COPY.

Lloyd's Register of Shipping.

71, Fenchurch Street, E.C. 3.

2 Enclosures.

26th January, 1926.

Dear Sir,

With reference to your recent call at this Office respecting the proposal to convert the S.S."POLCEVERA" ex "CUSTODIAN" now to be named "M.T.NIELSEN ALONSO" for the carriage of whale oil in bulk, it is noted that this oil is to be carried in four deep tanks aft between the after peak bulkhead and the after bulkhead of the deep ballast tanks, these tanks being divided by two longitudinal bulkheads extending from the existing twin screw shaft tunnels to the lowest deck.

Also, that it is proposed to carry whale oil in the deep tank abaft the engine room, and in four tanks extending from the forward end of the boiler space to a cofferdam between frames 163 and 165, these latter tanks being divided by a middle line bulkhead and extending to the lowest deck.

Further, that it is intended to carry oil fuel in three tanks extending from the cofferdam above mentioned to the fore peak bulkhead, these tanks being also divided by a middle line bulkhead and extending to the lowest deck, the fuel oil being intended to be supplied to the small

vessels which will accompany the whale factory, and which are intended for actually catching the whales.

With regard thereto I have pleasure in stating that the following scantlings and arrangements will be approved. It must be understood however that these are to some extent approximate, as the measurements have had to be taken from the original small scale plans, and also that the contours of the new bulkheads towards the end of the ship are not exactly known. The scantlings and arrangements may therefore require some adjustment when the working plans are received from the firm who will undertake the alterations.

Subject to the above provisos, the new transverse whale oil bulkheads may be constructed as follows:-

Blkd. No.	Plating	Stiffeners	Brackets top and bottom
23	.30-.39"	15 x 4 x 4 x .70 channels, spaced 24"	49½ x .44 flanged 3½"
51	.30-.38"	15 x 4 x 4 x .70 channels, spaced 24"	37½ x .44 flanged 3½"
134	.30-.38"	15 x 4 x 4 x .64 do. do.	37½ x .44 flanged 3½"
154	.30-.39"	15 x 4 x 4 x .72 do. do.	43½ x .44 flanged 3½"
163	.30-.39"	15 x 4 x 4 x .74 do. do.	49½ x .44 flanged 3½".

New whale oil middle line bulkhead, fore body.

Frames	Plating	Stiffeners	Brackets top and bottom
125-134	.30-.38"	15 x 4 x 4 x .64" spaced 27"	37½ x .44 flanged 3½"
134-143	.30-.38	15 x 4 x 4 x .70" spaced 27"	37½ x .44 flanged 3½"
143-154	do.	do. do.	do. do.
154-165	.30"-.39"	15 x 4 x 4 x .74" do.	49½ x .44 flanged 3½".

New whale oil longitudinal bulkheads abaft tunnels in after body.

Frames	Plating	Stiffeners		Brackets top & bottom.	
18-23	.30- .32"	10 x 3½ x .60 B.A.	spaced 27"	25 x .36 flanged 2½"	
23-35	do.	do.	do.	do.	do.
35-51	do.	10 x 3½ x .52	do.	do.	do.
51-67	.30"	9½ x 3½ x .52 B.A.	do.	24 x .34 flanged 2½".	

The additional stiffening required to the existing transverse bulkheads in the whale oil tanks should be exactly stated, as the arrangement of the existing stiffening is not exactly known. The arrangements may be, however, on the following lines, taking the bulkhead at frame 143 as an example:-

The existing horizontal girder if 24" in depth by .35" in thickness, with a 12 x .65" bulb plate on its inner edge, will be approved if adequately supported by brackets, and also efficiently attached by flanged brackets to the middle line bulkhead and side stringers, provided vertical webs be fitted at the half breadth of the ship about 48" in depth by .46" in thickness, with a 9 x 3½ x .50" bulb angle face bar and with double riveted connections to the bulkheads. The vertical webs must be attached to the deck and inner bottom by efficient flanged brackets, and must also have efficient supporting brackets. The vertical stiffeners if consisting of 9" flanges spaced 30" apart, would require to be reinforced by 3 x 3 x .40" reversed angles on their inner edges, and to be efficiently bracketed to the deck and inner bottom plating.

In view of the additional support afforded to the decks by the new transverse and longitudinal bulkheads, it is considered that only local reinforcement to the deck may be necessary, but this point will be dealt with when the working plans are received.

The deep tank abaft the machinery space is structurally suitable for carrying whale oil.

The arrangements for making the deck at the crown of the tank oiltight in way of the whale oil tanks may be as

in previous similar vessels, namely by fitting vertical plates inside the frames 18 x .40" filled at the back with cement.

The tunnel will require additional stiffening as arranged in previous cases.

The web frames at the ship's sides must be efficiently connected to the inner bottom plating by large gusset plates and the existing side stringers must be connected to the bulkheads by large flanged brackets.

The above arrangements are approved with the whale oil hatchways 2'-6" in height, as arranged with you, and if the height of these is increased the above scantlings and arrangements may require modification.

With regard to the oil tanks to be fitted at the forward end of the ship, the scantlings and arrangements should be generally as follows (the maximum pressure head being arranged to be 8'-0" above the crown of the tank) taking the transverse bulkhead at frame 187 as an example:-

Plating .30" to .40". Vertical stiffeners 9x 3 x .40" B.A. spaced 24", efficiently bracketed at top and bottom. Top horizontal girder in line with upper side stringer (about 8'-0" below the lower deck) plate 21 x .40" with a 7½ x 3 x .46" bulb angle on the face. Bottom horizontal girder in line with the third side stringer from the top (about 18" below the deck), plate 33 x .40" with a 9 x 3 x .50" face bulb angle. These horizontal girders must be efficiently supported by brackets and connected to the side stringers and to the horizontal girders on the middle line bulkhead and middle line bulkhead plating by large flanged brackets. The frames must be cut and bracketed at the lower deck in way of the oil fuel compartments.

The flash point of the oil fuel must be above

150° F., and the Rules for the burning and carrying of oil fuel must be complied with so far as applicable.

The question of the riveting was discussed generally with you having in view the special service of the ship and the arrangements approved in previous similar cases which are stated to have proved satisfactory, but these matters will be further dealt with when the working plans are received.

It is observed that the work will be carried out in Norway, Holland or possibly at Middlesbrough, and it is specially desired that if the work is to be done abroad the Society's Surveyors shall be informed, in order to facilitate the work, that it will not be necessary for them to submit plans of details which do not affect the strength and seaworthiness of the ship, and these matters also will receive attention when the plans of the structural alterations come to hand and it is known where the work is to be carried out.

With regard to the plan showing the alterations to the stern, I am directed to state that the arrangements will be approved generally in principle, matters of detail and questions regarding the support of the various decks and flats being dealt with when the working plans are received.

One copy of the plan in question, together with a copy of the preliminary plan indicating the positions of the new bulkheads are returned herewith, and the duplicates are being retained in this office for reference.

With regard to the plan showing the arrangements of the boilers on the upper deck, which are intended for boiling the blubber, entrails, bones &c., it is observed that these boilers will be arranged on the upper deck and will protrude through the awning deck. In order that the seaworthiness of the ship may be maintained it was arranged with you that the existing plate bulwarks will be carried up to about 9 feet above the awning deck in the vicinity of these boilers, this side plating being adequately supported and made watertight. Fore and aft watertight bulkheads will also be arranged inboard, with a flat above. These details will also be dealt with when the working plans are forwarded for consideration.

The alterations on deck may affect the equipment, depending on the extent of the new erections.

On completion of the alterations a suitable notation will be made denoting that the vessel will carry whale oil, and also fuel oil in bulk.

I am, Dear Sir,
Yours faithfully.

C.F.Christensen, Esq.,
Messrs.Arnesen,Christensen
& Smith,
2, James Street,
CARDIFF.

Secretary.