

Twin Screw Motor Ship "JOSEPH MEDILL".  
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This vessel was built by Messrs. Swan, Hunter & Wigham Richardson, Ltd., at Wallsend-on-Tyne, for Messrs. Quebec & Ontario Transportation Co.Ltd., and was intended for service on the Great Lakes, and Gulf of St.Lawrence (from April to October).

The class assigned was ~~NA~~ "For Service on the Great Lakes, and Gulf of St. Lawrence (from April to October) at an extreme draught of 14 feet", "Electrically Welded". ~~L.M.C.8.35~~ Oil Eng. C.L.

Dimensions.

Length overall .....	259'-0"
Length to centre of rudder stock .....	252'-3"
Breadth moulded at deck .....	43'-10"
Breadth moulded at base line .....	43'-6"
Depth moulded .....	22'-0"

Vessel had one deck and a Poop 35' long and Forecastle 29' long. Machinery was fitted aft.

Twin rudders were fitted for a speed of  $8\frac{1}{4}$  knots.

The scantlings of the "JOSEPH MEDILL" are in accordance with the Society's practice for the service approved and for a draught of 14 feet on such service.

The minimum freeboard which could be assigned to a vessel of the same dimensions and arrangement of superstructures under the Load Line Convention Act is about 4'-7", corresponding to a summer moulded draught of about 17'-5".

The transverse strength, in view of the system of construction, may be regarded as being reasonably equivalent to that required by the Convention Act for a draught of 14 feet, and the longitudinal modulus is at least equivalent to the same standard, but the side shell plating is only .34" in thickness, instead of .43" as would be required by the Convention. Further, in regard to minor details these are below the normal practice for a seagoing vessel at the same draught.

The "JOSEPH MEDILL" differs also from the ordinary seagoing vessel in that there is no sheer.

The cargo hatchways, which are 30' x 26', are not equivalent to the highest standard of the Convention Act, but are in accordance with the Society's practice for the service intended. The webs were of joist section, and were spaced 6'-6", 6'-6", 4'-0", 6'-6" and 6'-6" to suit stowage of paper rolls.

Angled cleats of stamped steel were fitted 24" apart and 6" from hatch corners. Two tarpaulins were fitted to each hatch.

The following table shows the scantlings of the hatchways as fitted in the ship and as required by the Convention for a full scantling sea-going ship :-

	<u>Ship.</u>	<u>Convention.</u>
Coamings	21" x .40"	24" x .44"
" supports	3 small brackets	3 stays.
" stiffeners	None	Bulb Angle.
( Number	4	4
( Scantling of )	I 16x6x62 lbs.	I 25 x .41
( end webs )		
Webs ( Modulus of end webs	84	223
( Scantlings of )	I 16x6x62 lbs.	I 21½ x .38
( other webs )		
( Modulus of other webs	84	177
Hatches	3"	3"

See separate memo regarding the welding construction.  
Steering Gear - Hastie's Hydraulic Gear operating twin rudders;  
also Hand Gear on poop deck.

Draught for voyage to Canada :- On page 4 of the First Entry Report it is stated as follows :-

"A freeboard giving draught of 13'-0½" T.K. has been assigned by the Board of Trade for the loaded voyage out".

In a letter, dated 20th August 1935, the Newcastle Surveyors reported that at a loaded trial held off Grangemouth

on 3rd of that month difficulty was experienced in steering, and the vessel was subsequently docked at Wallsend for alterations. The diameter of the propellers was reduced from 5'-6" to 5'-3½". The central skeg was extended about 4'-0" aft, and plate skegs .62" in thickness were fitted by welding under the bossing on each side about 14'-0" long x 2'-2" in depth. The two rudders were reduced in width, 6" being taken off the leading edge.

A loaded trial was carried out off the Tyne on 10th August, and the steering was then found to be satisfactory.

The load on this trial was :-

Light weight .....	764 tons
Coal .....	2785 "
Oil fuel .....	92 "
F.W. in E.R. ....	23 "
F.W. tanks .....	5 "
Stores &c. ....	10 "
W.Ballast in No.1 bilge tank port side ....	<u>30</u> "
	<u>3709 tons.</u>

Draught 11'6" f.  
" 14'8" a.  
" 13'1" mean.

The vessel left the Tyne with a cargo of coal on 10th August 1935 for Toronto, and was last seen on 17th August in Lat. 57 19N Long. 26 12W. She was posted "Missing" at Lloyd's on 30th October, 1935.

A letter, dated 5th October 1935, was received by the Society from Comision Naval Argentina en Europa (London Office) regarding the loss of the ship, and in a reply, dated 12th October 1935, they were informed that "this vessel was classed "by this Society for restricted service and therefore the class "was not in operation while she was making the journey from "this Country in open waters. It is understood that she was "therefore prepared for the voyage under the supervision of the "Board of Trade, who issued a certificate allowing her to make "the contemplated journey".

On 21st October 1935 Messrs. Lambert & German (the Owners' Naval Architects) cabled the Society asking its opinion

for or against all welded construction, and if duplicate scantlings would be approved, and on the 22nd October 1935 they were advised that the Committee "will be equally prepared "to approve either riveted or welded construction Stop. If "welded construction adopted scantlings and arrangements fitted "in Medill would be approved for duplicate ship".

Copies of the following Reports have been supplied to the Board of Trade, viz :-

Newcastle Report No.92860, dated 20th August 1935, on the Hull  
and

Newcastle Report No.92860, dated 12th August 1935, on the  
Machinery.

In addition to the above Reports, the following have been received in the London Office, but copies have not been supplied to the Board of Trade :-

Bremen Report No.1720, dated 16th July 1935 dealing with the construction of the engines.

Grimsby Report No.19372, dated 26th June 1935, dealing with the construction of auxiliary engines.

Newcastle Report No.92860, dated 20th August 1936, dealing with the electrical equipment.

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