fine jetty is already erected that is able to accommodate all vessels other than tankers, there is no fire risk to the Town.

Disadvantages. The necessity to lighter fuel across the Harbour.

Proposal No. 2. Advantages. The oil is on the Stanley side of the Harbour. Prevailing winds being westerly there is little fire danger to the Town. No long pipe line would be necessary.

Disadvantages. Lightering would still be necessary to the Power Station tanks and possibly to Vessels. The cost of building a suitable jetty would be high and considering the extremely limited resources of the Colony as regards labour and technical staff the practical difficulties would be very great.

Proposal/. . . . .

Proposal No. 3. Advantages. The oil would be on this side as at 2. Fire risk as at 2. No costly jetty to be built and no lighterage.

Disadvantages. A costly and very long pipe line with possible additional pumping units other than those contained in the Lighter. The same practical difficulties would arise as in the case of proposal No. 2.

Proposal No. 4. Advantages. A relatively short pipe line as compared with No. 3. No jetty and lighterage.

Disadvantages. Fire risk greater to the Town with winds prevailing from the West.

Of the proposals suggested No. 1 and No. 4 appear the most favourable. With regard to No. 1, I would be pleased if you would contact the appropriate Admiralty Department, (who are being advised of our proposals regarding the Camber site), where it is likely that more detailed information might be given. Also Admiralty views on the matter might be known.

With regard to proposal No. 4 this certainly seems attractive since, if it were adopted, there would be no need for the long pipe line or the new jetty. Some risk of fire presumably exists already from the present tanks and it is a question to what extent the construction of the new tanks further back would enhance this risk. Your advice on this point would be greatly appreciated.

With regard to the proposals generally, I would be pleased to learn of any major disadvantages you may find with the schemes and also to have a provisional estimate of what the material costs of the various proposals might be, including proposal No. 4.

Firm orders for pipeline and its associated material will be made directly the site is decided upon this will most likely be in November. Work on the foundations will begin immediately and these will be ready for the Erectors to commence work at the beginning of March of 1963.

Motherwells should be asked to despatch one set of the tank drawings as soon as they are available to:

Mr. Thor Thorsen, Works Master,
Albion Star Whaling Company,
Grytviken,
SOUTH GEORGIA.

and two copies to this Colony.

I am,
Gentlemen,
Your obedient servant,

COLONIAL SECRETARY.

Copies to: Secretary of State
H.E. the Governor

F. I. ref: 1905
C. O. ref:

SAVING TELEGRAM.

From: The Officer Administering the Government of the Falkland Islands.

To: The Secretary of State for the Colonies.

Date: 18th August, 1962.

No. 124. SAVING. COPY

Oil Storage Tanks.

I would be grateful if you would forward to the Admiralty a copy of the enclosed plans showing details of where it is suggested that the proposed diesel oil storage tanks should be situated at the Camber. The fuelling arrangement is, that the oil Lighter discharges its cargo, using its own diesel pumps, into a stand pipe on the East end of the Oiling Jetty. For bunkering vessels the fuel would flow back under its own gravity head.

Crown Agents have been given copies of these plans and have been asked to contact the appropriate Admiralty Department in order to discuss this matter and obtain any relevant information they may require, should the Admiralty agree to our proposals and it is decided to build at the Camber, (two other sites also being under consideration).

With regard to financial arrangements for the Camber site.

This Government will maintain their own installation and are prepared to enter into agreement with the Admiralty whereby the stock of diesel oil, which is Admiralty grade, will be available for use by H.M. Ships, should the Admiralty stock of 400 tons stored in their Lighter not be sufficient to meet their requirements in time of emergency or other occasion, provided that replenishment was forthcoming before essential services in the Colony were affected. The total Government oil stocks would be, 3,000 tons at the Camber site plus 600 tons at the Stanley Power Station.

In repayment for this concession the Colonial Government would hope that no charge should be made for the use of the Camber site and hope that the fuelling facilities provided by the use of the dumb lighter would be allowed to continue.

Oil affects the cost of living in the Colony and it is the Government policy to keep this to a minimum.

Officer Administering the Government

HCG/LH

By HE arrive 16.10.62
nil

See 244.

1955 20TH AUGUST. 1962

150

From :—

THE CROWN AGENTS FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS

4 MILLBANK
LONDON, S.W.1

Crown Agents' reference :— FALKLAND ISLANDS. 9054.

COLONIAL SECRETARY'S OFFICE
4 SEP 1962
FALKLAND ISLANDS

The Crown Agents acknowledge receipt of your telegram / ~~letter~~

143 reference No. 274. dated 18-5-62

requesting the supply of STORAGE TANKS & EQUIPMENT.

This has been registered under the above reference which should be quoted in all further correspondence on the subject.

IMPORTANT.

A confirming indent, if one is sent, must be endorsed in bold type :—
" In confirmation of order by telegram/letter dated ..... ".
If a confirming indent without such a reference has already been despatched, please complete the counterpart of this form and forward it to the Crown Agents by return.

Extract from " Notes on the Preparation of Indents " (para. 36) :—
" The Crown Agents may have to disclaim liability arising from any duplication of supplies resulting from failure to include adequate cross references."

Await reply to 142
Indent prepared at b.c.
22/9/62

To :—

The
COLONIAL SECRETARY.
STANLEY
FALKLAND ISLANDS.
South Atlantic.

Form W.126 3000/5/62 C.F.H.768

Folios 151-3 now in 1905/B

1905 PRELIMINARY ADVICE OF ORDER TO:—

Crown Agents' Reference W 202/Falkland Is.9084/1

Indent No. Col.Sec.Ltr.
or Authority 1905 dated 22.1.62.
A/c.
Dept.

The Motherwell Bridge & Engineering Co.Ltd.
P.O.Box No.4,
MOTHERWELL,
Scotland.

THE CROWN AGENTS
for Overseas Governments and Administrations
4, MILLBANK, LONDON, S.W.1.

All letters to be addressed to the Crown Agents, the reference in the top left hand corner being quoted.

Telegrams
Inland "Crown, Sowest, London"
Overseas "Crown, London-S.W.1."
Telephone Abbey 7730
Telex No. 24209

21 AUG 1962

The Crown Agents, acting for and on behalf of the Government of Falkland Islands have sent an order to the above firm for M.S. tanks specified under items 3 of the above indent.

Subject to the firm's confirmation that they can supply the goods, and to the price and delivery promise being satisfactory, the usual "Advice of Order placed" will follow.

This order is subject to inspection by Chief Inspecting Engineer before despatch.

REQN. NO.	FIRM	DEPT.
9084/1	Motherwell Bridge & Eng.Co.Ltd.	

W.G. 410

DECODE.

TELEGRAM SENT.

From GOVERNOR *to* SECRETARY OF STATE

Despatched: 8.9.62 *Time:* 1100 *Received:* *Time:*

142 No. 114. My telegram No. 97. Most grateful your early attention.

Officer Administering the Government

P/L : HLB/LH

BV 20.9.62
KIV 151

W/EC2 FALKLAND IS. 9084/1

157

Communications to be addressed to the Crown Agents and the above reference quoted.

THE CROWN AGENTS
FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS
4, MILLBANK, LONDON, S.W.1

TELEGRAMS: {INLAND: "CROWN SOWEST LONDON."
{OVERSEA: "CROWN LONDON."
TELEPHONE: ABBEY 7730.
TELEX NO. 24209.

13 SEP 1962

COLONIAL SECRETARY'S OFFICE
26SEP1962
FALKLAND ISLANDS

Sir,

I am directed to forward herewith particulars of an order placed in pursuance of the authority quoted.

Advice of order placed.

145
158-160

Receipt of letter No.1905 dated 18th August 1962 is hereby acknowledged and copies for the order dated 21st August for item 1 - Tanks is enclosed.

An order for item 2 - Electrodes will be placed as soon as possible for supply at the same time as the tanks.

The remaining points in your letter are receiving attention and a reply will be sent to you at the earliest opportunity.

/SM

I am, Sir,
Your obedient servant,

Gould

W/G18 40,000/6/61 C.F.H. 1061

ACKNOWLEDGMENT OF ORDER PLACED WITH:—

158

ADVICE OF ORDER

W / EC2/Falkland Is.9084/1

Indent No. or Authority Col.Sec.Ltr. 1905 dated 22.1.62.

A/c.

Dept.

To:—
THE CROWN AGENTS
for Oversea Governments and Administrations,
4, MILLBANK, LONDON, S.W.1.

The Motherwell Bridge & Engineering Co.Ltd.
P.O.Box No.4,
MOTHERWELL,
Scotland.

Order Dated:—
21 AUG 1962

GENTLEMEN,

We accept this order placed for and on behalf of the Government of Falkland Islands and agree to supply, on the terms stipulated, M.S.Tanks specified below, in accordance with the Crown Agents' General Conditions of Contract dated June, 1957, and, where applicable, Special Conditions of Contract dated June, 1957.

Signature [signature] Estimating Manager Address

Dated this 21 day of 19

This order is subject to inspection by Chief Inspecting Engineer before despatch.

REQN. NO.	FIRM	DEPT.	DATE DUE	ACTION DUE JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
9084/1	Motherwell Bridge & Eng.Co.Ltd.														

ITEM No.	QUANTITY	DETAILED DESCRIPTION OF ARTICLES ORDERED	ESTIMATED COST	RATE	AMOUNT
3	2	M.S.Tanks 48ft.0ins. dia. x 36ft. hh., each 1,500 tons capacity, of all welded construction, and equipped with Fixed Cone Roofs all as per attached specification. Approx.Wt. 98 tons.	9112 - -		
		Extra for supplying two (2) sets of key erection equipment, each set comprising:- 198 key plates, 100 U bars, 540 spacer bars, 1080 fitting wedges, 18 key angles, 12 vertical joint aligners, 12 fitting channels, 590 blank nuts, 1034 key pins. Approx.Wt. 8 tons.	1264 - -		
		(Contd.)			

RJF/ZF

DELIVERY DATE: (Not period)

Cost of articles specified on continuation sheet (if any) 10376 - -

If economy can be effected by so doing, firm should quote for despatch by Parcel Post, sub-divided if necessary. Firms may offer delivery at ports other than Liverpool or London if by so doing they can deliver f.o.b. more cheaply. For delivery f.o.b. London price must include port rates.

DISCOUNTS AND TRADE ALLOWANCES
Packing and delivery f.o.b. or postage to GLASGOW
NET AMOUNT PAYABLE (including all charges) on receipt of Bills of Lading £ / P.O. Cert. of Posting £

POSTAL ADDRESS

Reqn.	
9084	The Colonial Secretary STANLEY, Falkland Islands.
C ↑ A	
Ind. No.	
Col.Sec.Ltr.1905 dd.22.1.62.	

SHIPPING MARK

Reqn.	
9084	COL. SEC.
C ↑ A	STANLEY.
No.	
Gross Weight	
Ind. No.	
Col.Sec.Ltr.1905 dd.22.1.62.	

FOR USE IN CROWN AGENTS' OFFICE

Checked by [signature] *Delivery Due* December 1962 *Entered & Copies Distributed* 13 SEP 1962 S X S.10 C.E. *To Progress*

S to Note:—
D.C. does not apply. By A.E.S. Vessel in December 1962

Inspector to Note:—

A.O.P. Address
as postal

W.G. 410 (163767) 30,000 5/62 JC&SLtd.

TO MESSRS. Motherwell Bridge & Eng.Co.Ltd.

ITEM No.	QUANTITY	DETAILED DESCRIPTION OF ARTICLES	ESTIMATED COST	RATE	AMOUNT
		As offered in your quotation DB/MM/9600A(DK) of 19th March 1962 and Specification.			
		To comply with Crown Agents Specification 10 where applicable, full instructions to be provided for erection together with a guide for the preparation of foundations.			
		Delivery to be made certain by the A.E.S. during December, 1962.			
		This material is very urgently required and you are requested to quote the earliest possible date for delivery.			

100

W/[redacted]2 FALKLAND IS. 9084/1

21 SEP 1962

Dear Sirs,

Your reference CHP/MS/A.2050 and A.6037

In connection with your acknowledgment of the order dated 21st August 1962 under the above reference (your A.2050 and A.6037) will you please arrange as soon as possible to forward two copies of a general arrangement drawing of the tanks with full details essential to the preparation of foundations to the postal address given on the order and one further copy addressed to Mr. Thor Thorsen, Works Master,

Albion Star Whaling Co.
GRYTVIKEN, South Georgia.

Please forward to this office as soon as possible a schedule giving full particulars of quantities, sizes and types of welding electrodes necessary for the erection of the tanks. Please forward also full dimensioned details of inlet, outlet and any other connections listed as tank fittings necessary for connecting pipes outside the tanks.

Yours faithfully,

for the Crown Agents.

The Motherwell Bridge & Engineering Co. Ltd.,
P.O.Box No.4,
Motherwell,
SCOTLAND.

/SM

161 Mail from 157.

SPED

For information. Is this in train order?

8 23/4/62

Y.H. 162

Yes, (I am not certain if shipment will be made in December 9.E.S.)

1/10/62. 163

We are telegraphing to Warsaw stating that we note deliveries in June in December we hope it will be in his to include other A.C.'s

8 2/10/62

164.

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS

SENT

Wt. P2809 5/61

Number	Office of Origin	Words	Handed in at	Date
	Psy			3.10.62

To

etat CROWN LONDON HOA/c

157 No. 353. Yourlet W/EC2 Falkland Islands 9084/1 of 13th September We note that delivery of MS tanks is due December and hope it will be in time to catch AES

Secretary

BD ~~2.10.62 RB 1421135~~ BD 31.5.63

Time RB/LH

165

O/c Bas

You insisted to see the plans

at back cover

15.10.62

Acs

166

Thankyou..

CLOSED - SEE VOL. II .15-10-62

BW/31.8.63

Y. E.

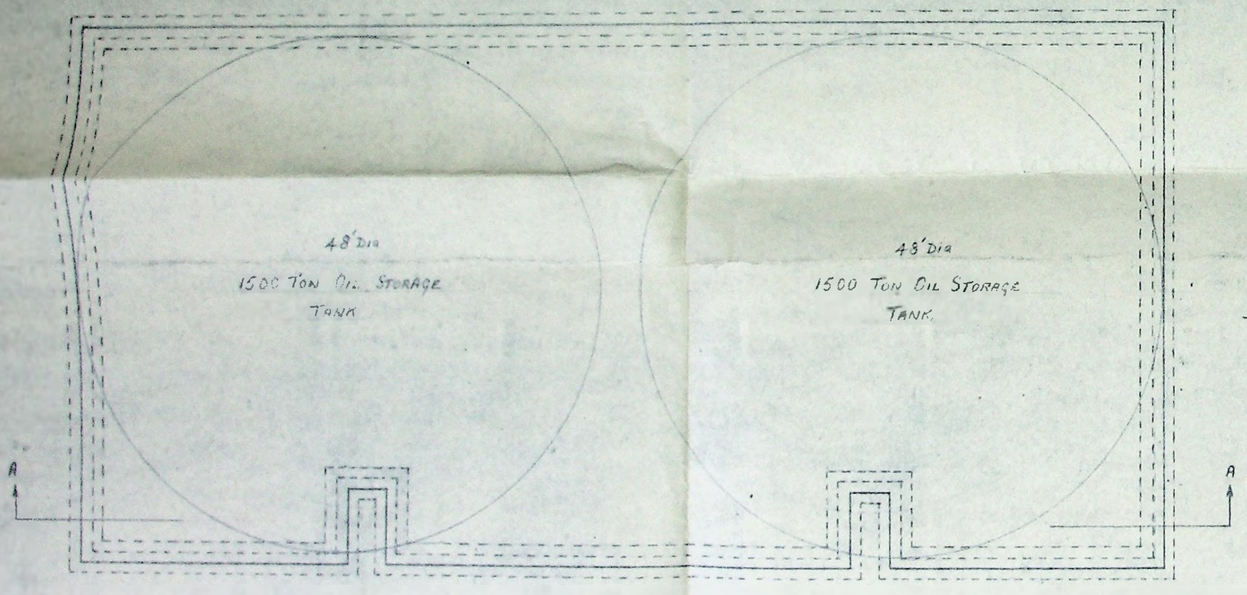
Request for Sd/ S.I authority
is at 192 of 1905 dated 13/7.
Reminder dated 8/9 is at 155.
no reply yet. meanwhile we have
of course ordered the trenches and
SPW is now about to start
work on the site.

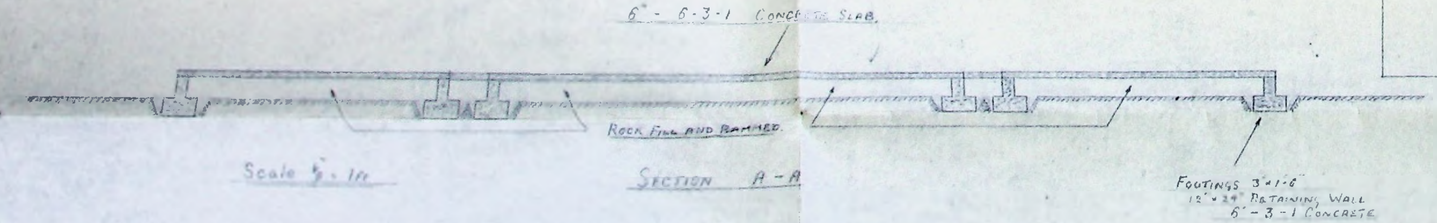
Shewing warrant submitted for signature

on 31/10/62.

PORT STANLEY - FALKLAND ISLANDS.
CAMBER.

FOUNDATION PLAN



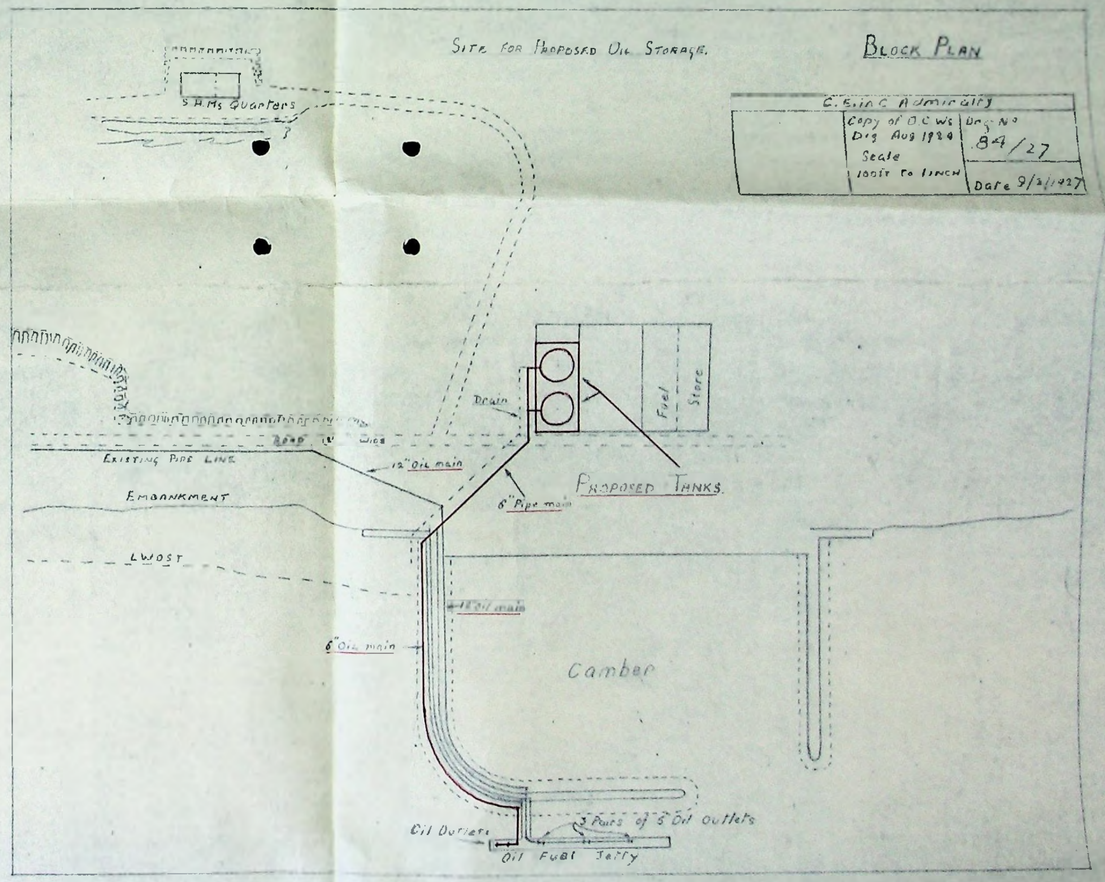


Scale ½" = 1ft

SECTION A-A

SITE FOR PROPOSED OIL STORAGE.

BLOCK PLAN



C. E. in C. Admiralty

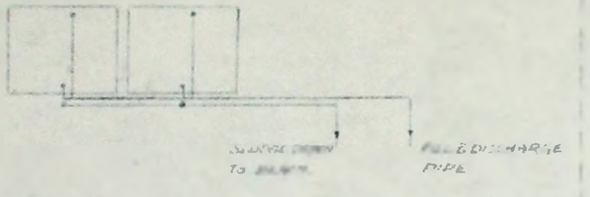
Copy of D.C.W.S. Dwg. Aug 1920 | Dwg. No. 84/27

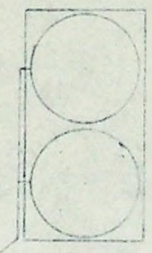
Scale 100ft to 1 INCH | Date 9/2/1927

PROPOSED LAYOUT of OIL STORAGE TANKS.
AND
PIPE LINES

L. PICTON. S.P.W.
2/7/62

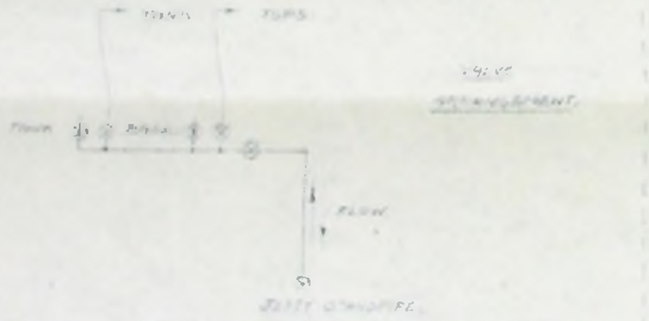
PROPOSED PIPING ARRANGEMENT, CAMBER.

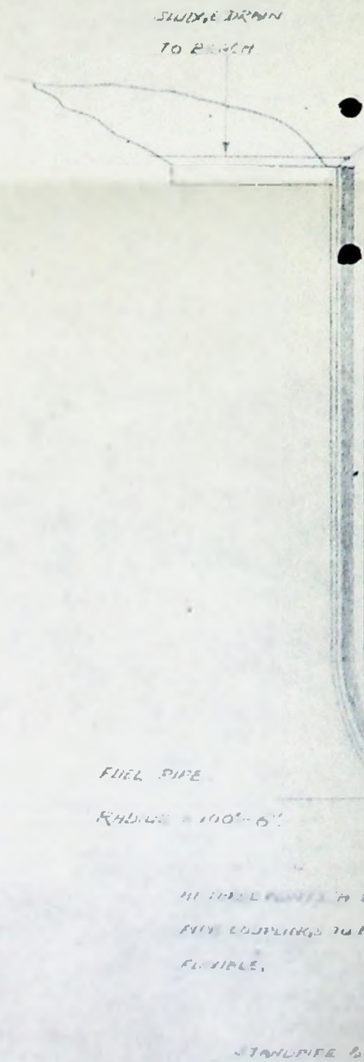


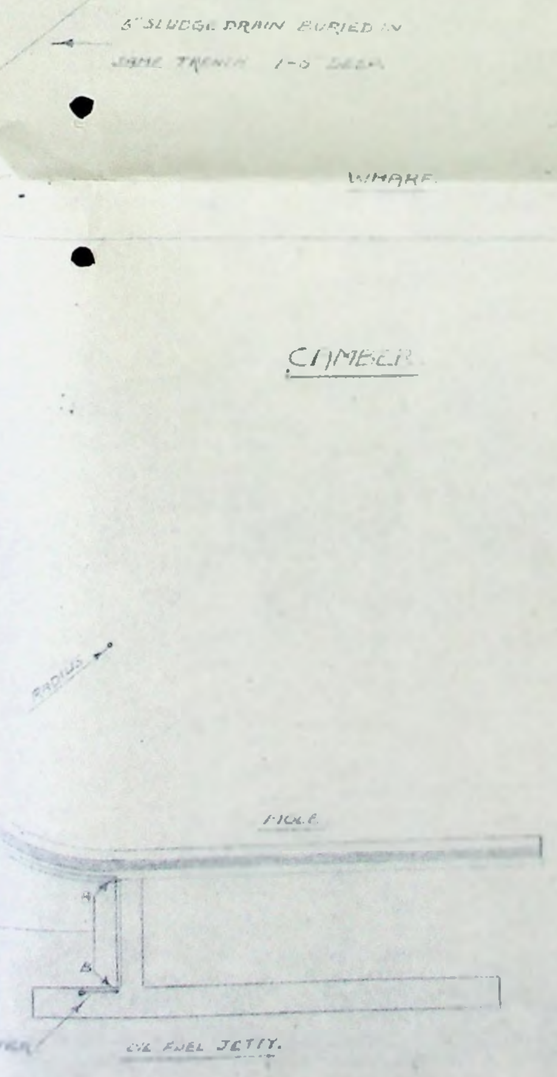


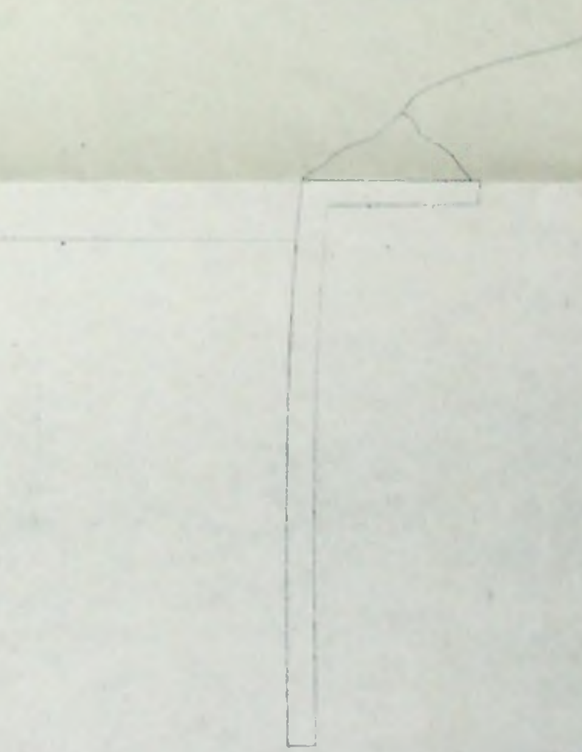
1500 TON CAPACITY DIESEL OIL STORAGE TANKS.

6" FUEL PIPE &
6" SLUDGE DRAIN BURIED IN SAME TRENCH 1-0 DEEP.









SECTION ON PIER
6" FUEL PIPE.

SCALE 50' = 1".

ENGINEERING DEPT. M.O.D.

W/EC2 FALKLAND IS. 9084/1

Communications to be addressed to the Crown Agents and the above reference quoted.

THE CROWN AGENTS
FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS
4, MILLBANK, LONDON, S.W.1

13 SEP 1962

TELEGRAMS: {INLAND: "CROWN SOWEST LONDON."
{OVERSEA: "CROWN LONDON."
TELEPHONE: ABBEY 7730.
TELEX NO. 24200.

Sir,

I am directed to forward herewith particulars of an order placed in pursuance of the authority quoted.

Advice of order placed.

Receipt of letter No.1905 dated 18th August 1962 is hereby acknowledged and copies for the order dated 21st August for item 1 - Tanks is enclosed.

An order for item 2 - Electrodes will be placed as soon as possible for supply at the same time as the tanks.

The remaining points in your letter are receiving attention and a reply will be sent to you at the earliest opportunity.

/SM

I am, Sir,
Your obedient servant,

(Sd.) S. V. Field.

W/G18 40,000/6/61 C.F.H. 1061

1905 20TH AUGUST 19[illegible]

To :—

THE CROWN AGENTS FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS

4 MILLBANK
LONDON, S.W.1

CIR

Crown Agents' reference :— FALKLAND ISLANDS. 9084.

With reference to your acknowledgement of my telegram / letter reference No. 274. dated 18-8-62 requesting the supply of STORAGE TANKS & EQUIPMENT.

Please note that Indent No. :

dated has already been despatched to you.

.....
(*Signature*)

.....
(*date*)

From :—

The
COLONIAL SECRETARY.
STANLEY
FALKLAND ISLANDS.
South Atlantic.

Form W.126

THE MOTHERWELL BRIDGE & ENGINEERING CO. LTD.

TELEPHONE: MOTHERWELL 5241
TELEPHONE: LONDON KNIGHTSBRIDGE 0701
TELEX: 77197 (MOTHERWELL)
24183 (LONDON)

LONDON OFFICE
23, PRINCES GATE, S.W.7.

P.O. BOX No. 4
MOTHERWELL
SCOTLAND

TELEGRAMS: BRIDGE, MOTHERWELL
TELEGRAMS: MOBRICOLIM, LONDON

YOUR REF. Q/EC2/Falkland Islands 9084.

OUR REF. DB/MM/9600A (DK).

BUF

19th March, 1962.

Crown Agents
for Oversea Governments and Administrations,
4 Millbank,
LONDON, S.W.1.

Dear Sirs,

Oil Fuel Storage Tanks.

We refer to your letter dated 15th ult., relative to our quotation dated 10th October, 1958, and have pleasure in submitting our revised offer for your amended requirements, as follows:-

Supply.

Item 1.

Two (2) M.S. Tanks 40'0" dia. x 34'0" hh., each 1,000 tons capacity, of all welded construction, and equipped with Fixed Cone Roofs all as per attached specification.

PRICE: £7,220. 0. 0. (Seven thousand, two hundred and twenty pounds Stg.) Lump Sum Nett delivered FOB Glasgow.
Approx. Wt. 74 Tons.

Extra for supplying two (2) sets of key erection equipment each set comprising:-

158 key plates, 100 U bars, 576 spacer bars, 1152 fitting wedges, 16 key angles, 16 vertical joint aligners, 16 fitting channels, 538 blank nuts, 884 key pins.

PRICE: £1,134. 0. 0. (One thousand, one hundred and thirty four pounds Stg.) Lump Sum Nett delivered FOB Glasgow.
Approx. Wt. 7.1/4 Tons.

-/-

Item 2.

Two (2) M.S. Tanks 48'0" dia. x 30'0" hh, each 1,250 tons capacity, of all welded construction, and equipped with Fixed Cone Roofs all as per attached specification.

PRICE: £8,366. 0. 0. (Eight thousand, three hundred and sixty six pounds Stg.) Lump Sum Nett delivered FOB Glasgow.
Approx. Wt. 89 Tons.

Extra for supplying two (2) sets of key erection equipment, each set comprising:-

165 key plates, 100 U bars, 450 spacer bars, 900 fitting wedges, 18 key angles, 12 vertical joint aligners, 12 fitting channels, 518 blank nuts, 902 key pins.

PRICE: £1,094. 0. 0. (One thousand and ninety four pounds Stg.) Lump Sum Nett delivered FOB Glasgow.
Approx. Wt. 7 Tons.

Item 3.

Two (2) M.S. Tanks 48'0" dia. x 36'0" hh., each 1,500 tons capacity, of all welded construction, and equipped with Fixed Cone Roofs all as per attached specification.

PRICE: £9,112. 0. 0. (Nine thousand, one hundred and twelve pounds Stg.) Lump Sum Nett delivered FOB Glasgow.
Approx. Wt. 98 Tons.

Extra for supplying two (2) sets of key erection equipment, each set comprising:-

198 key plates, 100 U bars, 540 spacer bars, 1080 fitting wedges, 18 key angles, 12 vertical joint aligners, 12 fitting channels, 590 blank nuts, 1034 key pins.

PRICE: £1,264. 0. 0. (One thousand, two hundred and sixty four pounds Stg.) Lump Sum Nett delivered FOB Glasgow.
Approx. Wt. 8 Tons.

Item 4.

2,500 lin.yards of 12" dia. piping supplied in 20'0" lengths with slip on flange welded each end, and complete with bolts and nuts and gaskets; one pipe support to be supplied for each 20'0" length of piping; 16 expansion joints 10'0" mean radius; exclusive of valves and painting.

PRICE: £35,840. 0. 0. (Thirty five thousand, eight hundred and forty pounds Stg.) Lump Sum Nett delivered FOB Glasgow.
Approx. Wt. 196 Tons.

-/-

Note: You to be responsible for transport of material from Glasgow to site at Port Stanley

Erection:

Erect, weld and test on your prepared foundations at Port Stanley:-

Item 1. 2 Tanks 40'0" dia. x 34'0" hh. Fixed Cone Roofs.

PRICE: £11,100. 0. 0. (Eleven thousand, one hundred pounds Stg.) Lump Sum Nett.

Item 2. 2 Tanks 48'0" dia. x 30'0" hh. Fixed Cone Roofs.

PRICE: £13,500. 0. 0. (Thirteen thousand, five hundred pounds Stg.) Lump Sum Nett.

Item 3. 2 Tanks 48'0" dia. x 36'0" hh. Fixed Cone Roofs.

PRICE: £14,700. 0. 0. (Fourteen thousand, seven hundred pounds Stg.) Lump Sum Nett.

Item 4. 2,500 lin.yards. of piping.

PRICE: £ 3,900. 0. 0. (Three thousand, nine hundred pounds Stg.) Lump Sum Nett.

Due to the lack of information regarding the pipeline, we are unable to quote firm prices, and our prices for item 4 are only approximate. On receipt of full details, we shall be pleased to submit a revised offer.

Tanks will be supplied and erected in accordance with API.12C. Specific gravity of the product to be stored has been assumed to be 0.85.

The erection contract will be undertaken by our Associates, The Motherwell Bridge Contracting & Trading Co. Ltd. Our erection prices are subject to the following:-

Responsibilities of The Crown Agents.

1. Provide free access to tank foundations for our personnel and plant.
2. Supply all tank materials to within 100 feet of erection site. All materials to be stacked in an orderly manner to obviate any delays.
3. The construction of all grades and foundations for tanks, stairways, ets., and their completion at a rate to avoid any delay to tank erection schedule.
4. Provide tank grades to a level of plus or minus 1/4" on perimeter of tank.

5. Supply and dispose of water for testing, including the supply of any necessary temporary pipework.
6. Mothercat to be reimbursed at cost plus 25% for any delays outwith their control e.g. lost or waiting time due to incomplete grades or foundations, or non-delivery of steel.
7. Payment of customs duties, port, wharfage, or other charges incident to the importation of our erection equipment into Falkland Islands.
8. Payment of all transport charges for our erection equipment from port in Falkland Islands to site, and, on completion of the contract, the transport charges from site to port.
9. You to supply suitable accommodation for our personnel at rates to be agreed.
10. If we are required to work overtime at your request, the non-productive hours will be charged at nett cost.
11. Supply key erection equipment - see separate prices under "Supply".

Responsibilities of The Motherwell Bridge Contracting & Trading Company Ltd. ("Mothercat").

1. Supply and remuneration of staff and workmen, together with the necessary administration, for the execution of the work.
2. Supply and maintenance of all construction plant and equipment.
3. Provide all messing for imported personnel.
4. Insure all personnel under Workmen's Compensation Acts as required by local laws.
5. Water test tanks and clean out after testing.
6. Supply of fuel and lubricants for plant, equipment and transport.
7. We do not include for radiography of welds, or painting of tanks.

Delivery:	Supply -	Ex Works 3½/4 months from receipt of order.
	Erection -	Complete 3½ months after arrival of erection crew and plant on site. (To be confirmed when ordering).
Terms:	Supply -	Nett cash against mate's receipt.
	Erection -	Payment by instalments as work proceeds.
Conditions:		As per CF.2 Form attached.

We have based our prices on supply and erection of two (2) tanks only.

-/-

M. B. & E. Co. Ltd.,
Motherwell.

With regard to the tank foundations, we consider that the foundation shown on BS.2654 fig. 18 would be entirely satisfactory. It is our normal practice to vacuum box test the bottom after welding.

A copy of our previous correspondence in 1958 is enclosed herewith for your records.

The foregoing confirms the information cabled to you.

We trust our tender meets with your approval and assure you of our best attention.

Yours faithfully,

For The Motherwell Bridge and Engineering Co. Ltd.

Chief Estimator (Tanks)

This quotation is based upon the present cost of materials, transport and labour and the acceptance of any order against the quotation shall be conditional upon:—

(1) The Contract Price being increased or reduced consequent upon the nett increase or saving in cost effected by any alteration occurring during the period between the date of the tender and the date of the completion of the contract in :—

(*a*) wages and working conditions arising out of any award or agreement sanctioned by any appropriate authority whether the cost of such wages and working conditions is charged in our cost accounts as direct cost or as on-cost, and in the amount of the premium payable in respect of the necessary insurance involved arising out of any alterations in wages as aforesaid.

(*b*) cost of materials and

(*c*) cost of transport.

(2) A suitable adjustment in the contract price being made should the customer require the work to be carried out other than during normal working hours.

(3) The customer giving an assurance that the work is sanctioned by any authority or licence which may be required by legislation.

FORM C.F.2.

r - (Tanks).

erwell Bridge and Engineering Co. Ltd.

COMMERCIAL MANAGER

Date ______________ Your Ref. ______________ Our Ref. 9600A.

MOTHERWELL BRIDGE & ENGINEERING COY., LTD.,
SPECIFICATION FOR WELDED TANK.

Item No. 1

No. off. 2

Size:— 40'0" dia. x 34'0" high.

Material:— Plates to BSS.13 26/32 T.T.
Sections to BSS.15 28/33 T.T.

Bottom Plates:— 1/4" thick Sketch and 1/4" thick rectangulars
Arranged for lap-welding.

Shell:— 6 Tiers arranged for butt-welding.

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Tier Thicknesses:—	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"				

Roof Type:— Fixed Frameless Roof (Non Pressure)

Roof Sheets:— 1/4" thk.

Tank Fittings:— See Sheet (2)

Shop Painting:— All steelwork will be Sulphuric/Phosphoric Acid Pickled and Painted one coat of Red Lead Primer.

Site Paint:— Nil

Delivery:— See letter This will require to be confirmed when ordering.

Electrodes Supplied:— YES xxxxxx

Terms:— Nett cash against mate's receipts.
xxxxxxxxxxxxxxxxxxxx
~~2½% discount for cash by end of month following month of delivery~~

Conditions:— *As per C.F. 2 Form attached.*

Our price covers for the materials supplied fabricated, despatched knocked down, marked for erection, including the necessary permanent bolts and nuts, plus spares; packed or bundled if required for shipment.

Copies :-	Orig.	Est.	L.O.	D.O.	Erect.	JLA	T.C	Spare.
	1	1	1	1		1		

TANK FITTINGS

No. Off	DESCRIPTION	Drawing Number.
1	Spiral Stair	M.B.E.
1	Set Handrail round roof	"
1	Set Radial Handrail on roof	"
1	24" dia. Shell Manhole	"
1	4" dia. Draw off & Sump	"
1	6" dia. Shell Nozzles x ASA 150 lbs.	"
2	12" dia. Shell Nozzles x ASA 150 lbs.	"
1	24" dia. Roof Manhole	"
1	6" dia. Swing Pipe	"
1	6" dia. Combined Vent and Dip to Whessoe Fig. WT.150	"
1	Thermometer	"
1	Hydrometer	"
	INSPECTION	
	If this quotation is successful please	
	give particulars on your official	
	order or letter of intent. State	
	'Nil' if none required.	

REMARKS:— We do not include for surface or edge inspection of any plates.

Date ______________ Your Ref. ______________ Our Ref. 9600A.

MOTHERWELL BRIDGE & ENGINEERING COY., LTD.,
SPECIFICATION FOR WELDED TANK.

INSPECTION

If this quotation is successful please give particulars on your official order or letter of intent. State Nil if none required.

Item No. 2

No. off. 2

Size:— 48'0" dia. x 30'0" high.

Material:— Plates to BSS.13 26/32 T.T.
Sections to BSS.15 28/33 T.T.

Bottom Plates:— 1/4" thick Sketch and 1/4" thick rectangulars
Arranged for lap-welding.

Shell:— 6 Tiers arranged for butt-welding.

Tier Thicknesses:—

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1/4"	1/4"	1/4"	1/4"	1/4"	1/4"				

Roof Type:— Fixed Self-supporting Cone Roof (Non Pressure)

Roof Sheets:— 3/16" thk.

Tank Fittings:— ~~See Sketch (2)~~ Allas Item 1

Shop Painting:— All steelwork will be sulphuric/phosphoric acid pickled and painted one coat of red lead primer.

Site Paint:— Nil

Delivery:— See letter This will require to be confirmed when ordering.

Electrodes Supplied:— YES ~~or NO~~

Terms:— Nett cash against mate's receipts.
~~Nett cash on delivery~~
~~less 2½% discount for cash by end of month following month of delivery~~

Conditions:— *As per C.F. 2 Form attached.*

Our price covers for the materials supplied fabricated, despatched knocked down, marked for erection, including the necessary permanent bolts and nuts, plus spares; packed or bundled if required for shipment.

Copies :-	Orig.	Est.	L.O.	D.O.	Erect.	JLA	T.C	Spare.
	1	1	1	1		1		

Date ______ Your Ref. ______ Our Ref. 9600A

MOTHERWELL BRIDGE & ENGINEERING COY., LTD.,
SPECIFICATION FOR WELDED TANK.

INSPECTION
If this quotation is successful please give particulars on your official order or letter of Agent. State if none required

Item No. 3

No. off. 2

Size:— 48'0" dia. x 36'0" high.

Material:— B.S.S.13 26/32 T.T. for Plates.
B.S.S.15 28/33 T.T. for Sections

Bottom Plates:— 1/4" thick Sketch and 1/4" thick rectangulars
Arranged for lap-welding.

Shell:— 6 Tiers arranged for butt-welding.

Tier Thicknesses:—

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1/4"	1/4"	1/4"	1/4"	1/4"	1/4"				

Roof Type:— Fixed Self Supporting Cone Roof (Non Pressure)

Roof Sheets:— 3/16" thk.

Tank Fittings:— ~~See Sheet (2)~~ All as Item 1.

Shop Painting:— All steelwork will be Sulphuric/Phosphoric acid pickled and painted one coat of red lead primer.

Site Paint:— Nil

Delivery:— See letter This will require to be confirmed when ordering.

Electrodes Supplied:— YES ~~NO~~

Terms:— Nett cash against mate's receipts.
~~Nett cash on delivery~~
~~2½% discount for cash by end of month following month of delivery~~

Conditions:— *As per C.F. 2 Form attached.*

Our price covers for the materials supplied fabricated, despatched knocked down, marked for erection, including the necessary permanent bolts and nuts, plus spares; packed or bundled if required for shipment.

Copies :-

Orig.	Est.	L.O.	D.O.	Erect.	JLA	T.C	Spare.
1	1	1	1		1		

FOUNDED 1890.

THE DRUM ENGINEERING CO. LIMITED

DIRECTORS: A. J. M. BEVER. M.INST.PET. E. D. STANSFIELD H. F. POOLE. A.I.M.

Makers of THE "DRUM" PUMP.

EDWARD STREET WORKS,
DUDLEY HILL,
BRADFORD, 4.

TELEPHONE:
BRADFORD 682373/4.

TELEGRAMS:
DRUM PHONE BRADFORD.

Your ref:Q/EC2/Falkland Islands 9084
Our ref:CDM/FEE/MS/610

Messrs. Crown Agents,
4, Millbank,
London S.W.1.

7th March, 1962.

Dear Sirs,

We thank you for your valued enquiry, above reference, dated the 19th ultimo, and refer to subsequent telephone discussion between yourselves and the undersigned, in response to which we take much pleasure in submitting our Quotation, in duplicate, giving prices and details of our recommendations.

We understand from the above mentioned telephone discussion that the pipework mentioned in your enquiry has not, as yet, been installed or sized. We have, therefore, based our calculations on what we would consider the most economical sizes and lengths, approximately 4000 feet each of 8" and 6" pipe, the 8" piping being on the suction side of the pump and on the delivery side for the remainder of its length, then continuing in 6" size.

We have also assumed that direct on line starting is suitable and have offered accordingly. If, however, alternative methods of starting are required we will be pleased to reconsider the offer on receipt of details.

We would advise that we would consider that the relief valve or bypass system be incorporated if there is any possibility that a valve could be shut on the delivery side of the pump whilst the pump is running. If a relief valve is required we would mention that we are able to supply suitable equipment, including the unloading valves.

We trust that you will find our Quotation in line with your requirements and look forward to hearing further from you in this connection in due course.

Yours faithfully,
THE "DRUM" ENGINEERING CO. LTD.

C.D. Marshall
DIRECTOR

THE "DRUM" ENGINEERING COMPA
HUMBOLDT STREET, BRADFORD,
TELEPHONE: BRADFORD 22358-9.

NEW ADDRESS
DRUM ENGINEERING CO. LTD.
EDWARD STREET WORKS
DUDLEY HILL
BRADFORD, 4
Tel. BRADFORD 682373

Crown Agents,
4, Millbank,
London. S. W. 1.

OUR REF. CDM/FEE/JW/610

YOUR REF. Q/E C2/FALKLAND ISLANDS/9084

QUOTATION.

DATE 7/3/62.

SUMMARY PAGE 1.
CONDITIONS OF SALE FORM 2254
SPECIFICATION SHEETS. 3,7.
DRAWINGS.
ILLUSTRATIONS. QA131/(7/3/62) CV 797

PUMP QUANTITY 1

SIZE 4/5/14

TYPE OGRB Carbon Seal.

BRANCH SIZE 8" (FITTED WITH TAPER PIECES)

DUTY 120 Tons/Hr. XXXXX XXXXX OF Deisel Oil SG 0.85 VISCOSITY

AT PUMPING TEMPERATURE (°F. °C.)

WHEN RUNNING AT 260 R.P.M. AND OPERATING AGAINST A TOTAL HEAD

OF 100 XXX WITH FLOODED SUCTION
P.S.I. XXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXX Hg.

X **CONSTRUCTION** OGRB pump as spec 3 (a) cast iron casing and rotors, steel shafts. Crane carbon seal gland.

RELIEF VALVE

STEAM JACKET

X **DRIVE** Reduction gear unit as spec 7(f) Highfield worm type 9" crs. ratio 1460/260 RPM fitted David Brown cone ring couplings and m/s guards.

X **BEDPLATE** Fabricated steel construction.

ACCESSORIES

X **HORSE POWER** at duty point approx 57.0 BHP. @ 115 PSI approx. 64.0 BHP.

X **MOTOR** 65 HP. Cromptom Parkinson TE.FC. Sq.Cage 1460 RPM. suitable D.O.L. Starting on 400/3/50 supply, screwed conduct entry.

STARTER

ENGINE

PRICE (INCLUDING WORKS TESTS)

Excluding motor	£516.		
Motor	£255.	10.	Od.
Pres, packing F.O.B.	£49.	.5.	Od.

DELIVERY F.O.B. Hull or Liverpool.

DESPATCH 16/18 weeks.

CONDITIONS OF SALE THIS QUOTATION IS GIVEN SUBJECT TO OUR CONDITIONS OF SALE FORM 2254 ENCLOSED.

SHIPPING DETAILS

approx.	nett weight	"	43.6 cwt.
"	gross	"	49.2. cwt.
"	cubage	"	114 cu.ft.

EXTRAS

FOR THE "DRUM" ENGINEERING CO. LTD.

C. D. Marshall.
DIRECTOR.

One Gland Internal Bearing Pumps

Construction

GENERAL

The Rotors are geared together by synchronising wheels which are totally enclosed in a substantial end cover.

GLAND may be either conventional stuffing box of ample depth with packed gland or mechanical carbon seal requiring no packing and eliminating all wear on the pump shaft.

Type of gland will be as stated in Quotation Summary page 1.

LUBRICATION of all working parts is provided by the liquid being pumped and there are no external lubrication points to be attended to.

MATERIALS OF CONSTRUCTION will be as stated in Quotation Summary page 1.
Standard construction is in cast iron with ·4 carbon steel shafts and Nitensyl nickel iron synchronising wheels.

Alternative materials can be used for special applications.

All pump casings are of substantial design well ribbed where necessary and hydraulically tested to B.S. Standards.

STEAM JACKET. When required the pump casing is arranged with full steam jacket designed to eliminate distortion. Jackets are suitable for dry saturated steam and are hydraulically tested to B.S. Standards.

O.G.R.B. (a)

The One Gland Roller Bearing pump is constructed with the shafts supported on internal roller bearings positioned close to the rotors.

It is therefore capable of operating against pressures limited only by the load-carrying capacity of the bearings.

For high temperature operation roller bearings are of heat-treated non-corrodible steel eliminating the possibility of distortion.

O.G.B.B. (b)

The One Gland Ball Bearing pump is constructed with the shafts supported on internal ball bearings positioned close to the rotors.

The ball bearings are of the dual-purpose type and are lightly pre-loaded during assembly of the pump, thereby providing positive axial location to the pump rotors.

The pump is arranged with a chambered cover at the driving end which can be used to relieve the stuffing box to suction pressure.

O.G. (c)

The One Gland pump is constructed with the shafts supported in internal sleeve bearings close to the rotors.

Bearings are of ample proportion and bearing pressures are kept within very moderate limits.

Special non-metallic materials can be used for the bearing bushes.

Steam jacket when required can in this design of pump be of the "H" type which envelopes the synchronising wheel chamber in addition to the pumping chamber.

Drive and Bedplate

Construction

GENERAL

All drives and transmission shafts are of ample proportions for the maximum horsepower to be transmitted and all bearings are arranged with lubrication requiring the minimum of attention.

Pedestal bearings are fitted with self-lubricating bronze bushes in conjunction with Plain Bearing pumps or self-aligning ball bearings in conjunction with Ball and Roller Bearing pumps.

Reduction Gears or Reduction Gear Units are conservatively loaded resulting in long life with minimum maintenance.

LUBRICATION. All reduction gears or gear units requiring lubrication are provided with oil level indicators and instructions regarding the correct grade of lubricant.

FLEXIBLE COUPLINGS. Standard flexible couplings are of the fabric disc type. **Alternative types if used will be as stated in Quotation Summary page 1.**

Reduction Ratio will be as stated in Quotation Summary page 1.

BELT DRIVE (a)

The pump is arranged with extended shaft supported in outer pedestal bearing and complete with fast and loose pulleys for flat belt drive, all mounted and lined up on a substantial cast iron bedplate.
Size of Pulleys as stated in Quotation Summary page 1.
Belt Striking Gear is not included unless stated but can be supplied when required.

V-ROPE DRIVE (b)

The pump is arranged with extended shaft supported in outer pedestal bearing mounted and lined up on a substantial cast iron bedplate. Drive is through V-belts arranged horizontally from V-pulley fitted to the driving motor which is mounted separately on slide rails. An enclosed type guard is provided for the rope drive. When floor space is limited the drive can be arranged vertically with the motor mounted above the pump on a hinged platform carried on a supporting stand bolted to the bedplate forming a self-contained unit.
Type of drive—Horizontal or Vertical—will be as stated in Quotation Summary page 1.

OPEN REDUCTION GEAR (c)

The pump is arranged with extended shaft supported in outer pedestal bearing and fitted with overhung cast iron spur wheel accurately aligned with a fibre pinion fitted to the driving motor, the whole being mounted and lined up on a substantial cast iron bedplate carrying pump and motor. The gearing is enclosed in a strong sheet steel guard split horizontally to allow the upper half to be removed for inspection purpose.

DIRECT DRIVE (d)

The pump shaft is fitted with flexible coupling for connecting direct to the driving motor or other prime mover, which, together with the pump, is mounted on a substantial cast iron or fabricated steel bedplate, the units being accurately lined up and a sheet steel guard of rigid construction fitted over the coupling.

ENCLOSED REDUCTION GEAR (e)

Self-contained reduction gears are incorporated in the driving end of the pump, totally enclosed and arranged with oil bath lubrication. The pinion shaft is mounted on ball and roller bearings and fitted with flexible coupling to suit the driving motor or other prime mover, which, together with the pump, is mounted on a substantial cast iron bedplate. The units are accurately lined up and a sheet steel guard of rigid construction is fitted over the coupling.

REDUCTION GEAR UNIT (f)

The pump is connected by flexible coupling to the output shaft of a totally-enclosed Reduction Gear Unit, the input shaft of which is fitted with flexible coupling to suit the driving motor or other prime mover, sheet steel guards of rigid construction being provided for the couplings.
The pump, gear unit and prime mover are mounted and accurately lined up on a cast iron or fabricated steel combination bedplate of ample depth and rigidity.
Make, Size, Type and Ratio of Gear Unit will be as stated in Quotation Summary page 1.

THE "DRUM" ENGINEERING COMPANY LTD.

PRICE CLAUSE. In view of the uncertainty of future manufacturing costs we are compelled to reserve the right to invoice at the price ruling at the date of dispatch.

CONDITIONS OF SALE.

1. **GENERAL.** THE ACCEPTANCE OF THIS TENDER INCLUDES THE ACCEPTANCE OF THE FOLLOWING TERMS AND CONDITIONS.

2. **VALIDITY.** UNLESS PREVIOUSLY WITHDRAWN, THIS TENDER IS OPEN FOR ACCEPTANCE WITHIN THIRTY DAYS FROM DATE HEREOF.

3. **PACKING.** UNLESS OTHERWISE SPECIFIED, ALL WOODEN PACKING CASES, CRATES, ETC., MUST BE RETURNED TO OUR WORKS AT YOUR EXPENSE AND IN GOOD CONDITION WITHIN ONE MONTH OF RECEIPT, OTHERWISE THEY WILL BE CHARGED FOR. THIS DOES NOT APPLY TO GOODS PACKED FOR SHIPMENT.

4. **PARTICULARS.** THE PARTICULARS GIVEN IN OUR QUOTATION ARE BELIEVED TO BE CORRECT, BUT DEVIATIONS SHALL NOT BE TAKEN TO VITIATE THE CONTRACT, AND ANY CLERICAL ERRORS ARE SUBJECT TO CORRECTION. ALL ILLUSTRATIONS, DRAWINGS, ETC., ACCOMPANYING OUR QUOTATIONS MUST BE REGARDED AS APPROXIMATE REPRESENTATIONS ONLY, AND ARE NOT BINDING IN DETAIL. DIMENSIONS ARE ALSO APPROXIMATE ONLY, AND SUBJECT TO ADJUSTMENT AND CORRECTION AFTER THE ORDER IS PLACED.

5. **DUTY.** SHOULD THE PLANT UPON ERECTION WITHIN SIX CALENDAR MONTHS FROM THE DATE OF DELIVERY (ON THE EXPIRATION OF WHICH PERIOD ALL LIABILITY ON OUR PART CEASES) BE FOUND NOT TO GIVE THE DUTY SPECIFIED IN OUR TENDER OR QUOTATION, AND SHOULD WE FAIL (REASONABLE FACILITIES BEING AFFORDED US BY THE CUSTOMER) TO MAKE IT DO SO WITHIN A REASONABLE PERIOD, THE CUSTOMER SHALL HAVE THE RIGHT TO RETURN THE PLANT AND BE REPAID ANY PURCHASE MONEY, BUT SHALL HAVE NO FURTHER OR OTHER RIGHT OR CLAIM IN RESPECT OF SUCH FAILURE.

6. **DESPATCH.** THE TIME GIVEN FOR DESPATCH IS TO DATE FROM RECEIPT BY US OF A WRITTEN ORDER TO PROCEED AND ALL NECESSARY INFORMATION AND DRAWINGS TO ENABLE US TO PUT THE WORK IN HAND. WE WILL USE OUR BEST ENDEAVOURS TO DESPATCH ON THE DATE GIVEN, BUT WILL ACCEPT NO LIABILITY FOR FAILURE TO DO SO UNLESS A GUARANTEE BE GIVEN UNDER AN AGREED PENALTY (AS LIQUIDATED DAMAGES) FOR LATE DESPATCH. SHOULD DESPATCH BE DELAYED BY STRIKES, LOCKOUTS, FIRE, ACCIDENTS, DEFECTIVE MATERIAL, OR ANY CAUSE WHATSOEVER BEYOND OUR REASONABLE CONTROL, AN EXTENSION OF TIME CORRESPONDING TO THE PERIOD OF DELAY IS TO BE GRANTED.

7. **DELIVERY.** DELIVERY F.O.R. BRADFORD UNLESS OTHERWISE STATED.

8. **DEFECTS.** WHILST WE USE OUR BEST ENDEAVOUR AS REGARDS THE DESIGN, QUALITY OF MATERIAL, AND WORKMANSHIP OF THE GOODS WHICH WE SUPPLY, NO CONDITION OF WARRANTY, EXPRESS OR IMPLIED, IS MADE OR GIVEN, BUT IN LIEU THEREOF WE UNDERTAKE TO REPLACE OR REPAIR ANY PART OF ANY SUCH MACHINE WHICH IS PROVED TO HAVE BEEN ORIGINALLY DEFECTIVE IN MATERIAL, OR WORKMANSHIP, IF RETURNED TO OUR WORKS, CARRIAGE PAID, WITHIN SIX CALENDAR MONTHS FROM THE DATE OF DELIVERY.

9. **GENERAL.** SAVE AS AFORESAID, WE UNDERTAKE NO LIABILITY IN RESPECT OF GOODS WHICH WE SUPPLY, WHETHER IN RESPECT OF DESIGN, MATERIAL, WORKMANSHIP OR OTHERWISE, OR IN RESPECT OF ANY MATTER ARISING DIRECTLY OR INDIRECTLY FROM ANY DEFECT THEREIN.

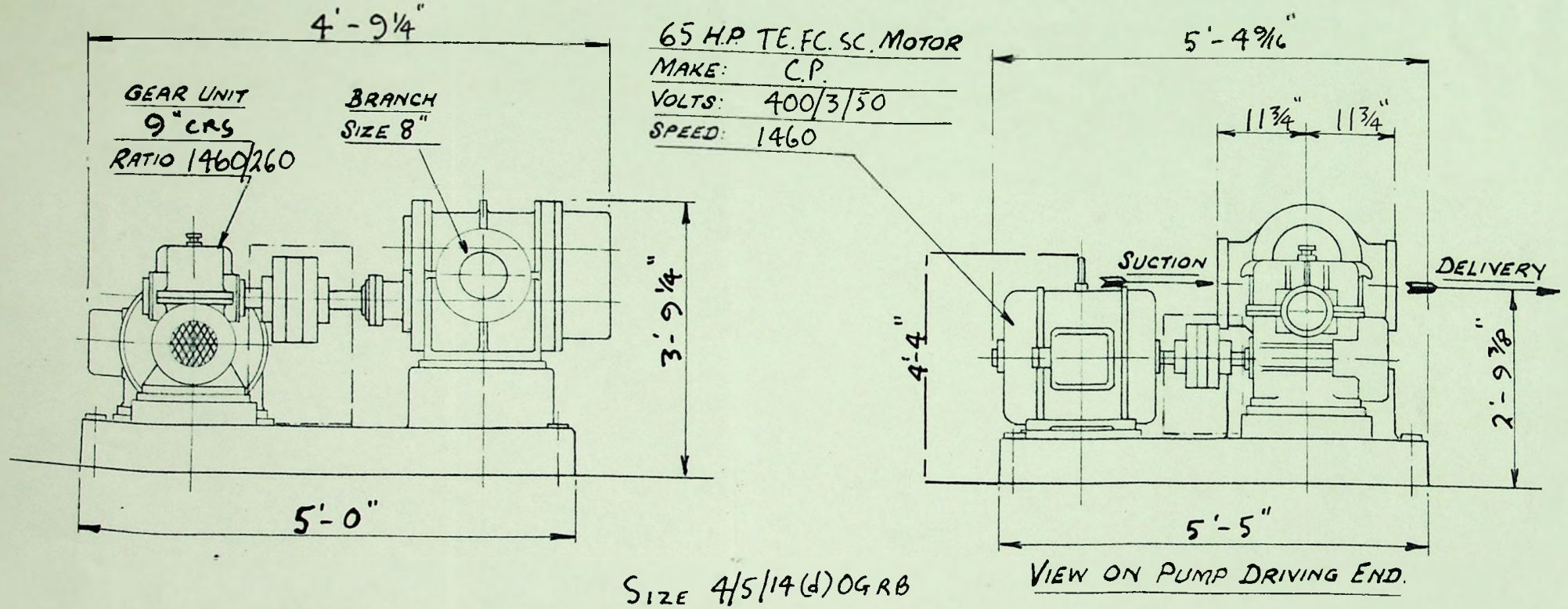
10. **LEGAL CONSTRUCTION.** THE CONTRACT SHALL IN ALL RESPECTS BE CONSTRUED AND OPERATE AS AN ENGLISH CONTRACT, AND IN CONFORMITY WITH ENGLISH LAW.

11. **SPECIAL CONDITIONS OF SALE.** ALL TECHNICAL FIGURES ARE SUBJECT TO THE USUAL MARGIN OF 2½% UP OR DOWN ON TEST. THE GUARANTEES MENTIONED IN OUR TENDER ARE GIVEN ON THIS BASIS. IN THE CASE OF PUMPS DEALING WITH LIQUIDS CONTAINING IMPURITIES, MATTER IN SUSPENSION, ACIDS, ETC., FULL PARTICULARS MUST BE SENT PRIOR TO PLACING AN ORDER, ALSO INSTRUCTIONS WITH REGARD TO ANY SPECIAL MATERIALS TO BE USED DESCRIBING ANY PECULIARITIES OBSERVED BY THE USE OF THE LIQUID IN EXISTING PUMPS OR MACHINERY. OUR GUARANTEE DOES NOT COVER CHEMICAL, ELECTROLYTIC, GALVANIC, OR OTHER DESTRUCTIVE ACTION UNLESS WE ARE FULLY INFORMED, IN WRITING, AT THE TIME OF PLACING ORDER.

    FURTHER, WE DO NOT MAKE ANY GUARANTEE TO COVER FAIR WEAR AND TEAR, THE EFFECTS DUE TO CARELESSNESS OR INCOMPETENCE ON THE PART OF THOSE HANDLING THE PLANT, DEFECTIVE FOUNDATIONS OR BUILDINGS, FAULTY ERECTION, UNSATISFACTORY ARRANGEMENT OF PIPING, FREEZING OR RUSTING, INCRUSTATING MATTER OR IMPURITIES.

12. **PAYMENT.** UNLESS OTHERWISE STATED PRICES QUOTED ARE FOR NETT 30 DAYS FROM DATE OF INVOICE. WE RESERVE OURSELVES THE RIGHT TO CHARGE 5% ON OVERDUE ACCOUNTS.

THE DRUM ENGINEERING CO: LTD: - BRADFORD.



VIEW ON PUMP DRIVING END.

SIZE 4/5/14(d)OGRB

ARRGT: OF ONE GLAND PUMP,
WITH WORM GEAR UNIT
& MOTOR DRIVE.

FOR QUOTATION PURPOSES ONLY

CLIENT:- CROWN AGENTS

REF:- Q/EC2/FALKLAND ISLANDS 9084

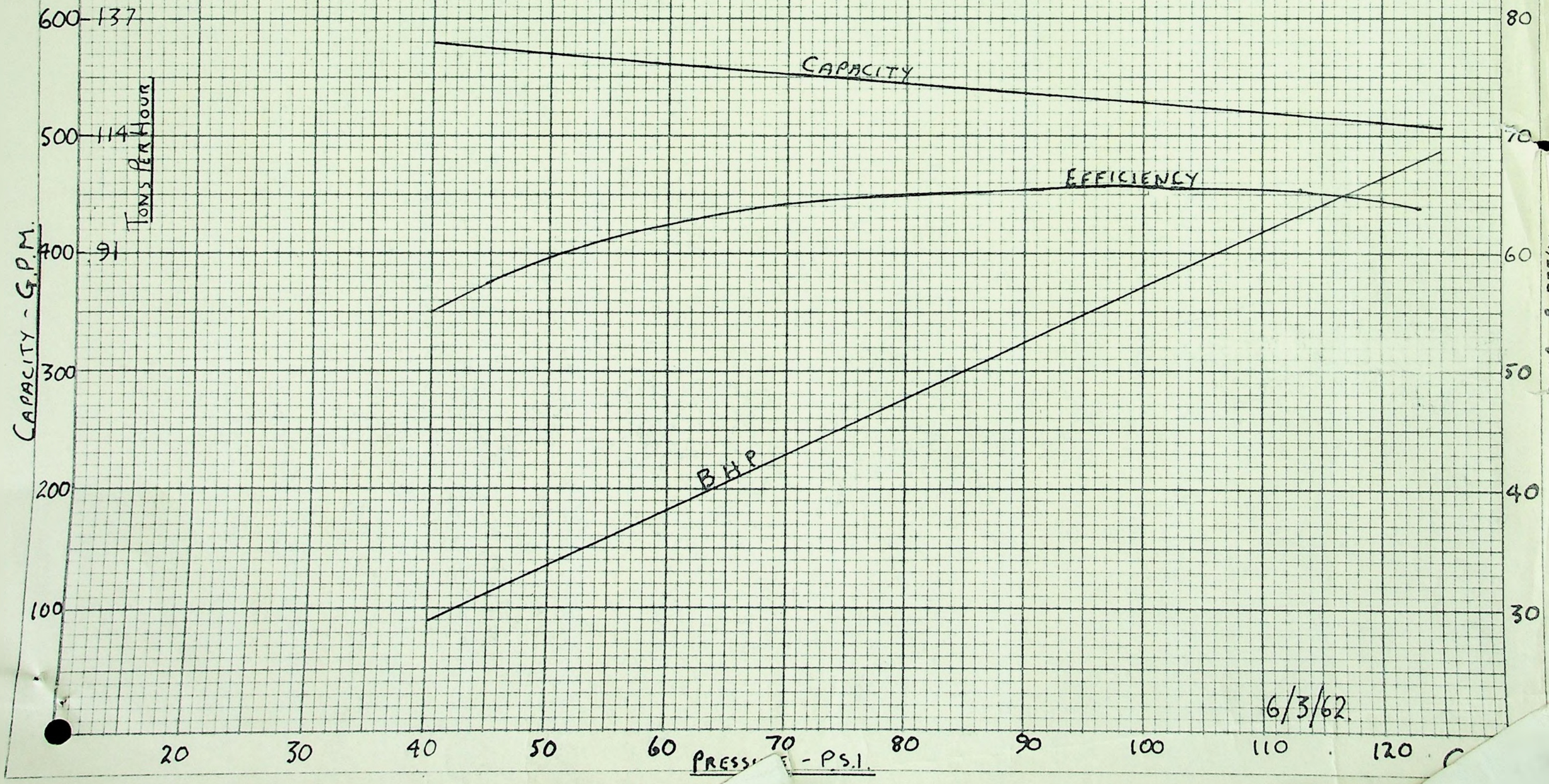
ISSUED: 7/3/62 DRG: NO: QA. 131.

DRG: NO: QA. 131.

C.F.

DRUM ENG' CO LTD
BRADFORD.

CROWN AGENTS REF Q/EC2/FALKLAND ISLANDS 9084
CURVES FOR 'DRUM' PUMP SIZE 4/5/14 OGRB RUNNING AT
260 RPM. HANDLING DEISEL OIL SG 0·85



W[illegible]AND REGISTERED OFFICE
L[illegible]Works
P[illegible]17 Newark, Notts.
Telephone Newark 601 (10 lines)
Telegrams 'Aquosity, Newark'

Worthington - Simpson Ltd.

BIRMINGHAM
Ox Hill Court, 202. Hagley Road, Edgbaston, Birmingham, 16
BRISTOL
Cumberland House, The Promenade, Clifton
DUBLIN
20, Herbert Place
GLASGOW
25, Maxwell Road, Eglinton Toll
LEEDS
39, Otley Road, Headingley
LIVERPOOL
15-16, Irwell Chambers East, Fazakerley St.
MANCHESTER
74, Corporation Street
NEWCASTLE-ON-TYNE
Milburn House, Dean Street

London Office:
QUEEN'S HOUSE · KINGSWAY · LONDON W.C.2
Telephone HOLBORN 4271 (10 lines) Telegrams 'PUMPING, WESTCENT, LONDON'

OUR REF. VHN/FEW/102
YOUR REF. JF/JW
20th February 1962

IN DUPLICATE

PER AIR MAIL

Crown Agents,
4, Millbank,
London, S.W.1.

TENDER NO. L.7868.

Dear Sirs,

Q/EC2/FALKLAND ISLANDS 9084.

We respond to your enquiry dated 19th February, and in computing the total head requirements against which the pumps need to operate, we have assumed an 8" delivery and suction pipe.

We are in some doubt as to the type of motor required, i.e. squirrel cage or slipring, and whether either of these types is to be of flameproof construction or [illegible] industrial type. We have accordingly refrained fro[illegible]ting for the motor, and we shall be pleased to qu[illegible]this upon receipt of further information from yo[illegible]

[illegible]e duty of 120 tons per hour of diesel oil [illegible] gravity of 0.85, and assuming viscosity [illegible]er, we canculate the requirements as [illegible]st a total head of 113 ft., and accord-[illegible]is :-

[illegible]ONTAL CENTRIFUGAL SINGLE-STAGE [illegible] of standard construction running [illegible]th packed glands and complete [illegible]pling guard and combination [illegible] the pump and a motor. Efficiency [illegible], motor required at duty 25 BHP, [illegible]ull non-overloading operation

Crown Agents. 20th February 1962.

PRICE: £160. 0. 0. NETT.

Extra for Witnessed Test on pump:
£ 20. 0. 0. NETT.

We attach Curve WS-250, page 4, which provides the characteristic curve of the pump offered, and we would advise that the BHP absorbed figures shown thereon should be reduced by the factor of 0.85, i.e. the specific gravity of the liquid. We also attach Specification Sheet WS-250, pages 3/4, which illustrates the pump of standard construction which we have offered.

DELIVERY:

F.O.B. British Port.

DESPATCH:

10 weeks approx. - this may be extended if a slipring motor or motor with flameproof enclosure is required.

CONDITIONS OF SALE:

As Form 'AE' already with you.

Yours faithfully,
WORTHINGTON-SIMPSON LIMITED.

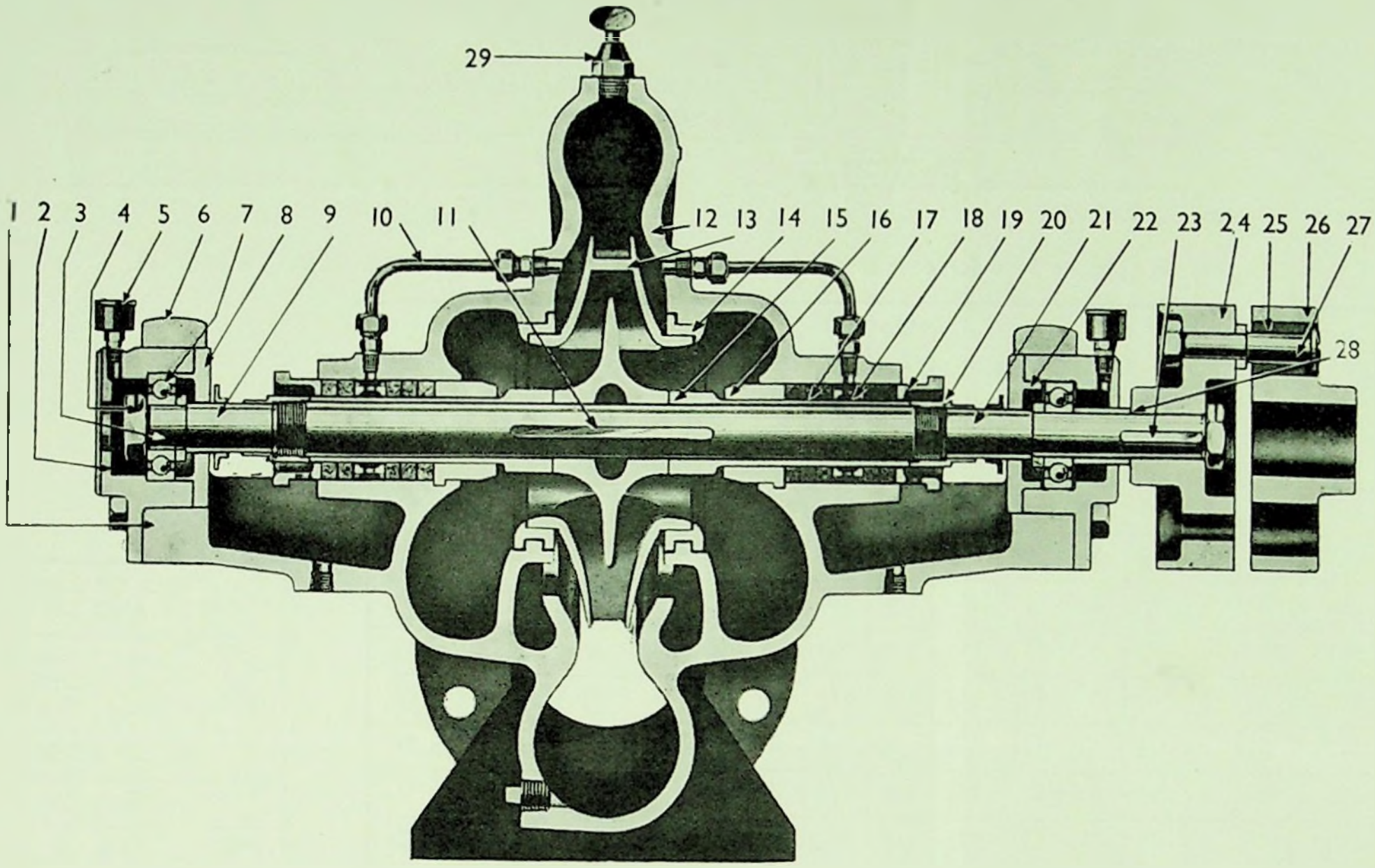
(V. H. Newling)
Export Manager.

Enc.

Worthington - Simpson

Type L HORIZONTAL SPLIT CASE CENTRIFUGAL PUMPS

TYPICAL SECTION AND LIST OF PARTS



1. Lower Half Casing
2. Bearing Housing
3. Bearing Collar
4. Lock Nut
5. Grease Cup
6. Bearing-Housing Strap
7. Ball Bearing
8. Outboard Bearing Cover
9. Water Shield
10. Water-Seal Tube
11. Impeller Key
12. Upper Half Casing
13. Impeller
14. Casing Ring
15. Shaft Sleeves
16. Stuffing Box Bushing
17. Graphite Packing
18. Water Seal Cage
19. Gland
20. Shaft Nut
21. Shaft
22. Inboard Bearing Cover
23. Coupling Key
24. Driven Half Coupling
25. Rubber Bushing
26. Driving Half Coupling
27. Coupling Pin and Nut
28. Coupling Distance Piece
29. Air Valve

STANDARD SPECIFICATION

Casing.—Close-grained cast iron of heavy section, split horizontally with branches in lower half, thus permitting rapid access to rotating parts. Suction passages are volute in form, promoting smooth entry to impeller and increasing efficiency.

Impeller.—Bronze, of the double entry shrouded type thus eliminating end thrust. All outside surfaces machined and water passages hand finished to reduce friction loss and increase efficiency.

Casing Rings—Renewable, secured from relative movement by tongue and groove fitting.

Shaft.—Medium carbon steel, heat treated.

Shaft Sleeves.—Bronze, renewable, protect shaft from contact with liquid and from packing wear.

Bearings.—Single row ball type, contained in separate easily removable housings. Locating bearing at end remote from drive.

Stuffing Boxes.—Extra depth to prevent air leakage and water sealed. Stuffing box bushes of whitemetal and renewable. Mechanical seals are available in lieu of packed stuffing boxes.

Gland.—Bronze stamping, provided with swing bolts to facilitate re-packing.

Coupling.—Flexible, of the steel pin and rubber bushing type.

Baseplate.—Standard baseplates are of cast iron of heavy box section. When the size or type of driver requires a special base, it will be fabricated in steel.

Fittings.—Air valve, two grease lubricators, and water seal connections.

Accessories.—Foundation bolts, when baseplate supplied.

ALL IRON SPECIFICATION

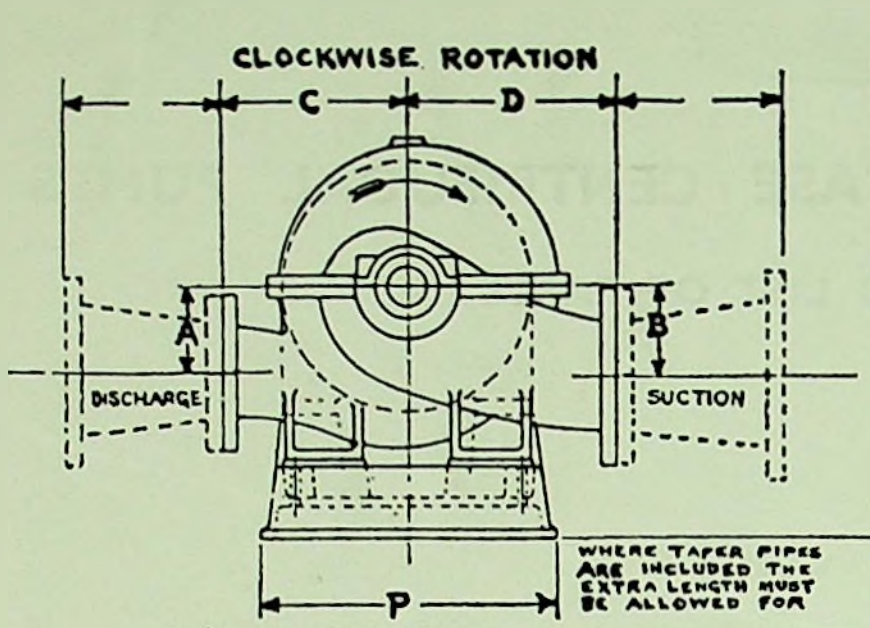
Materials as Standard Specification with the following variations : Impeller, Casing Rings, Stuffing Box Bushes, Glands—Cast iron. Shaft Sleeves, Air Valve, Water Seal Connections—Steel.

ALL GUNMETAL SPECIFICATION

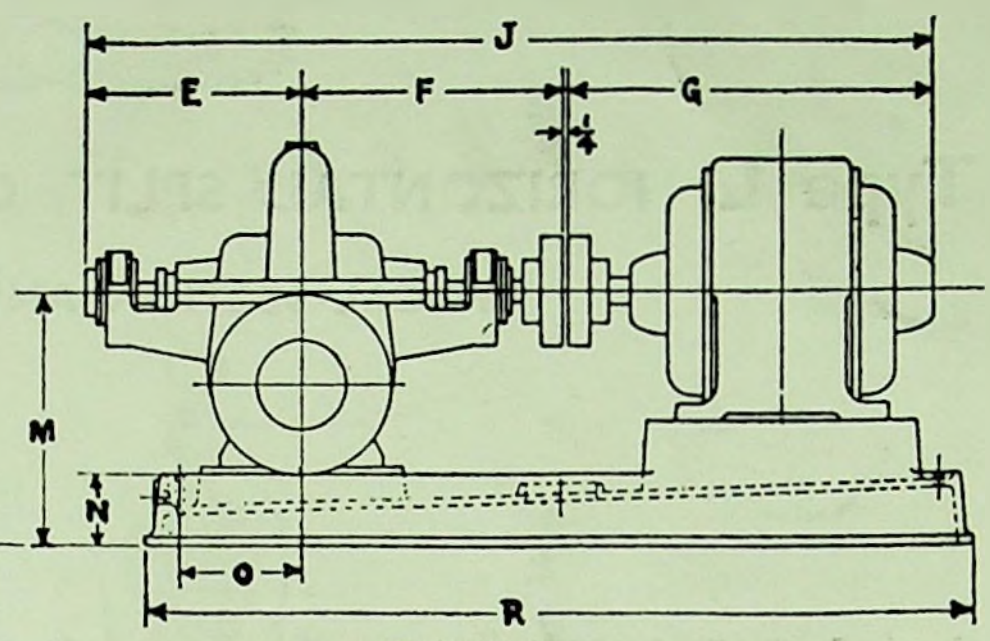
Materials as Standard Specification with the followi[ng] variations : Casing, Casing Rings, Stuffing Box Bush[es] Gunmetal. Shaft—Stainless Steel.

OVERALL DIMENSIONS

Type L HORIZONTAL SPLIT CASE CENTRIFUGAL PUMPS



Driving End View



Front View

Branches on opposite hand for counter clockwise rotation—Clients to advise which handing is required.

Type of Pump	Discharge Diam.	Suction Diam.	A	B	C	D	E	F	† G	† J	† M	† N	† O	† P	† R
3L1	3	4	5¾	4½	7½	10	12¼	14½	28	55	16	3¾	5¾	19	45½
3L2	3	5	7½	5	9¼	11¾	12¼	14½	33	60	16	3¾	5¾	19	45½
3L3	3	4	7	4¾	12	11	12¼	14½	28	55	16	3¾	5¾	19	45½
3L13	3	4	7½	6	11	11½	13 3/16	16¾	32	62 3/16	17¼	6	5¾	21	52
4L1	4	5	4¾	5	10½	11¾	12¼	14½	28	55	16	3¾	5¾	19	45½
4L2	4	6	7¾	6¼	12¾	13½	12⅜	14⅝	31	58¼	17	4	8¾	22½	51
4L3	4	6	9¼	6½	12	14½	13⅝	17⅜	33	64¼	20	4	8¾	22½	51
*4L13	4	6	7¾	6½	12	13	16⅜	20 1/16	45	82 5/16	19	6	8	27	72
5L1	5	6	6¼	6¼	10	13½	12⅜	14⅝	31	58¼	19	4	8¾	22½	51
5L2	5	6	9	6¾	13	15½	13⅝	17⅜	36	67¼	20	4¼	8¾	27	60
5L3	5	6	9 9/16	6¼	15	15	15⅜	19½	36	71⅛	20	4¼	9½	27	60
6L1	6	8	7	7	10	14½	13	15¼	28	56½	19	4	8¾	22½	51
6L2	6	8	9½	8¼	14	15¼	15⅜	19½	33	68⅛	19	4¼	8¾	27	60
6L3	6	8	10⅜	8⅛	17	17½	15⅜	19½	42	77⅛	23	5¾	9½	33	68
*6L11	6	8	7½	8	14	13½	15 5/16	19½	43	78 1/16	21	6	9	24	66
*6L13	6	8	9¼	8¼	14	15	16⅜	20 1/16	46	83 5/16	22	7	9	29	78
8L1	8	10	10	9½	13	17½	17 9/16	21¾	38	77½	23	5¼	9½	33	68
8L2	8	10	12	9¾	18½	17½	16½	20⅝	40	77⅜	24	5¼	9½	33	68
8NL3	8	10	11½	9½	19	17	16½	20⅝	42	79⅜	24	7	9½	33	68

TABLE OF DRILLING FOR SUCTION AND DELIVERY FLANGES				
Dia. of Pipe	Dia. of Flange	Pitch Circle Dia.	Size of Bolt	No. of Bolts
3	7¼	5¾	⅝	4
4	8½	7	⅝	4
*4	8½	7	⅝	8
5	10	8¼	⅝	8
6	11	9¼	⅝	8
*6	11	9¼	¾	8
8	13¼	11½	⅝	8
*8	13¼	11½	¾	8
10	16	14	¾	8

* These figures apply only to the corresponding models similarly indicated in the dimension table.

† NOTE.—Dimensions G, J, M, N, O, P, R, are approximate only and depend on size and type of motor. Not to be used for installation purposes.

All dimensions are in Inches

Worthington - Simpson Ltd

LONDON OFFICE:
QUEEN'S HOUSE, KINGSWAY, LONDON, W.C.2.
Telegrams: *"Pumping, Westcent, London"* Telephone: *Holborn 4271 (10 lines)*

WORKS & REGISTERED OFFICE:
NEWARK, NOTTS.
Telegrams: *"Aquosity, Newark"* Telephone: *Newark 601 (10 lines)*

BRANCH OFFICES:

BIRMINGHAM ...Ox Hill Court, 202 Hagley Road, Edgbaston
BRISTOL Cumberland House, The Promenade, Clifton
DUBLIN ... ... 20 Herbert Place
GLASGOW 25 Maxwell Road, Eglinton Toll
LEEDS ... 39 Otley Road, Headingley
LIVERPOOL ... 15/16 Irwell Chambers East, Fazakerley Street
MANCHESTER ... 74 Corporation Street
NEWCASTLE-ON-TYNE ... Milburn House, Dean Street

OVERSEAS AGENTS IN :—ADEN, AUSTRALIA, BAHREIN AND MUSCAT, BURMA, CYPRUS, EGYPT, HONG KONG, INDIA, IRAQ, KENYA AND UGANDA, KUWAIT, MALAYA AND SINGAPORE, NEW ZEALAND, PAKISTAN, RHODESIAS, SOUTH AFRICA, TANGANYIKA AND ZANZIBAR

TELEPHONE: 2351* CHEADLE, STOKE-ON-TRENT.
TELEX SERVICE: 3642.

TELEGRAMS: "BERRYHILL", STOKE, TELEX.
CABLEGRAMS: "BERRYHILL", STOKE.

Berry Hill (Engineers) Ltd.

WORKS
NEW HADEN, CHEADLE
MOORLANDS FOUNDRY, LEEK

IRON FOUNDERS

HYDRAULIC ENGINEERS

DIRECTORS:
E. SIMPSON, M.B.E.
F. W. LOBENHOFFER.
G. N. BELL.

P.O. Box No 5.
Cheadle,
Stoke-on-Trent
STAFFS.

Your ref : C/EC2/Falkland Isles 9084
Our ref : LDL/DF/Exp.AH6

5th March 1962

Crown Agents for Oversea Governments and
Administrations,
4, Millbank,
LONDON. S. W. 1.

Dear Sirs,

Thank you very much indeed for your enquiry of 19th February for electrically driven pumping plant required in the extension of the fuel storage capacity of the Falkland Islands Authorities.

We note that a pumping rate of approximately 120 tons per hour (528 GPM ,s.g.0.85) is implicated and from the general wording of the specification assume that duplicate units are required. We therefore enclose our provisional offer for your consideration, the total head stated being calculated as follows.

Static delivery head to tank base	40 ft.
Static delivery head above tank base - allow	30 ft.
Friction head loss in 7500 ft. of 8" diam. mild steel delivery main	71 ft.
Allowance for suction lift	15 ft.
Total head from all causes,	156 ft.

As mentioned above this offer should be considered preliminary only as the size and class of pipe work actually employed will affect our head calculation and also a portion of the static head is an assumed figure. We shall be pleased to make a complete revision including flexible suction pipe and specials when more complete details of the scheme are made known; in respect of the latter equipment a sketch will be most helpful.

Assuring you of our close attention, we remain.

Yours faithfully,
BERRY HILL (ENGINEERS) LIMITED

DIRECTOR

TELEPHONE: 2351 * CHEADLE, STOKE-ON-TRENT
TEL[redacted]ERVICE 3642

TELEGRAMS: "BERRYHILL" STOKE. TELEX
CABLEGRAMS: "BERRYHILL" STOKE.

Berry Hill (Engineers) Ltd.

WORKS:
NEW HADEN. CHEADLE
MOORLANDS FOUNDRY. LEEK

IRON FOUNDERS
HYDRAULIC ENGINEERS

P.O. Box. No 5,
Cheadle,
Stoke-on-Trent,
STAFFS

DIRECTORS :
E. SIMPSON. M.B.E.
F. W. LOBENHOFFER
G. N. BELL

TENDER FOR

ELECTRICALLY DRIVEN CENTRIFUGAL PUMPING SETS

Crown Agents for Oversea Governments
and Administrations,
4, Millbank,
LONDON. S. W. 1.

5th March 1962

Dear Sirs,

We have pleasure in offering the following:

TWO- Electrically driven horizontal centrifugal pumping set having the following performance.

Rated Capacity :	117 tons per hour
Head generated :	156 ft. from all causes
Liquid handled :	Diesel oil, s.g. 0.85; atmospheric
temp, s.g. etc.:	temp.,viscosity 45 Redwood No.1.assumed.
Power absorbed :	32 BHP at 2900 r.p.m.
Motor rating :	40 BHP at 2900 r.p.m.

Characteristics Chart C. 5575

EACH UNIT COMPRISES:

PUMP 4L1 - single stage horizontal split case centrifugal pump manufactured to the specification below.

Branches	: 5" suction and 4" delivery both suitably flanged.
Casing	: **Cast iron** construction split on the horizontal centre line with the pipe branches arranged on the bottom half so allowing the removal of the top half and inspection of the rotating element without breaking the pipe joints.
Impeller	: **Gunmetal** accurately machined all over and hand filed to minimise friction. The impeller is of the double eye double shrouded type, rotating in renewable wearing rings and is carefully balanced.
Shaft	: **Steel** of large diameter to prevent distortion and completely sleeved through the water passages. The rotating element is locked up from either end to form a rigid assembly
Bearings	: **Ball/race** type grease lubricated, contained in housings at either end of pump external to the water passages. Water throwers are situated on the shaft before the bearing housings to prevent water entry
Stuffing boxes	: Deep section design each having rings of packing and lantern ring retained by adjustable gland. Each stuffing box is sealed with liquid to prevent the entry of air into the impeller eye.
EXTRA ITEMS	:

Cont.....

FLEXIBLE COUPLING: Of the large diameter type will provide direct coupled power transmission between the above specified pump and the following motor.

COUPLING GUARD: Of the rigid sheet steel type will be provided totally enclosing the flexible coupling and giving complete protection.

MOTOR: 40 HP SLIPRING induction motor, 2900 r.p.m.

Supply	: 400 volt 3 phase 50 cycles
Rating	: TO BSS 2613,wound with Class E insulating materials.
Enclosure	: SCREEN PROTECTED
Manufacturer	: Brook Motors Limited
Cable Entry	: Terminal box for conduit entry.

BASE FRAME: Of substantial mild steel fabricated design with lifting holes incorporated and of all welded construction will be supplied to accept both pump and motor, these being accurately aligned upon it to form one integral unit. The pump and motor foundations comprise accurately machined pads of large area.

FOUNDATION BOLTS: Will be provided and foundation lugs on the base frame will be drilled to accept these bolts.

STARTER: Hand operated oil immersed combined stator and rotor starter by Erskine Heap arranged for wall fixing and equipped with the following - Free handle feature; under voltage release; 3 solenoid type overload releases with adjustable oil dashpot time lags; emergency stop push button; suitably graduated ammeter; triple pole interlocked isolating switch; resistances rated for ordinary duty and plain holes for locknutted conduit.

PRICES:

Complete pumping set as specified	-	£316.	0.	0 each
Extra for mechanical seals in lieu of standard packed stuffing box,if required	-	£ 9.	18.	0 per pump
Hand operated starter	-	£123.	10.	0 each

Approx. shipping specification : each unit:

	Nett wt. cwts	Gross wt. cwts	Case cu.ft.
Pumping unit	11½	13½	35
Starter	1¾	2¼	12

ANTICIPATED DISPATCH. 12/14 working weeks from receipt of full and final instructions allowing us to put the work in hand

CARRIAGE: Prices include for packing for ocean shipment and delivery F.O.B. Liverpool.

TERMS OF PAYMENT: Nett monthly account .

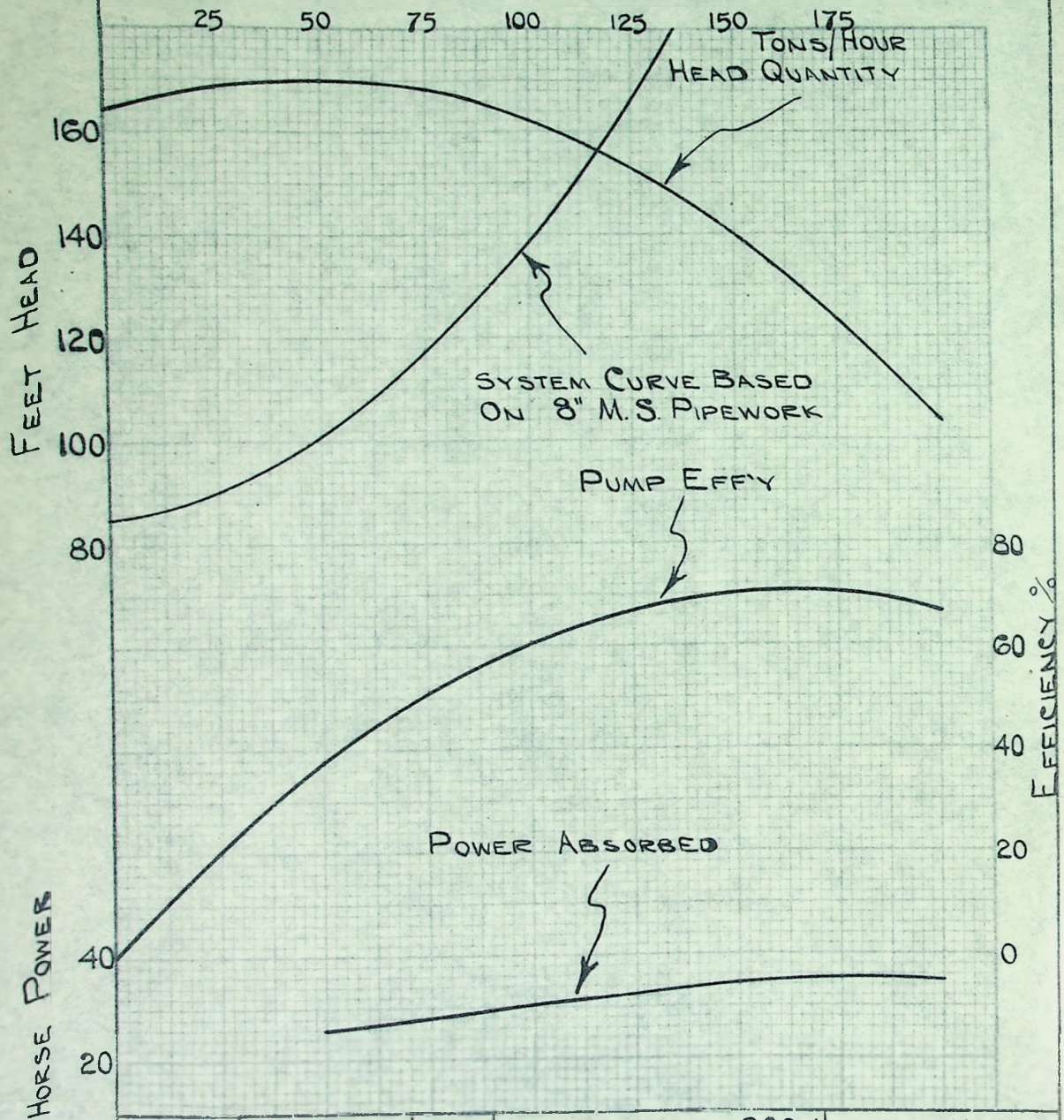
TEST: Each unit can be tested at these works prior to despatch
Test fees: Works test - Witnessed test included
Copies of test record and characteristic curves are included in fees.

DRAWINGS AND LITERATURE: A fully dimensioned drawing will be prepare on receipt of your instructions copies of which will be forwarded on completion. Section 103R enclosed shows a typical cross section through the design of pump specified.

Yours faithfully,
BERRY HILL (ENGINEERS) LTD.

L. D. LAWTON

WORKS ORDER:	BERRY HILL (ENGINEERS) LTD., CHEADLE, STOKE-ON-TRENT.	REF. C5575
TYPE: 4L1	R.P.M. 2900	D.O.NOTE:
LIQUID: DIESEL OIL	S.G. 0·85	VISCOSITY 45 SECS REDNo1 ASSUMED



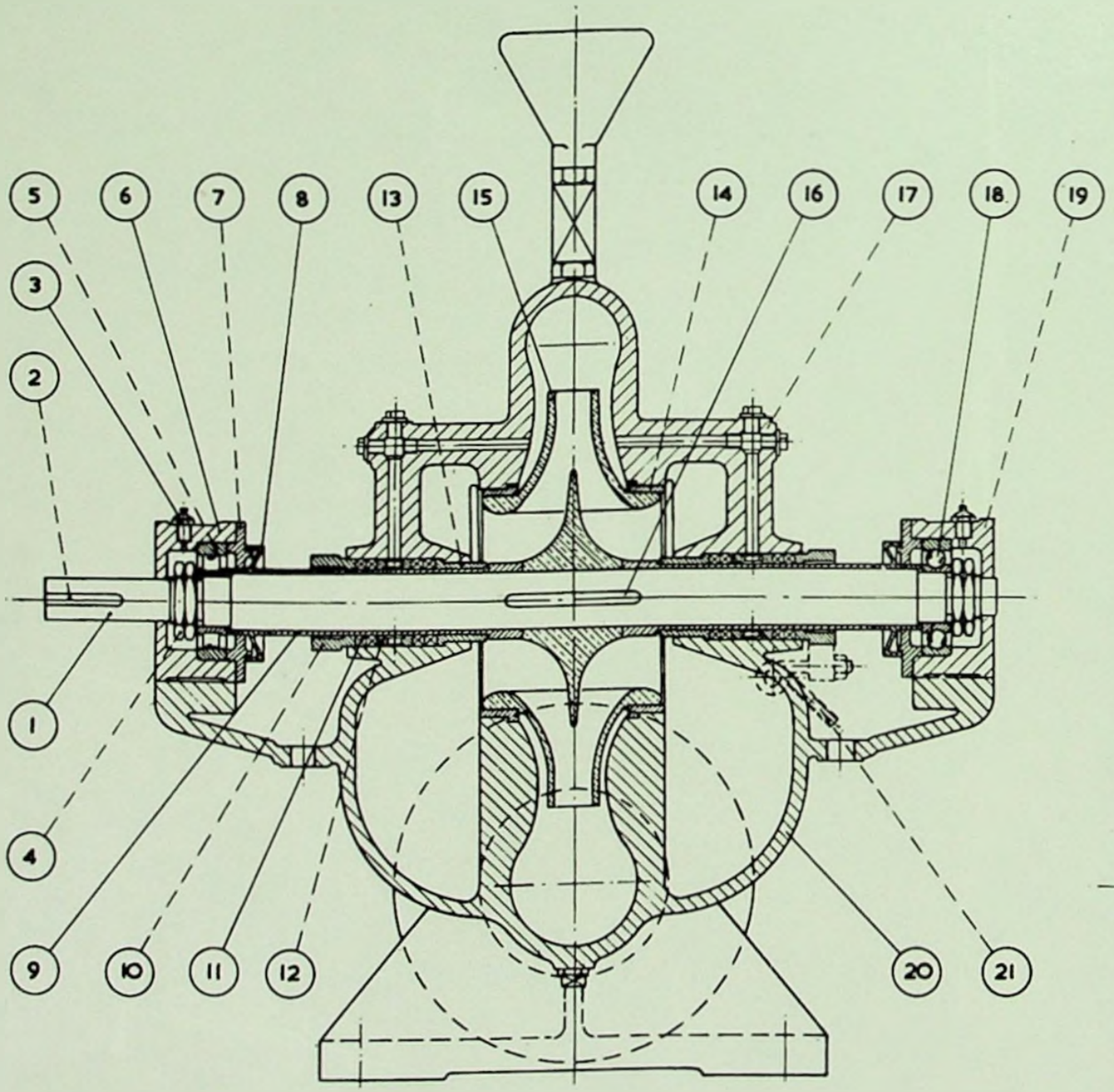
CLIENT: C.A.	Q/EC2	FALKLAND ISLANDS 9084	DATE: 2 MAR 62

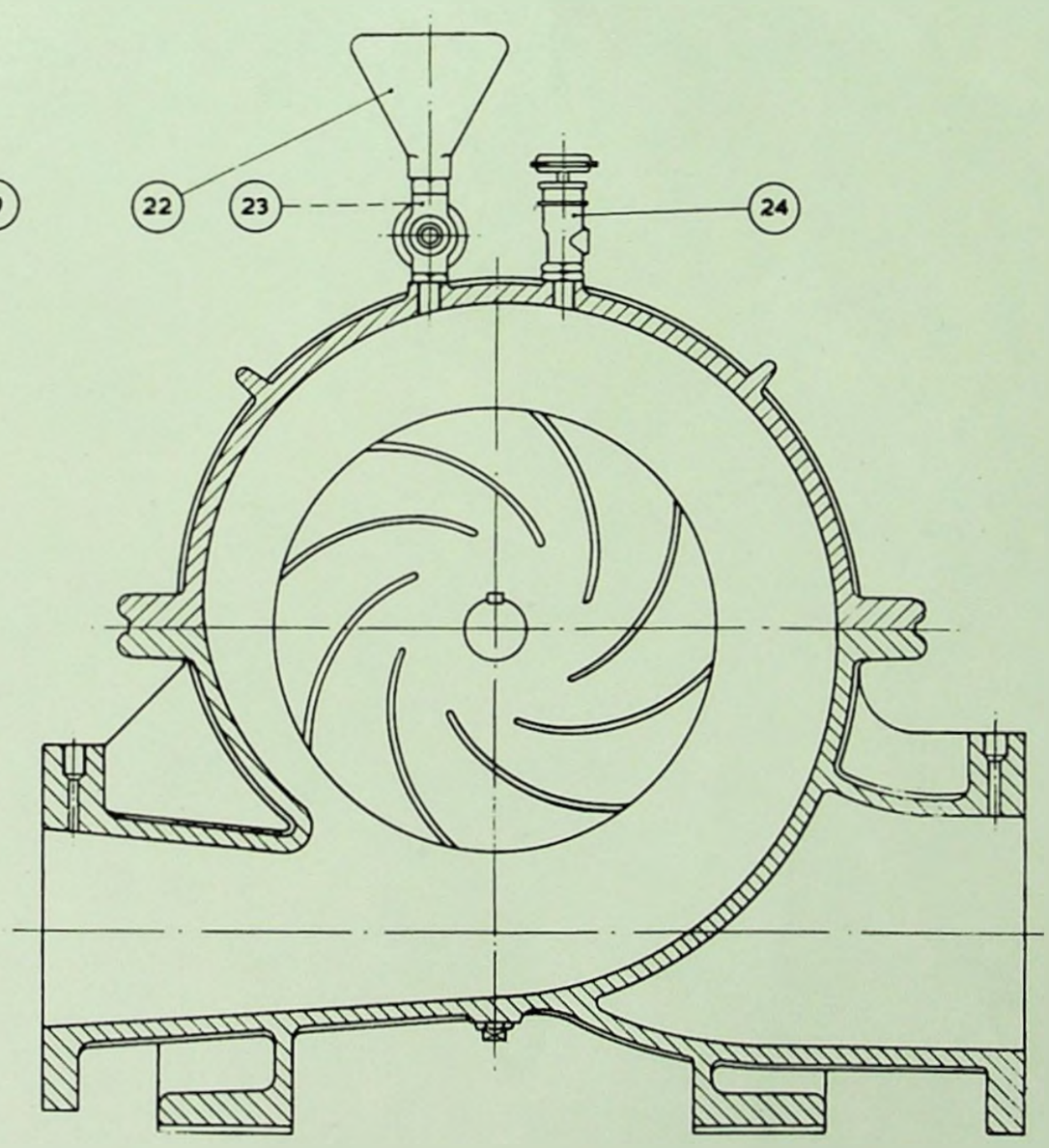
AGT.LD.3601

BERRY HILL (Engineers) Ltd.,

Section
103R

SECTIONAL ARRANGEMENT OF SINGLE STAGE HORIZONTAL SPLIT CASE CENTRIFUGAL PUMP.





No.	Description	Material	No.	Description	Material	No.	Description	Material
1.	Shaft	Steel	9.	Shaft Sleeve	Gunmetal	17.	Top Half Casing	Cast Iron
2.	Coupling Key	"	10.	Gland.	"	18.	Ball Bearing	
3.	Grease Nipple	Mild Steel	11.	Gland Packing		19.	Non-Driving End Bearing Housing	Cast Iron
4.	Shaft Nut	Steel	12.	Lantern Ring	Gunmetal	20.	Bottom Half Casing	" "
5.	Roller Bearing		13.	Stuffing Box Bush	"	21.	Gland Swing Bolt	Mild Steel
6.	Driving End Bearing Housing	Cast Iron	14.	Neck Ring	"	22.	Tundish	Cast Iron
7.	Bearing Cap	" "	15.	Impeller	"	23.	Tundish Cock	Gunmetal
8.	Water Thrower	Gunmetal	16.	Impeller Key	Steel	24.	Air Cock	Gunmetal

D R A F T

Hold

MEMORANDUM TO EXECUTIVE COUNCIL AND

STANDING FINANCE COMMITTEE

Storage of Diesel Oil

40000
3
12,000

For the last two years the question of the adequacy of storage facilities for diesel oil has been considered, but owing to the cost of providing further storage facilities no decision has ~~up to now~~ yet been taken. It is now felt that the matter should be pursued further. We ~~now~~ have at present two tanks each of 300 tons capacity. The annual consumption of the Colony was estimated at between 300 and 350 tons in 1958 but now is perhaps nearer 400 tons. All our supplies are obtained from an Admiralty Tanker which has been calling every 18 months or two years.

Is it or isn't it?

2. The case for increased storage is as follows:-

(1) We are at present entirely dependent on the visit of the tanker, if she were to fail us ~~ever~~ we should have to procure oil from Montevideo at double the present cost.

To consider dependence on diesel oil one may mention -

(a) we are exclusively dependent on diesel oil for running the Power Station. This means that without it not only would Stanley be without light & power but since the Radio Station would not be working, the Falkland Islands would be cut off from the rest of the world except for its communication by sea;

(b) the Filtration Plant is entirely dependent on electricity so that without

/diesel.....

diesel oil there would be no water in Stanley;

(c) There are various opportunities of increasing supply if we had more storage, and indeed there is already one fairly large applicant for a supply of electricity;

Actual or potential? I am not sure if you have the satellite tracking station in mind. →

(d) the F.I.D.S. vessels would find it more economic and convenient to fuel in Stanley;

(e) Admiralty require storage here for new frigates and have already asked for an annual supply of 200 tons.

3. The original proposal was to install a further 900 ~~gallon~~ TON CAPACITY tank, giving us a total storage of 1,500 ~~gallons~~ TONS, at ~~and the~~ an estimated cost ~~of a 900 gallon/tank was~~ TON CAPACITY of £3,200. It is considered, however, that it would be more economical to install a 1,500 ton tank, which is estimated to cost £4,475, particularly as the cost of erection is likely to be very high. The original estimate for the entire job was as follows-

Tank	£4,475
Freight	900
Erection and preparation of ~~site~~ site of tank	£4,625
Total	£10,000

It was estimated that of the storage the Colony would require 775 tons, F.I.D.S. 525, and the Admiralty 200 tons. ~~and~~ A suggestion was made that the cost might be divided ~~up~~ amongst the three in that proportion. The cost of erection ~~had been~~ was queried by the Admiralty, and before any finality had been reached it was decided to put the matter off. It is now proposed to approach the Admiralty with the suggestion that the P.W.D. ~~would~~ should CONSTRUCT ~~do~~ the concrete base ~~and~~, that the cost of the tank ~~would~~ should be divided between

/this.....

this Government and F.I.D.S., and that the erection should be done by the Admiralty. [Mr. Price who was one of the welders at the Camber and is now at Devonport Dockyard has written to say that he would be willing to do this job.] If this suggestion is accepted the estimated cost to the Colony wd. be as follows: -

4. It is realized that the cost to this Colony would in any case be heavy at a time when we are trying to save, but on the other hand expenditure could be regarded to some extent as an investment as it would be likely to bring in a return. One danger of putting this off indefinitely is that if we do so the Admiralty may think it necessary to make other arrangements in which case we should be denied the help and financial assistance which we expect from them.

we are so dependent on diesel oil that the provision of adequate reserves would seem to be a wise precaution.

5. As regards the question of whether the Admiralty will do the erection and the division of costs it will be necessary to communicate further with the Admiralty but preliminary approval is sought now for the principle of erecting a 1,500 ton storage tank.

Redo

RHDM/HF

D R A F T

H.M.S. PROTECTOR,

AT

February, 1961.

No.

COMMANDER - IN - CHIEF,
SOUTH ATLANTIC AND SOUTH AMERICA.

FALKLAND ISLANDS - FUELLING FACILITIES AT PORT STANLEY

References:- (a) A.L. MII/161/3/59 dated 2nd November 1960.

(b) H.M.S. PROTECTOR's letter No. 5/294/203A dated 24th April, 1960.

(c) H.M.S. PROTECTOR's letter No. 203A dated 13th June, 1960.

(d) H.M.S. PROTECTOR's letter No. 203A dated 7th February,61.

The approval for a second fuel lighter to be provided at Port Stanley (reference (a)) solves the problem of maintaining an emergency supply of 500 tons of dieso at Port Stanley for the use of diesel frigates whilst at the same time retaining a lighter of 500 tons capacity for replenishing ships with F.F.O. from the shore tanks. This latter is contingent on action being taken to refit the existing lighter (reference(d)).

2. One fourth class mooring for these lighters has been laid and the material for the second mooring has now been received at Stanley and it is anticipated that it will be laid shortly. The requirements in paragraph 6(a) and (b) of reference (b) have therefore been met or are about to be met.

3. There remains the question of a suitable diesel fuel storage tank at Stanley to provide for the operational needs of a diesel frigate should it be necessary to station one at Stanley and at the same time provide storage for diesel fuel for F.I.D.S. ships and the Government Power Station (paragraph 6(c) of reference (b)).

/ 4. There would .....

4. There would appear to be two alternatives

(a) to use one of the two 8,000 ton tanks at present used for F.F.O.

(b) to build a new tank of 5000 tons. In both cases a diesel pipe line from the tank to the Camber jetty would be a requirement.

5. The maximum requirement of F.F.O. for H.M.S. PROTECTOR during a season is estimated to be 5,500 tons. (The average requirement for the last six years has been 5000 tons per annum). It is presumed that any large ship visiting the Falkland Islands would be accompanied by an R.F.A. since fuelling in Port William with a 500 ton dumb lighter would be a long and tedious procedure. If one tank was converted to dieso storage there would be a balance of 2500 tons, over the PROTECTOR's of FFO requirements for fuelling other smaller ships annually. The disadvantage of transferring one tank to dieso is that even if the PROTECTOR is the only user of the F.F.O. it will be necessary to replenish the tank annually. If both tanks continue to contain F.F.O. it will probably only be necessary to replenish them every three years.

6. If a new tank for dieso is built it is considered that it should be of sufficient size to require replenishment only every three years assuming that it is used for transiting diesel frigates only. The annual requirements are estimated to be (a) For one transiting frigate annually 500 tons

(b) For F.I.D.S. ships 575 tons

(c) For Government ~~Power Station~~ requirements 400 tons

(The Government Power Station already has storage for 600 tons) A tank of 5000 tons capacity would therefore be required.

/ 7. There.....

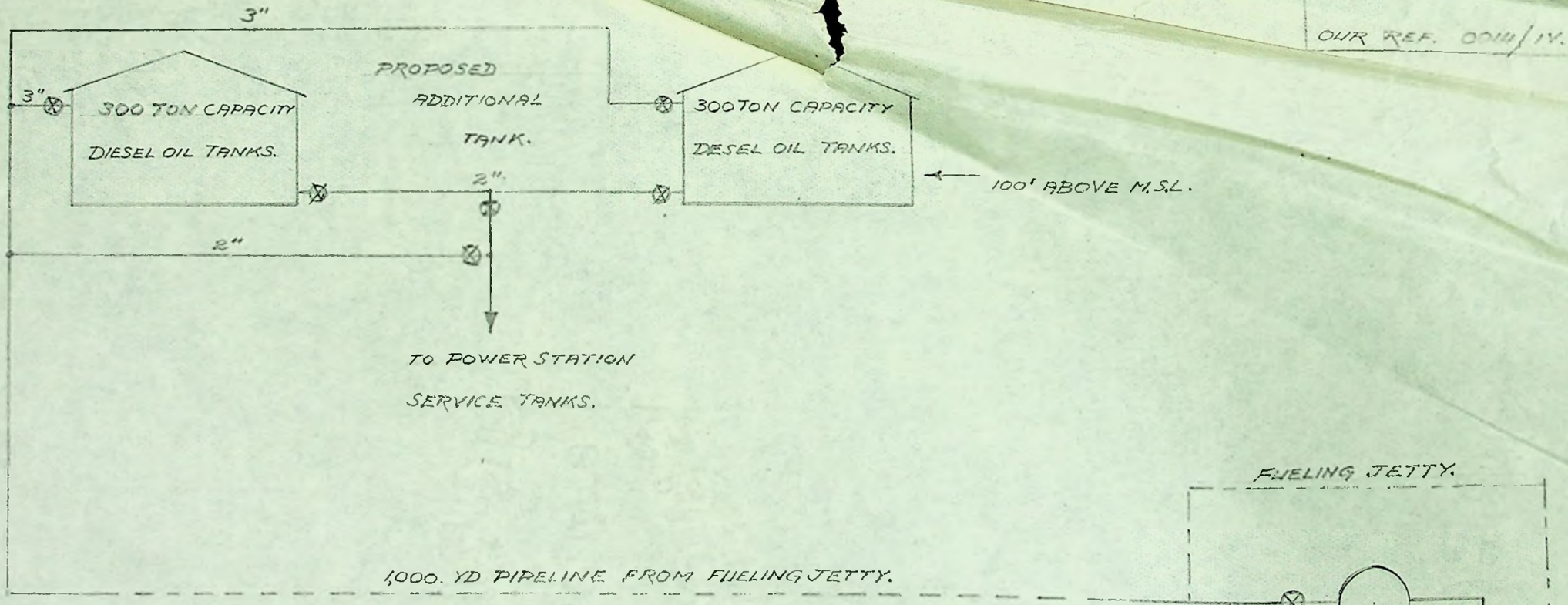
7. There are already a number of sites for fuel tanks cleared and levelled near to the existing tanks.

8. In view of the considerable saving that would accrue from only having to replenish stocks every two or three years it is suggested that a new tank of 500 tons capacity, should be built. The Colonial Office to be approached with a view to sharing the cost of this project.

SCHEMATIC LAYOUT OF FALKLAND ISLAND GOVERNMENT FUELING ARRANGEMENT

COLONIAL OFFICE REF. 124/101/01

OUR REF. 0011/IV.



⊗ VALVES.

NOTE. 2" PIPING IS RELATIVEY SHORT & COULD BE ALTERED TO 3".

E.C. GUTTERIDGE
SUPT. POWER & ELECTRICAL DEPT.
27-7-1959.