

WOOD SHIP.

Copy

No. 1636 Survey held at Biloxi Miss: Date, First Survey Aug 28th 1917 Last Survey Sep 2nd 1918
on the *Aux Wood Tug* *and mobile, Ala.* "ELIZABETH RUTH" Master Wm Kerr 15-18

Original Number 21689
Tonnage under Tonnage Deck 783.36
Ditto of Spar Deck, or Awning Deck 70.15
Ditto of Poop, or Raised Qr. Dk. 4.71
Ditto of Houses on deck 4.75
Gross Tonnage 862.97
Crew Space, as per Rule 16.19
Register Tonnage, cut on Beam 275.95
Engine Room 327.47
Register Tonnage, as a Steamer, cut on the Beam 500.196
162 Gross

Built at Biloxi Miss. When built 1918 Launched June 15th 1918

By whom built Mississippi B. Coym Owners Lever Transportation Co.

Port belonging to Boston, Mass. Destined Voyage Australia

If Surveyed while Building, Afloat, or in Dry Dock Building

Length as per Section 39	Feet. 172	Inches. 3	Extreme Breadth Outside...	Feet. 38	Inches. 1	Depth of Hold	Feet. 17	Inches. -	No. of Decks with Flat laid	One
Length of Keel	164		Round of Beam	4		Depth from limber-strakes to under side of lower deck beam	8	5	No. of Tiers of Beams	Two
						Depth, Moulded	18	4 3/4		

LINGS OF TIMBER.	IN SHIP.			REQUIRED PER RULE, OR AS APPROVED.			OUTSIDE PLANK.	THICKNESS.		Dimensions of Ship per Register.
	SIDED.	MOULDED.	MOULDED.	SIDED.	MOULDED.	MOULDED.		In Ship.	Per Rule, or as Approved.	
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.		Ins.	Ins.	
AND SPACE	30			30			Garboard Strakes	6	6	Length 174.85 breadth 38.10 depth 17.10
	12	15	15	12	15	15	Garboard to Bilge	4	4	
oks	12	14 1/2	13 1/2	12	14 1/2	13 1/2	Bilge Planks	4	4	
	12	13 3/8	13	12	13 3/8	13	Bilge to Wales	4	4	
	12	12	10	12	12	10	Wales	5 1/2	5 1/2	
ets	12	7	8 1/2	12	7	8 1/2	Topsides	5 1/2	5 1/2	
o 63 Average Space	10	10	10	10	10	10	Sheer Strakes	5 1/2	5 1/2	
ns, length amidships 35'							Plank Sheers	5	5	
o 20 Average Space	14	12	12	14	12	12	Water Upper Deck	10 1/2 x 10	10 1/2 x 10	
ns, length amidships 35'							Ways Lower Deck	10 x 10	10 x 10	
	15	15	15	15	15	15	Ditto, faying surface against Timbers	9 x 10	9 x 10	
Ditto	14	7'-6"		14	7'-6"		Upper deck	4"	4"	
Ditto		7'-6"			7'-6"					

Size of Bolts in Fastenings, distinguishing whether Copper, Yellow Metal, or Iron; also of Treenails.

Copper or YM in Ship.	Iron in Ship.	Size required per Rule.	Copper or YM in Ship.	Iron in Ship.	Size required per Rule.	Copper or YM in Ship.	Iron in Ship.	Size required per Rule.
Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
and Deadwood abaft...	1 1/4	1 1/4	Transoms and throats of Hooks	7/8	7/8	Hold Beam Waterway	1 1/4	1 1/4
Keel, No.	1 1/4	1 1/4	Arms of Hooks	7/8	7/8	Knees	1 1/4	1 1/4
ts through Keel at	1 1/4	1 1/4	Thro' Bilge and Limber Strakes	7/8	7/8	Bolts in Shelf or Clamp	1 1/4	1 1/4
h Heels of Timbers	1	1	Thickstuff over Double Floors	1 1/4	1 1/4	Deck Beam Waterway	1	1
adwood	1	1	Butt End Bolts	1	1	Bolts in Knees	1	1
			Short Bolts in Ceiling	1	1	Shelf or Clamp	1	1
			Pintles of the Rudder	3 1/2	3 1/2	Nails or Bolts in Flat of Deck	1 1/2 x 7 1/2	1 1/2 x 7 1/2
						Treenails	1 3/8	1 3/8

NG.—The Space between the Floor Timbers and Lower Foothooks is 6 Inches. The Space between the Top-Timbers is 6 Inches.

onsist of *yellow pine* The First Foothooks of *yellow pine*

Foothooks of *yellow pine* The Third Foothooks and Top Timbers of *yellow pine*

elson is *yellow pine* and is free from all defects. The Shifts of the First and Second Foothooks are not less than 4'-0"

Keelson is *yellow pine* N.B.—When less than prescribed by the Rules, state how many.

as, Knightheads, Hawse Timbers, & Aprons of *yellow pine* ditto. The rest of the Shifts of the Frame are 4'-0"

yellow pine and *free from defects* ditto. The Frame is 12" x 24" squared from First Foothook Heads upwards,

d Stern Post of *white oak* and *free from defects* ditto. and is free from sap, and from thence downwards, the frame is 15" x 24"

Hold Beams of *yellow pine* The *double* Frames are *trunked* & bolted together to the Gunwale.

of *pine* Knees of *oak* N.B.—If not, state how bolted.

ce of Rudder of *live oak* Windlass of *cast iron oak* The Butts of the Timbers are *fitted* close together; their thickness not

yellow pine and 3" oak false keel less than *full depth* of the entire moulding at that place.

OUTSIDE.—From the top of the Keel to two-fifths the depth of Hold, the Plank is *of yellow pine*. The Frame is *butt* chocked with — Butt at each end of the chock.

ve named height to the Wales *yellow pine*

d Black-strakes *of yellow pine* The Topsides and Sheer-strakes *of yellow pine*

g and Plank-sheers *of yellow pine* The Water-ways { Upper Deck *yellow pine*

yellow pine State of *Good* { Lower Deck *Do*

the Planking are not less than 5 Feet 0 Inches. N.B. If less than prescribed by the Rule, state whether general or partial,

al, in what part of the Ship. The Planking is wrought *3 clear strakes* between, and without step-butting.

INSIDE.—The Limber-strakes and Bilge-strakes are *yellow pine*

ower Hold, and between Decks *of yellow pine* Shelf Pieces and Clamps *of yellow pine*.

IS.—To Hold Beams *Shelf and clamp of yellow pine 2 - 10" x 10" through bolted*

finished, one 11 1/2" x 10"

shelf and clamp of yellow pine, two 10" x 10" one 10" x 11 1/2" through bolted &

finished. Plank sheer on top, & waterway checked into beam 1 1/2" all through

clined & clinched

er of Breasthooks *Two* Pointers *✓* Crutches *✓*

End Bolts are of *1" galv. iron* in the Bottom *one* Bolts in each Butt End *clinched* through and clenched.

and Limber Strakes *are* bolted through and clenched. Treenails of *oak and locust* How made *split and turned*.

Thickstuff over Double Floors *is* bolted through and clenched. General quality of Workmanship *Good*

We certify that the above is a correct description of the several particulars therein given.

Mississippi Shipbuilding Corp. Surveyor's Signature *(Signed) J. M. Buchanan* Lloyd's Register

Builder's Signature *(Signed) Walter M. Dwyer* Surveyor to Lloyd's Register of Shipping.

111-2200-40114

EQUIPMENT TONNAGE 750										ANCHORS.										See note in General Remarks	
Number of Certificate.	Anchors.	WEIGHT, EX. STOCK.			WEIGHT OF STOCK.			TEST, PER CERTIFICATE.				WEIGHT, REQ. BY RULE.			Description of Anchor.	Makers.	Where and when tested, and Superintendent.			U. S. Patent State name of Patent.	Where and when tested, and Superintendent.
		Cwts.	qrs.	lbs.	Cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.	Cwts.	qrs.	lbs.							
6584	1st Bower	24	2	16	Stockless			24	8	1	21	23	1	0	Stockless	Baldt	Chester May 31 1918			U. S. Patent State name of Patent.	Where and when tested, and Superintendent.
6343	2nd "	23	3	5	"			23	13	3	0	24	3	7	Baldt	Anchor Co					
6342	3rd "	23	1	6	"			23	6	1	0	20	2	21	"	"					
	Collective weight	71	2	27								66	3	0			Ap. 15-15-15			U. S. Patent State name of Patent.	Where and when tested, and Superintendent.
6341	Stream	7	3	7	2	0	21	10	0	1	7	6	0	0	Common	"					
6340	Kedge	4	0	2	1	0	13	6	7	2	0	3	0	0	"	"					
	2nd Kedge																Ap. 15-15-15			U. S. Patent State name of Patent.	Where and when tested, and Superintendent.

CHAIN CABLES.														HAWSERS AND WARP				
Number of Certificate.	Fathoms.	Size.	Test per Certificate, Tons.	Weight of Chain Cable.		Fathoms and Size per Rule.	Description.	Makers of Cables.	Where and when tested, and Superintendent.	Material.	Fathoms.	Size.	Breaking Test of Steel Wire Towline.					
				Supplied.	Per Rule.													
107	180	1 1/2	40.5	21.3	222.1	210-1 1/2"	Sand	James Mc Kay	Mc Kay Rocks Pa. Feb 18-17	TOWLINE	75	3/4						
				0.4		(see note)	link	Co	F. Stabler	HAWSER	120	8"						
						75-3 1/2				WARP	90	6"						
											90	5"						
Masts, Yards, &c., are in														Good	condition, and			

Masts, Yards, &c., are in Good condition, and sufficient in size and length.

Standing and Running Rigging is sufficient in size and good in quality.

Sails. Good One Suit of fore sail Sails, and the following spare sails 2 topsails, 1 staysail, 1 per

Boats One gasoline driven lifeboat 31 ft long and one working boat

Windlass, present state is Good Capstan Good Rudder Good Pumps Good

Scuppers, &c.—What arrangements are there, beyond the scuppers on-deck, for clearing upper deck of water, in case of a sea coming on board? Three framing ports each side with hinged doors 5'-0" x 20"

Cargo Hatchways.—How formed? Framed yellow pine State size 10'-4" x 12'-6" / 10'-4" x 13'-5"

If of extraordinary size, state how framed and secured? One centre fore safter 9 1/2' deep 8' wide

What arrangement for shifting beams? Yes, solid 2 3/4"

Hatches, themselves, whether strong and efficient? Yes, solid 2 3/4" Main Hatchways.—State size See above.

Order for Special Survey, No. _____ Date _____

Order for Ordinary Survey, No. _____ Date _____

No. _____ in Builder's Yard.

DATES of Surveys held while building, as per Section 35.

1st. When the Frame is completed Aug 28. Sep 13. Nov 9 Jan 15.

2nd. When the Beams are put in, &c. Feb 21. Mar 26. Apr 19.

3rd. When completed and before the plank be painted or payed May 13. June 12. 26. July 18. Aug 27. Sep 2nd c

General Remarks. This vessel has been built in accordance with the approved plans, and in general conformity with the Rules for the Class contemplated.

All fastenings where of iron are galvanized, except the fastenings of keel scarphs, which are yellow metal. The garboards are edge bolted through the keel with 1/4 gal. iron clinched bolts.

The close ceiling is edge bolted from upper deck clamp to end of truck ceiling at short arm floors, extending 2 1/2 strakes, 1/4 bolts spaced 3'

All beams are secured to shelf piece, notched, and fastened as shown on approved plans. All timbers, beams, frames, longitudinals and ceiling have been given 3 coats of preservative (carbolineum) and salting has been carried out in accordance with the Rules, except the salting of beams. Drip trays have been placed under fuel oil tanks, and means taken to prevent leakage of oil from coming in contact with ceiling etc. of vessel.

Notes. Lengths of cables reduced in accordance with War Emergency measures.

Vessel placed in dry dock at Mobile, bottom exam. and found good. painted.

Present condition of Caulking of Bottom Good Deck, Good and Waterways Good

If Sheathed, Doubled, Felted, Coppered, or Yellow Metalled No. Copper paint When last done July 18th 1918

I am of opinion this Vessel should be Classed A1-12 yrs

The Amount of the Entry Fee ... £ : : Fees applied for, ... 19

Special ... £ : : Received by me, ... 19

Certificate... £ : :

Travelling Expenses, if any, £

Committee's Minute FRI AUG. 14 1922

Character assigned

(Signed) M. Buchanan
Surveyor to Lloyd's Register of Shipping.

New Orleans.
New YorkContinuation of Report No. 1636 dated July 1st 1918 on the

Survey held at New York Date 1st Survey Last Survey Sep 2nd
 on the "ELIZABETH RUTH" tons (Gross 862 Net 500) Built at Biloxi Miss.
 By whom built Mississippi Shipbuilding Corp. When built 1918
 Engines made at New York By whom August Twitz Corp. New York
 When built 1918 Brake horse power 150 Each
 Owners. Lever Transportation Co. Port belonging to Boston Mass.
 Maximum working pressure for sq. inch cylinders 250 lbs.
 Engine description: 2, two cycle, single acting, directly reversing, low
 compression, hot bulb type: No. of cylinders 3. No. of cranks 3. No. of air compressor
 eccentrics 1. Dia. of working cylinder 14" Length of stroke 18 1/2" Revs. per
 minute 225-240. Minimum revs. per minute 150. Maximum revs.
 per minute 240. Approved Dia. of crank shaft 5 7/8" Dia. of crank
 pin 5 7/8" Size of crank webs 3 1/2 x 7 1/4" wide. Dia. of thrust shaft
 under collars 5 9/16" Mark on crank shaft LLOYD No. 386 + 387
 20. 3. 18 C. J. H. No. of cooling pumps 1 per engine, 2 5/8" dia. double
 acting 4" stroke. The bed plate and supports for cylinders are one
 casting. Water passages on all cylinders have been tested by hydraulic
 pressure to 80 lbs. per sq. & found tight & sound. Pistons are not water or
 oil cooled. Exhaust pipes are water cooled. Silencers are not supplied.
 The cylinders are not fitted with ordinary relief valves, but when
 engines are started on compressed air, the air starting valve is kept
 open by the operating lever and any excessive pressure is relieved
 automatically through the up stroke.
 The air compressor is of the single stage type, water cooled 8" dia. x 4"
 stroke driven by an eccentric secured to the crank shaft: it is easy
 of access for overhauling and adjustment. A relief valve will
 be fitted between the air compressor and the "shut off" valve on the
 air receivers. No other valve is fitted between the compressor discharge
 and the air receivers.
 The capacity of the air receivers will be sufficient to operate the
 engines for at least twelve consecutive operations without
 replenishment. A connection to the whistle is also to be made
 on these tanks. Initial pressure in receivers is 175 lbs. per sq. and
 the engines can be reversed at 85 lbs. per sq. in.
 The fuel injection is of the solid injection type i.e. without the use
 of compressed air and the supply of fuel to the cylinders is obtained
 through a mechanically operated injection pump. The fuel
 discharge goes through a distributing disc to each cylinder
 in succession. This pump is driven by a link belt (silent chain)
 from the crank shaft and is geared up 3 to 1 of crank shaft.
 No scavenging pump is fitted, the air being compressed
 to a little less than 2 lbs. per sq. in. in the crank case.
 The auxiliary compressor system consists of an oil engine 7" bore
 x 8" stroke driving a 4 1/2" x 8" stroke air compressor, the cranks
 being set at 180 deg. The compressor engine cylinders and covers

for same are water cooled by means of a rotary pump geared direct on the crank shaft. The auxiliary compressor runs at 400 revs. per min. Forced, sight, feed lubrication is adopted throughout in these engines.

The engines were examined when running under full load conditions at the works and worked well in both directions.

They have now been dispatched for fitting on board.

Spare Gear List:-

1 cylinder cover complete with all accessories fitted to it.
 For one cylinder (of each engine): 1 air starting check valve body: 1 lug nut valve & spring: three nozzles complete: 3 nozzle tips: 3 fuel by-pass needle valves: 1 piston complete with 4 piston rings, lap bolt, studs & nuts: wrist pin: 4 piston rings (1 set) for reversing valve gears. 1 set each of main skew wheels and governor chain: 1 chain sprocket: 1 idler pinion: 4 top end bolts & nuts: 1 set of wrist pin bushings: 1 set of connecting rod brasses: 2 bottom end bolts & nuts: 2 main bearing bolts & nuts for end bearing: 4 main bearing bolts & nuts for centre bearing: 2 sets of white brass shells for end bearing: 2 sets of white brass shells for centre bearings: 2 oil rings for end bearings: 1 set of coupling bolts for crank shaft, 2 split side washers for crank shaft: 1 crank pin oiler: 1 set of coupling bolts for intermediate shaft: 4 piston rings for air compressor cylinder: 3 air compressor valves: one fuel injection pump, oil distributor disc & cover for each engine: 8 circulating pump valves, set of cylinder cover studs & nuts: assorted bolts & nuts: 2 lengths of pipes for fuel delivery.

The Society's Rules as to the details of construction, lubrication & accessibility etc. have been fully complied with as far as the construction of these main engines are concerned, the remaining requirements to be attended to at the fitting of the motors in the vessel. In my opinion these engines are of good design: the materials and workmanship are sound and of good quality, and are eligible for the notation L. M. C. in the Register Book when all the requirements of the Rules as to fitting on board have been complied with. These engines have not been built under Special Survey.

N.B. The air receivers are not being made by the engine builders and the order as far as known has not been yet placed. The design for them will have to be approved, tested as required and of sufficient capacity to comply with the Rule Requirements. The spare gear as per list enclosed requires to be checked on board the vessels.

The foregoing is a correct description.

August 1918
 Manufacturer,
 August Mielz Corporation
 per (Signature illegible)
 General Manager.

(Signed) C. J. Hudson.
 Eng. Surveyor to Lloyd's Register of Shipping.

Aux. Ser. ELIZABETH RUTH

Solid cast brass pipes $\frac{5}{8}$ " thick with flanges on outside and screwed flanges on inside fitted to ship's sides for the sea inlets and discharges - 2 on each side, flanges on outside sunk flush with planking and secured with brass bolts. Brass rose plates fitted over the sea inlets. Sea inlet valve chests and discharge valves chests, studded to the inside flanges.

A small valve fitted to each inlet sea chest with portable air hose to permit of blowing out and cleaning the rose plates on ship's sides.

Engine and thrust seating secured to ship with through bolts and nuts. Propeller brackets secured with through bolts & nuts as per plan, steel plates on ceiling. Steel air receivers built at Mobile, 30" diam.: by 8 ft long, shells $\frac{3}{8}$ ", double butt straps $\frac{3}{8}$ ", 2 rows $\frac{5}{8}$ " rivets, pitch $3\frac{1}{4}$ " Ends $\frac{1}{2}$ " dished S.R. $\frac{3}{4}$ " rivets.

A manhole door at one end, and large compensating ring riveted on. Receivers tested by hydraulic pressure to 350 lbs. per sq inch and found tight and sound in every respect. A drain plug fitted at one end for removal of oil and water. The air compressors are fitted with relief valves set to 75 lbs.

Drip pans fitted under fuel oil tanks, oil tanks built as per plan & tested with 15 ft head of water, found tight and sound.

Oil tanks well secured on beams, with palms & stretching screws to ship's sides. Ventilators carried well clear of deck houses.

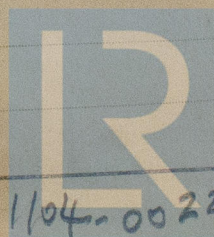
An independent power driven bilge pump fitted in engine room connected to bilges and sea.

An independent fire pump on deck, and $3\frac{1}{2}$ " hand pump on deck for hold bilges. Large ventilators fitted in engine room. A silencer or muffler fitted and water cooled, exhaust pipes from engines covered with non-conducting material.

The engines were tried at the wharf and given a two hour trial without stop, the revolutions vary from 93 to 105 per min. It is feared that the pitch of the propeller is too great (4 ft pitch) but as the vessel was loaded & dry dock not available the spare propellers were not fitted, pitch of spare propellers 4 ft. The Owners Representative has given instructions to the Master to change these propellers on arrival at Colon if he finds that the engines are not working satisfactorily.

Spare gear checked on board.

(Initialed). J. M. B.



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Foundation

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