MOTOR VESSEL

"CAPE NELSON"

An Ore-carrier of 16,450 Tons Deadweight

BUILT BY

LITHGOWS LTD.
PORT GLASGOW

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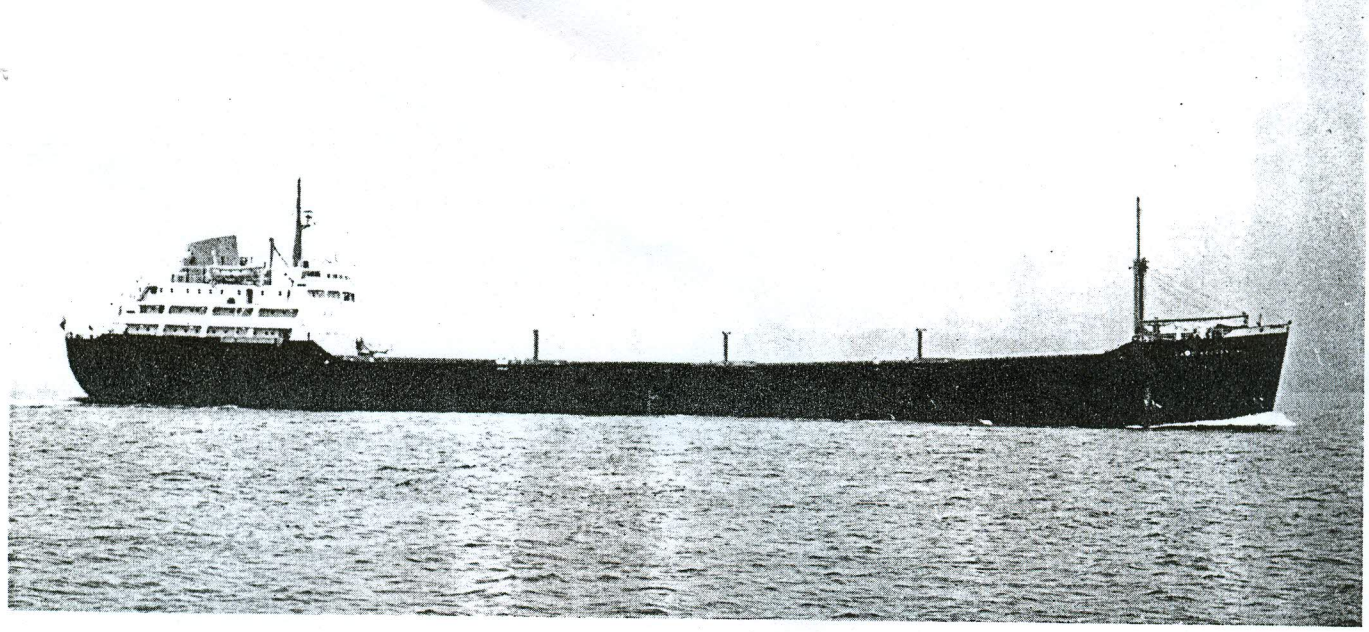
WITH THE COMPLIMENTS OF

THE OWNERS

LYLE SHIPPING CO., LTD.

GLASGOW



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RECENTLY completed by Messrs. Lithgows, Ltd., of Port Glasgow, for the Lyle Shipping Co., Ltd., of Glasgow, the *Cape Nelson* is a sister ship of the *Cape Franklin* delivered in May, 1959, but her design has been modified in a number of respects. Both vessels have Kincaid-Harland-B. & W. machinery constructed and installed by Messrs. John G. Kincaid & Co., Ltd., of Greenock, but whereas the *Cape Franklin* has her accommodation amidships and aft, for the *Cape Nelson* an all-aft arrangement has been selected. By increasing the breadth some 6in. and the draught 1¼in., it has been possible to increase the deadweight carrying capacity by 900 tons and the grain cubic by 19,888 cu. ft. The accompanying Table gives the principal particulars of each vessel.

The *Cape Nelson* has been built on the longitudinal system. Two longitudinal bulkheads 20ft. 0in. off the centreline, port and starboard, divide the ship into three longitudinal compartments. These compartments are divided transversely to give a main fuel oil bunker and four main ore holds in the centre, and five water-ballast tanks, port and starboard.

Riveting has been used for the side shell seams and longitudinals, while the remainder of the vessel is mainly of welded construction.

An interesting feature of the ore holds is that they are sheathed with a double thickness of timber on the tank top and on the sides up to the underside of the upper deck brackets. This is, of course, to protect the steel against damage from grabs during unloading operations.

Each hold is served by a hatchway with dimensions of 63ft. 0in. by 35ft. 0in. and overhangs have been kept to a minimum. All the covers are of the MacGregor steel watertight single-pull type and are operated by electric winches on deck.

A cathodic system of protection has been fitted in Nos. 1, 2, 3 and 4 wing ballast tanks. No. 1 tank, port, was shot-blasted on the deckhead and for 6ft. 0in. down the sides before the application of three coats of Linalux. No. 1 starboard tank has been shot-blasted for a similar area but the final covering in this case is Camkote. The remaining tanks are coated over the top area with Camrex grease paint. Wing tank No. 5, port and starboard, has been coated with Camrex throughout, as have been the double bottom water-ballast tanks, but none of these tanks are cathodically protected.

It is obvious from the foregoing that the owners are making a very determined effort to discover the best treatment for water-ballast tanks and some very interesting results may be disclosed.

An exceptionally high standard of accommodation has been provided throughout and the builders are to be con-

GENERAL PARTICULARS OF THE "CAPE NELSON" AND "CAPE FRANKLIN"

	Cape Nelson	*Cape Franklin*
Accommodation	All aft	Midships and aft
Length B.P.	498ft. 0in.	498ft. 0in.
Breadth moulded	69ft. 9in.	69ft. 9in.
Depth	37ft. 0in.	36ft. 6in.
Draught	27ft. 6in.	27ft. 4¼in.
Deadweight, tons	16,450	15,550
Total water ballast, tons	12,416	12,063
Grain capacity in holds, cu. ft.	434,975	415,087
Bale capacity in holds, cu. ft.	432,915	412,639
Designed service speed, knots	11·5	11·5
Service B.H.P. of main machinery	4,500	4,500

Fig. 2.—Officers' Smoking Room.

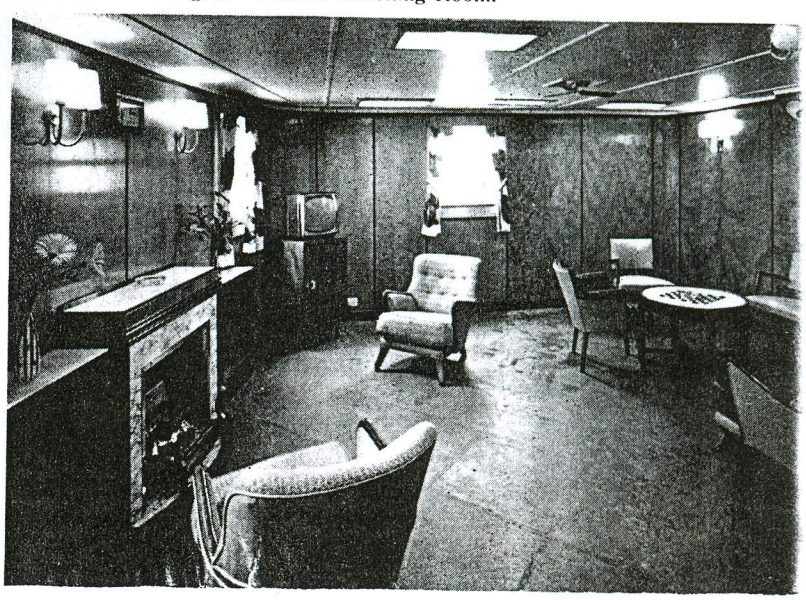

Fig. 3.—Dining Saloon.

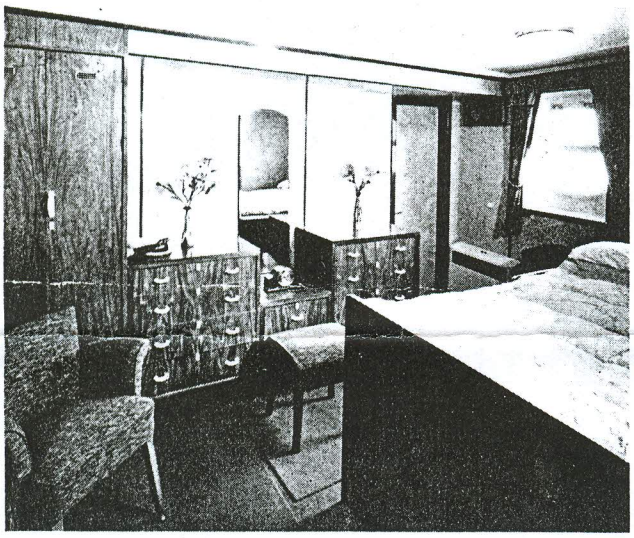

Fig. 4.—Captain's Bedroom.

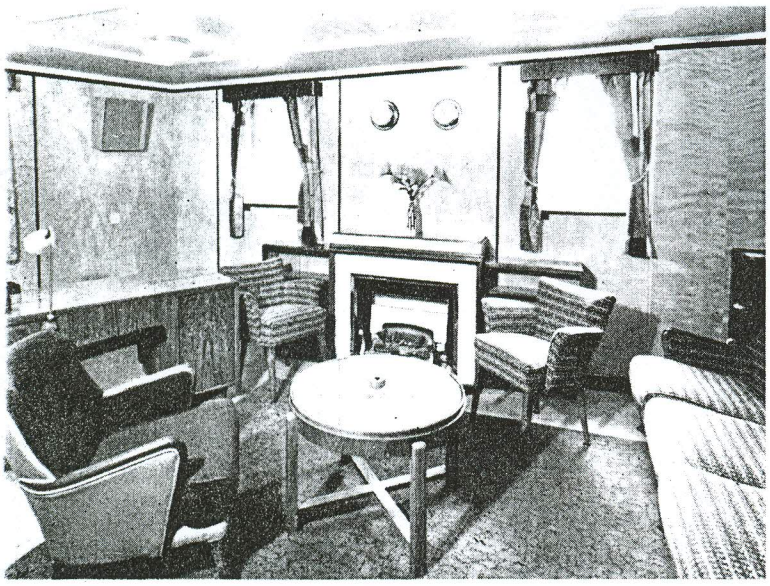

Fig. 5.—Captain's Dayroom.

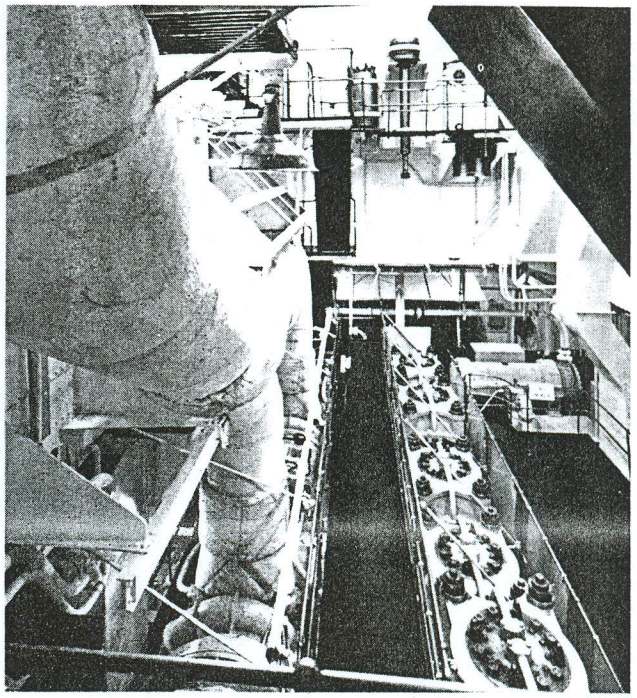

Fig. 6.—Cylinder Tops.

gratulated on the excellent finish in the rooms for all sections of the crew.

All the officers' rooms have been tastefully decorated and the use of light oak dados, with carefully selected patterned leathercloth above, is a main feature of this accommodation. Other timbers used in the captain's, chief engineer's and owners' suites and public rooms are flame Betula, Indian satinwood, Australian maple, walnut, sycamore and bird's-eye maple. Photographs of the accommodation are reproduced in Figs. 2 to 5.

In selecting the various colour schemes, the owners called on the services of Miss J. A. Mackenzie Aikman, D.A., and the choice of curtains, carpets, upholstery and floor coverings create a very pleasant and colourful atmosphere throughout.

All other cabins, pantries, messrooms and recreation rooms for the petty officers and crew are finished in full height plastic veneers in pastel colours, with painted passageways.

The main propelling unit is a Kincaid-Harland-B. & W., single-acting, two-stroke cycle, five-cylinder, opposed-piston, crosshead Diesel engine of the latest design, with pressure induction on the exhaust turbo system. The cylinder bore is 620 mm. and the piston stroke 1,400 mm. plus 470 mm., giving a total of 1,870 mm. At 114 r.p.m. and with an m.i.p. of about 104 lb per sq. in., the engine is capable of developing 4,500 B.H.P. in normal service. Napier turbo blowers are fitted and are designed to run at about 7,500 r.p.m. An engine-room view is shown in Fig. 6.

Electrical power is supplied by three Clarke Chapman, 210-kW., D.C. generators at a tension of 220 volts. These generators are directly coupled to three National, type F.4AU3, three-cylinder Diesel engines.

Steam requirements are met by a Cochran composite boiler with a diameter of 8ft. 6in. and a height of 21ft. 0in., designed for a working pressure of 100 lb per sq. in. The boiler is capable of producing about 2,900 lb of steam per hour from exhaust gas firing and about 4,000 lb of steam per hour from oil firing. Oil burning is on the Wallsend low-air pressure gravity-feed system.

After the completion of highly successful trials, during which a mean speed of 14·2 knots was attained, the vessel was handed over to her owners. She is on charter to the British Iron & Steel Corporation, Ltd.

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