AMERICAN BUREAU OF SHIPPING

Structural Failures in Liberty Vessels

Reported to February 15, 1944

Casualties in this list are indicated by group numbers I, II and III which are defined as follows:

Group I

Casualties which result in either the actual loss of the vessel or which have progressed to such an extent in the strength deck or shell to make a definitely unsafe condition.

Group II

Casualties which occur in the strength deck or shell or in members attached directly thereto such as in bilge keels or bulwarks and which in their present state are not serious in extent but which experience has shown could easily progress to such an extent as to result in a Group I casualty.

Group III

Casualties which occur in relatively unimportant parts of the hull structure from a longitudinal strength standpoint and which due to their nature would not be expected to progress into the main strength deck or shell.

February 15, 1944.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	~~DATE & PLACE OF FAILURE~~ CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
ALABAMA D. D. & S. B. Co.			
J. L. M. CURRY 231 Group I	5-42	3-43	No report received. Vessel abandoned and sunk.
NATHANIEL BACON 241 Group II	9-42	3-43 Found at N.Y.	Welded butt in strake below sheerstrake cracked, port side, in No. 3 hold; crack extended into sheerstrake 6". this butt was part of previous repair.
ISRAEL PUTNAM 242 Group II	10-42	12-42 Found at N.Y.	Boat deck stringer plate and curtain plate fractured; bulwark plate and bulwark rail fractured.
JAMES HOBAN 281 Group III	11-42	1-43 U.S. to Fremantle.	Welding of forward stanchions supporting boat deck cracked at bulwark rail.
BENJAMIN H. LATROBE 283 Group II	12-42	2-43 N.Y. to London	In heavy weather. Fracture 12" long in deck seam outboard of No.5 hatch, port side.
Group II		1-44 No.Atlantic Westbd.	SECOND DAMAGE? Heavy weather in ballast condition (mean draft 17'-5"), Temp. 56° F. Deck cracked 6' from for'd. starb'd. corner of #3 hatch, hatch coaming corner weld cracked 16", hatch end beam cracked 9". Heavy doubler cracked thru at corner of aft port, #3 hatch.
LAWTON B. EVANS 287 Group II	1-43	3-43 No. Atlantic	Fracture in upper deck starting from welded butt at after end of No.5 hatch, port side. Small cracks in bulwarks.

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ALABAMA D. D. & S. B. Co. (Con't.)			
LAWTON B. EVANS (Continued) Group II		2-43 to 4-43	SECOND DAMAGE: Heavy weather. Deck plating in way of starboard corner of No.2, port and starboard forward corners and after starboard corner of No. 3 hatch fractured for 6".

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BETHLEHEM-FAIRFIELD SHIPYARD			
GEORGE WYTHE 2011 Group III	5-42	8-43 in Atlantic	Heavy weather. Fractured welds connecting tie plates & stringers to fore & aft bulkheads in the port settling tank.
JOHN HENRY 2032 Group III	7-42	9-42 U.S. to Persian Gulf.	Heavy weather. Welding cracked at bounding angle of deckhouse to deck.
WILLIAM MACLAY 2034 Group II	7-42	2-43 No. Atlantic	Heavy weather. Butt weld between shell plates G-9 and G-10, port side, fractured.
WILLIAM WIRT 2037 Group I	7-42	3-43 Westbd.from England.	Shell and upper deck, starboard side fractured amidships; port side, bet. Frames 88 and 89, sheerstrake fractured 4" up and 4" down from deck; stringer fractured 49" in from shell.
BENJAMIN CHEW 2045 Group III	8-42	2-43	Heavy weather. Welding of boat deck stanchions to bulwark, and deck flange of deckhouse boundary angle to deck cracked.
WILLIAM FEW 2059 Group II	9-42	12-43 Newport News	Bilge keel plates fractured at welded butts.
GRACE ABBOTT 2069 Group III	10-42	1-43 U.S. to Capetown	Welding of deckhouse to deck cracked around after starboard corner.
MAHLON PITNEY 2092 Group II	2-43	9-43 in Dry Dock	One cracked butt on bilge keel.
MARIE M. MELONEY 2226 Group III	9-43	11-43	Heavy weather. Welding connecting foundation angle of deckhouse to deck found cracked.
LEWIS EMERY, JR. 2254 Group II	10-43	1-44 in Murmansk	"H" strake on portside, between Fr.80 & 81 cracked thru, 'tween decks cracked 18" in way of above.

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CALIFORNIA S. B. CORPORATION			
BENJAMIN FRANKLIN 3 Group II	3-43	6-43 in No. Atlantic	Heavy weather. Welded butts of deck cracked at forward port and starboard corners and at port after corner of #3 hatch.
JOHN PAUL JONES 4 Group III	3-42	9-43 at Savannah	Second deck and webs of hatch end beams at forward and after ends of No.2 hatch fractured alongside base plate for centerline pillars.
Group III		12-43 at Newport News	SECOND DAMAGE: Heavy weather in No. Atlantic. Tank top plating cracked in three spots between #1 & #2 deep tanks.
SAMUEL ADAMS 8 Group I	4-42	2-44 at Newburgh,N/Y at pier.	Sheerstrake cracked 6'-0" and upper deck 5'-0".
ALBERT GALLATIN 9 Group II	4-42	8-43 at Mobile	Butt weld in upper deck at starboard side of boiler casing cracked in way of edge of corner doubler.
ELBRIDGE GERRY 12 Group II	5-42	1-44 in Philadelphia	Hauling the stern of the vessel into the dock a crack developed in deck plate alongside of the forward side of stressed fairlead (aft, stbd. of #5 hatch) and thwartship for a length of one plate and 4" into the other plate.
ABIEL FOSTER 15 Group I	5-42	1-44 in No. Atlantic	Ballast (11'-8" fwd., 21'-0" aft). Port and starboard side cracked from fwd. end of #3 hatch to bulwark. Sheerstrake and strake below split between Frames 72 & 73, starboard side.
ABRAHAM CLARK 18 Group II	6-42	1-44 in Boston	No.3 hatch, after starboard corner deck weld to coaming cracked 4". No.3 hatch, forward port corner, vertical weld in coaming cracked 2". (hatch corner).

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CALIFORNIA S.B. Corp. (Continued)			
EDWIN MARKHAM 25	6-42	5-43 at New York	Crack in shell 24" long at turn of bilge, in way of auxiliary circulatory injection.
Group II			
JAMES SCHUREMAN 30	6-42	11-42 U.S. to Capetown	Heavy weather. Shell in engine room fractured diagonally for 2 ft. thru seam.
Group II			
LELAND STANFORD 53	8-42	3-43 at N. Y.	Deck plating cracked for 18" outboard from forward port corner of deckhouse.
Group II			
CLARA BARTON 61	9-42	12-43 in No. Atlantic Westbd.	Heavy weather in ballast. After port and starboard corners of #3 hatch cracked 9".
Group II			
HENRY BALDWIN 82	11-42	12-42 U.S. to Australia loaded	Upper deck fractured at all four corners of No. 3 hatch, the fracture from forward port corner extending to side of ship and down 4 ft. into sheerstrake.
Group I			
BROCKHOLST LIVINGSTON 83	11-42	5-43 U.K. to U.S.	Heavy weather, in ballast. Shell and decks fractured at after end of deckhouse, port and starboard sides; upper deck fractured into forward end of No.4 hatch; shell fractured into second strake below sheer.
Group I			
THOMAS JOHNSON 84	11-42	2-43	Deck plate and doubling below cracked 2'-0" at forward starboard corner of No. 3 hatch.
Group II			
Group I		4-43	SECOND DAMAGE: Heavy weather. Upper deck and sheerstrake fractured at after end of deckhouse. No.4 hatch coaming fractured 2'-6" in way of cracked weld of deck plate butt, port side.
SAMUEL NELSON 87	11-42	1-44 in No. Atlantic Westbd.	Heavy weather, in ballast. Main deck cracked for 20" from gunwale on portside forward #2 hatch; 4' crack in forward port corner of #3 hatch. Port bulwark rail cracked 4' forward of aft end of deckhouse.
Group II			

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CALIFORNIA S. B. CORP. (Continued)			
ABEL STEARNS 99 Group II	12-42	10-43 No. Atlantic	In heavy seas, mean temperature 35°. Upper deck plate "C" strake starboard, in way of after corner of No.2 hatch cracked across plate to 6" from seam. Insert plate and doubler cracked and hatch coamings cracked about 9". Smaller cracks occurred in way of starboard after corner and port forward corner of #3 hatch.
WILLIAM MULHOLLAND 102 Group II	12-42	2-43 at Savannah.	Upper deck fractured diagonally forward for 4 ft. from forward port corner of No.3 hatch.
Group II		5-43 U.K. to N.Y.	SECOND DAMAGE: Heavy weather. Two foot crack in upper deck from forward starboard corner of #3 hatch.
ARCHBISHOP LAMY 107 Group II	12-42	2-43	Heavy weather. Upper deck fractured 4'-0" diagonally from forward starboard corner of No.3 hatch; and from after coaming on port side for 2'-0".
LOUIS McLANE 109 Group III	12-42	10-43 New York	During alterations a 24" crack was found in boat deck on the starboard side in way of the after davit, #1 lifeboat.
WILLIAM L. MARCY 113 Group II	1-43	12-43	Crack 8" long in deck under bulwarks starboard side.
Group II		11-43 at Belfast.	SECOND DAMAGE: Upper deck fractured from forward port corner of No.3 hatch for 5'. Doubler under deck also fractured, and end coaming cracked vertically 5" about 3" from hatch corner.

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CALIFORNIA S. B. CORP. (Continued)			
WILLIAM L. MARCY (Con't.) 113 Group II		11-43 at Belfast	THIRD DAMAGE: Bulwarks at recess for accommodation ladder cracked from freeing port to deck, port & starboard. Deck plate in way cracked 7" on starboard side.
Group I		1-44 at Belfast	FOURTH DAMAGE: Fractures on forward deck and shell.
JOSEPH H. HOLLISTER 118 Group II	1-43	3-43 N.Y. to Scotland	Heavy weather. Welded deck butt cracked at after starboard corner of No.4 hatch, extended into coaming and down thru face plate of girder. Deck butt at forward port corner of No.3 hatch also cracked.
JOHN DRAKE SLOAT 122 Group II	1-43	6-43 N.Y. to U.K.	Heavy weather. Fracture in upper deck from starboard forward corner of No.3 hatch, for 24" diagonally forward. Heavy doubler below also fractured. Web of hatch end beam fractured downward and inboard from corner of deck.
Group II		10-43 at Phila.	SECOND DAMAGE: Deck plate at forward end of No.2 hatch cracked for 10" near pad eye for toppinglift.
GEORGE E. HALE 125 Group II	2-43	12-43 U.K. to N.Y.	Heavy weather. Cracked deck and doubler plate and coaming at forward port side of #3 hatch.
JAN JORES EX: Thomas Nast 126 Group II	1-43	1-44 in No.Pacific	Heavy weather, loaded. Twelve inches crack in deck near #3 hatch corner.
PHINEAS BANNING 136 Group III	2-43	8-43 in So.Atlantic.	Heavy weather. At several frames in No.5 hold, welding of frame to shell in way of crossing of welded seams broken, and adacent frames rivets leaking.

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CALIFORNIA S. B. CORP. (Continued)			
PHINEAS BANNING(Con't.) 136			
Group I		12-43 in No.Atlantic.	SECOND DAMAGE: Upper deck cracked (reported increasing).
DANIEL DRAKE 140	3-43	7-43 at Baltimore.	Welding of keel plate butt to "A" strake port side aft, cracked for 6". Upper deck welding to hatch coaming cracked 4" at forward end of No.3 hatch, port side, fracture extending into plating 15" to port.
Group II			
BENJAMIN LUNDY 141	3-43	10-43 in No.Atlantic.	Heavy weather. Deck cracked 67" from forward starboard corner of #3 hatch. Doubler cracked thru and coaming cracked about 12". Deck cracked 53", from forward port corner of #3 hatch. Doubler cracked thru and coaming cracked 21".
Group I			
THEODORE DWIGHT WELD 142	3-43	3-43 tied up at Wilmington, Calif.	Light stores being loaded. Transverse butt of insert plate at after port corner of #4 hatch cracked for 20" from coaming. 12" crack in coaming.
Group II			
THEODORE PARKER 143	2-43	1-44 in Horta, Azores	"Ship at Horta, Azores with fractured Hull".
Group II			
HENRY M. RICE 154	3-43	8-43 in So.Pacific.	Heavy weather; temp. 45° F. Crack in deck 3'-0" long at forward corner starboard side of #4 hatch, starting 2'-0" inboard from corner and 2'-0" forward and running diagonally forward to deck house recess, and 6" in way of fillet.
Group II			
		11-43 No.Atlantic	SECOND DAMAGE: Heavy seas. Ballast condition. Main deck and hatch coaming cracked at the three corners of #3 hatch. The worst crack ran 51" outboard in deck thru insert plate and doubler underneath.

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CALIFORNIA S. B. CORP.(Continued)			
JAMES B. WEAVER 157 Group II	9-43	12-43 in No.Atlantic Eastbound.	Heavy weather. Minor cracks at #2, 3 & 4 hatch corners.
JACQUES CARTIER 162 Group II	4-43	6-43 U.S. to Cape Town.	Heavy weather. Upper deck fractured from port forward corner of No.4 hatch. Slight fracture in deck at port after corner of house.
Group II		8-43 at Port Said	SECOND DAMAGE: Welded butt in upper deck at after end of No.2 hatch, starboard, cracked for 12"; vertical fracture in hatch coaming about 12".
WILLIAM CARSON 165 Group II	4-43	12-43 Norfolk	Three inch crack in stringer deck plate near after corner of deckhouse. 30" crack in plating of after port of deckhouse ½" above deck.
EDWARD W. SCRIPPS 178 Group II	4-43	1-44 in No.Atlantic Westbound.	Heavy weather in ballast (10'-6" forward and 20' aft). Forward end of #3 hatch, portside, cracked about 7' starboard side, about 2'. After end of #4 hatch cracked on starboard side about 2'.
JOHN S. CASEMENT 187 Group II	5-43	10-43 in Dry Dock.	Overhead weld made in Bombay on the main deck at forward port corner of #3 hatch was chipped out and rewelded. Long main deck girder extending forward from this hatch corner was found cracked for 15".
P. T. BARNUM 188 Group III	5-43	8-43 in So.Pacific	Heavy weather. Boat deck plating in the vicinity of the after end of deck house, port side, fractured athwartship 10½'. Welding attaching 3 stanchions to bulwark cracked.
SAMHOLT 218 Group II	7-43	10-43 Karachi	Heavy weather. Cracked welding between deckhouse and main deck at the four corners. Bulwark rail cracked on the starboard side at the after corner of recess for accommodation ladder.

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CALIFORNIA S. B. CORP.(Continued)			
SAMSON EX: John J. Ingalls 7-43 219 Group II		12-43	Upper deck plate cracked 30" from after port corner of #3 hatch. Coaming cracked 4".
JOSIAH G. HOLLAND T2, Tanker Group II	10-43	12-43 in Los Angeles.	Upper deck cracked 16" at the after of the midship house corner of starboard entry recess.
HORACE SEE T11, Tanker Group II	10-43	1-44 No. Pacific	Heavy weather. Three stanchions of midship house fractured in way of bulwark rail welds. Bulwark rail fractured at after end of gangway recess.

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DELTA S. B. CORPORATION			
ABRAHAM BALDWIN 4	7-42	2-43 Westbound from Liverpool.	Shell and upper deck starboard side; fractured at cut for accommodation ladder.
Group I			
Group I		10-43 Liverpool for N.Y.	SECOND DAMAGE: Upper deck and shell cracked in way of cold storage box, port side; similar to fracture on starboard side previously reported.
GEORGE GALE 7	8-42	1-43 at Capetown.	Welded seam of shell, starboard in engine room cracked between two frames.
Group II			
Group I		1-44 in No.Atlantic Westbound.	SECOND DAMAGE: Heavy weather. In ballast. Gunwale fracture en port side at recess for accommodation ladder; crack extends 13' down shell and 8' inboard on main deck, 6" crack in 2nd deck. Cracks at corners of #3 and #4 hatches. 15" crack aft end of boat deck.
ANDREW MOORE 12	10-42	5-43 U.K. to U.S.	Bilge keel and shell plates in B, C & D strakes, starboard side, fractured; tank top margin plate fractured 182.
Group I			
THOMAS SCOTT 14	10-42	1-43	Welded butt in upper deck port side, cracked 9'-0".
Group I			
JONATHAN TRUMBULL 18	11-42	1-43	Heavy weather. Deck cargo shifted. Welded butt of deck at after starboard corner of No.3 hatch cracked and seam cracked 5". Miscellaneous cracks in bulwark, etc.
Group II			
JOHN VINING 19	12-42	2-43 N.Y. to Russia.	Heavy weather. Boat deck stringer plate, starboard, fractured in way of boat davit.
Group III			
Group I		1-44 Murmansk.	SECOND DAMAGE: At anchor, crack between Frs. 104 & 105 on port side extending about 9" down side shell and inboard 6' on main deck.

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DELTA S. B. CORP. (Continued)			
HENRY WYNKOOP 21 Group I	12-42	2-43 at Pier in N. Y.	Loaded. Shell, upper and second decks port side, fractured at after end No.2 hatch.
WILLIAM BLOUNT 27 Group II	9-42	5-43 Mobile Bay.	Welding of upper deck butts at forward end of boiler casing cracked for 12", port and starboard.
RICHMOND MUMFORD PEARSON 29 Group II	11-42	2-43	Heavy weather. Upper deck cracked diagonally aft from after port corner of No.2 hatch.
RICHARD OLNEY 37 Group II	2-43	7-43 at Norfolk.	Welding of insert plates at port after corner and forward starboard corner of No.4 hatch cracked.
SAMUEL DEXTER 42 Group II Group I	4-43	11-43 at Baltimore 1-44 Westbound in No.Atlantic.	Cracked welding at corners of deckhouse and on bulwarks. SECOND DAMAGE: Cracked both sides across #4 hatch.
ROGER GRISWOLD 43 Group I	3-43	1-44 in No.Atlantic	Cable: "Ship returned to Belfast with fractures on forward deck and hull".
EDWARD SPARROW 62 Group II	6-43	12-43	Port aft corner of deckhouse near deck cracked 28" and deck plate cracked 4".
JOSEPH GOLDBERGER 78 Group III	1-43	11-43 Tremley Pt., New Jersey	Starboard side, plating of after end of midship deckhouse, cracked inboard 65" and 12" above deck.

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HOUSTON S. B. COMPANY			
DANIEL CARROLL 8 Group II	8-42	12-43	Butt weld in side shell cracked for 36" in way of tank top at #2 D. B. 7½" crack in margin plate.
NICHOLAS GILMAN 9 Group I	8-42	1-43	Heavy weather. Upper deck at after end of house cracked for 10'-0" in from ship's side.
DANIEL HIESTER 12 Group I	9-42	1-43 Africa to N.Y.	Shell and upper deck amidships port side, fractured at cut in sheerstrake for accommodation ladder.
JAMES LONGSTREET 18 Group II	11-42	8-43 at Boston.	Crack 3" long in deck, diagonally from after port corner of No.2 hatch.
THEODORE SEDGWICK 29 Group I	9-42	12-43 in No.Atlantic.	Heavy weather. Loaded 2,000 tons, well distributed. Fracture portside commencing after end No.3 hatch and extending to ship's side and down through shell plating 8ft. Starboard side fracture commencing forward end No.3 hatch across deck and down ship's side 16 ft.2nd deck plating starboard side fractured thru shell inboard 3 ft.
JEREMIAH WADSWORTH 31 Group I	9-42	12-42 Cape Horn	Sheerstrake starboard side, fractured at cut for accommodation ladder.
JAMES BOWIE 32 Group I	11-42	2-43 Westbound from England	Shell and upper deck, starboard side, fractured amidships at cut for accommodation ladder.
Group III		8-43 at Baltimore	<u>SECOND DAMAGE:</u> Centerline bulkhead in No.2 hold forward of hatch fractured from tank top thru rectangular access opening to pillar, about 8 ft. above tank top.

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HOUSTON S. B. COMPANY (Continued)			
LAMBERT CADWALADER 34 Group I	11-42	12-43 out of Hampton Roads, Va.	Portside gunwale fractured at cutout for accommodation ladder thru sheerstrake extending into strake below and thru deck stringer.
WILLIAM L. SMITH 36 Group I	1-43	3-43 U.S. from England, light.	Upper deck and shell, starboard, fractured from No. 3 hatch coaming down to second deck.
Group II		4-43 U.S.to N.Y.	SECOND DAMAGE: No.3 hatch coaming starboard side fractured.
STEPHEN C. FOSTER 37 Group I	1-43	3-43	Upper deck at after end No.3 hatch fractured 12 ft. from hatch, starboard side, and from hatch to shell, port side, also port sheer strake fractured.
Group II		12-43 No.Atlantic Westbound	SECOND DAMAGE: 1. Corner welding at base of coaming after end on both sides of No.2 hatch leaking. 2. Insert plate of after starboard corner of #3 hatch cracked thru; coaming plate cracked 3". 3. Insert plate of forward port corner of #3 hatch cracked 10".
WILLIAM H. CRAWFORD 40 Group I	2-43	5-43 in So.Pacific	Deck cargo shifted. Deck cracked across and 5'-0" down sheerstrake, at after port corner of No.3 hatch, and at forward starboard corner of No.3 hatch.
JANE LONG 57 Group I	5-43	1-44 in No.Atlantic Westboundl	Cracked across #4 held.
LORENZO de ZAVOLA 64 Group I	6-43	1-44 in No. Atlantic.	Shell & deck fractures.

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HOUSTON S. B. COMPANY (Continued)			
JOHN MARY ODIN 67 Group III	6-43	9-43 in No.Atlantic	Heavy weather. Boat deck on port side fractured 15" inboard from curtain plate butt.
DAVID WILMOT 82 Group III	9-43	11-43	Welding of deckhouse to deck cracked in crew quarters.

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J. A. JONES CONSTRUCTION CO. (Brunswick Yard)			
JAMES M. WAYNE 105 Group III	5-43	6-43 N.Y. to Liverpool.	Heavy weather. Upper deck abreast No.5 hatch, port side fractured in two places for 11" between welded clips for securing cargo.
JOSEPH R. LAMAR 107 Group I	5-43	1-44 Westbound in No.Atlantic	Fracture extending from starboard forward corner of #4 hatch to sheerstrake parallel with and between deck beams (does not continue into sheerstrake).
J. A. JONES CONSTRUCTION CO. (Wainwright Yard)			
DOLLY MADISON 12 Group III	10-43	12-43	Weld connecting heavy insert plate to bulwark between Fr. 82 & Fr. 83 cracked.

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KAISER COMPANY - VANCOUVER, WASH.			
ELIAS HOWE 2 Group II	8-42	3-43 in Alaskan waters	Heavy weather. Two cracks athwartship of the midship deckhouse; fracture aft of the midship house. All cracks were in the bulwark and sides of the vessel.
JOSEPH HENRY 45 Group III	2-43	2-43 Mukilteo, Wash.	In port loaded. Boat deck curtain plate cracked in butt weld, stringer plate fractured 3 ft. inboard.
Group II		7-43 at Seattle.	SECOND DAMAGE: Upper deck butt welds cracked about 18" outboard of coamings at after starboard and both forward corners of No.2 hatch, all four corners of No.3 hatch and the forward starboard corner of No.4 hatch.
LAURA KEENE 46 Group I	2-43	12-43 about 200 m. from Azores.	Heavy weather, ballasted. Upper deck fractured in butt weld at forward starboard corner of No.3 hatch, extending to gunwale and down shell thru first strake below sheer between FRS. 75 & 76. Hatch side coaming fractured from top to bottom and thru face plate. Deck butts also cracked about 1' at port forward and after corners of No. 3 hatch, and at forward stbd. corner of No.4 hatch where the coaming was also cracked about 30".

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MARINSHIP CORPORATION			
SEBASTIAN CERMANO 11 Group II	3-43	3-43 at San Francisco	Seam at lower edge of sheer-strake unwelded for 6" between frames 129 and 130, starboard.

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NEW ENGLAND S.B. CORP. **(formerly So. Portland S.B. Co.)**			
JOHN DAVENPORT 201 Group II	6-42	8-43 in So. Pacific	Heavy weather. Deck cracked 3'-6" outboard in way of after port corner of No. 3 hatch and 3" up coaming. Deck cracked 7'-6" in way of starboard forward corner of No.3 hatch 4" beyond coaming & 3" up on coaming.
THOMAS HOOKER 203 Group I	8-42	3-43 No.Atlantic	No report received, vessel lost.
JOHN CARVER 207 Group II	11-42	6-43 at N. Y.	Welded deck butt cracked at outboard end, abreast forward end of No. 3 hatch.
WILLIAM BRADFORD 208 Group III	12-42	1-43 No. Atlantic	Heavy weather. Welding of deck houses to deck leaking; welded butts of rail bars cracked.
WILLIAM BREWSTER 209 Group I	12-42	12-42	In port after harbor trail. Shell at Fr. 94-95, port side, fractured for 10' in way of bilge keel, fracture extending thru bilge keel butt.
HERMAN MELVILLE 218 Group III	10-42	1-43 U.S. to Buenos Aires	Welding of deckhouse to deck cracked at corners. Welding of lifeboat bases cracked.
ANNA HOWARD REED 240 Group II	9-43	11-43	Heavy weather. Main deck plating cracked 14" outside of doubler at after starboard corner #3 hatch; welding of deckhouse to deck cracked in many places.
WINSLOW HOMER 253 Group II	12-42	8-43 on Dry Dock	No. 9 "D" strake, starboard side was fractured 14" vertically on way of bilge keel. Tank top, on both sides was fractured for 18" or less.
JOHN MURRAY FORBES 254 Group III	1-43	4-43 taking fuel at N.Y.	After bulkhead of No. 3 starboard deep tank cracked in vertical welded butt just below top of tank.

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NORTH CAROLINA S. B. CORPORATION			
VIRGINIA DARE 3 Group II	3-42	12-42 Westbound from Scotland.	Welds of Upper deck at forward end of No.3 hatch, port and starboard, cracked and port hatch coaming fractured 16". Small crack in bottom plate amidships.
FRANCIS MARION 6 Group II	4-42	2-43 U.S. to U.K.	Heavy weather. Welding of hatch corner insert plates at after starboard corner of No.2 hatch and port forward corner of No.3 hatch cracked. Girder abaft No.2 hatch fractured.
WILLIAM MOULTRIE 9 Group II	6-42	4-43 at N. Y.	Welded butt in "C" strake of shell, port side, cracked for 6" and fracture extended up into "D" plate for 6", between frames 116 & 117.
THOMAS SUMTER 10 Group I	6-42	3-43 U.S. to U.K.	Port sheerstrake fractured for 8" at Frame 84½ and 91½; and for 2'-0" at Frame 102½ where deck stringer plate also cracked for 2'-6". Starboard sheerstrake cracked 5'-0" at Frame 91½, and deck stringer cracked 3'-0".
HUGH WILLIAMSON 13 Group II	7-42	3-43 U.S. to Cardiff	Heavy weather. Welded butts of upper deck cracked at port after corner of No.3 hatch, and port forward corner of No.4 hatch. At starboard forward corner of No.4 hatch, a similar crack extending diagonally into plate for 14".
WILLIAM A. GRAHAM 16 Group II	8-42	2-43 on Dry Dock at N.Y.	Butt weld in E strake, port side No.4 hold cracked.
SAMUEL ASHE 20 Group III	6-42	10-42 at N. Y.	Welded connections of girders, bulkhead stiffeners and beams in deep tank Nos. 1 & 2, starboard, cracked.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	~~DATE & PLACE OF FAILURE~~ CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
NORTH CAROLINA S. B. CORP. (Continued)			
BENJAMIN WILLIAMS 21 Group III	10-42	2-43 at N. Y. loaded.	Boat deck curtain plate cracked in butt weld, stringer plate fractured 6 ft., house side fractured down 4 ft.
Group III		10-43	SECOND DAMAGE: Boat deck plating cracked 72" inboard from curtain plate, butt that was welded on one side only. Outboard side of upper deck-house cracked vertically for 52".
EDWARD RUTLEDGE 29 Group III	7-42	Date Unknown	Butt of keel plate at stern frame cracked and "A" plate, port side, fractured 4" above butt.
COLLIS P. HUNTINGTON 38 Group II	11-42	2-43 at pier in N.Y.	Port side, forward bulwark cracked next to and thru a butt weld.
HENRY BACON 40 Group II	11-42	12-42 at pier in Phila.	Butt in bulwark plate forward of house cracked, breaking bulwark rail.
RICHARD CASWELL 48 Group III	12-42	6-43 U.S. to Buenos Aires.	Heavy weather. Seams of shell leaking in #2 deep tanks, port and starboard, and numerous frame rivets loose.
POCAHONTES 49 GroupII	12-42	Date Unknown	Misc. minor welded joints cracked on bulwark plating & rail.
CHRISTOPHER GADSDEN 50 Group III	12-42	2-43 N.Y. to No. Africa.	Heavy weather. Welding of girders to pillars in No. 1 & No. 2deep tanks, port and starboard cracked.
JOHN HARVEY 56 Group III	1-43	3-43 at Casablanca.	Girders pulled away from top of pillars in No. 2 deep tank.
ROBERT HOWE 57 GroupII	1-43	7-43 at Gibralter.	Butt weld of upper deck at after end of No.4 hatch, star-board side, cracked for 18" from coaming.
WILLIAM D. PENDER 72 Group II	3-43	3-43 at Jacksonville	Tank top margin plate in No.2 hold, starboard fractured 10" in from shell.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	~~DATE & PLACE OF FAILURE~~ CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
NORTH CAROLINA S. B. Corp. (Continued)			
THOMAS L. CLINGMAN 86 Group II	4-43	8-43 in Indian Ocean.	Fully loaded. "E" strake on port side, cracked, 2" from the aft butt of plate, 2 ft. down from the upper seam, forward in a semicircle to a point about 6" from lower seam crossing bulkhead 116, at aft end of deep tank. The vertical projection of the crack was about 4 ft.
WALTER HINES PAGE 90 Group I	5-43	12-43 in No.Atlantic Westbound.	Heavy weather. Deck plating fractured from forward starboard corner of #3 hatch to sheerstrake. Sheerstrake fractured 5' down. Hatch coaming fractured in way for 18" and girder fractured in two places.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	~~DATE & PLACE OF FAILURE~~ CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
OREGON S. B. CORPORATION			
JOHN BARRY 174 Group II	2-42	7-43	Heavy weather. Bulwark plate and rail on port side in way of Fr. 111 cracked vertically 37".
THOMAS MAC DONOUGH 182 Group I	3-42	11-42 from N.Y. to No.Africa.	Loaded. Shell and upper deck fractured at aft end of house, starboard side.
JAMES WHITCOMB RILEY 199 Group III	5-42	2-43	Heavy weather. Boat deck curtain plate cracked in welded butt and stringer plate fractured 3'-0" inboard.
WALT WHITMAN 232 Group I	5-42	1-44 London	15 ft. fractured in No.5 hold, 30' forward of bulkhead above propeller boss.
MARK TWAIN 233 Group II	5-42	3-43 at N.Y.	Butt of bottom plating cracked 6" extending into bilge strake 12".
MATTHEW P. DEADY 545 Group II	7-42	3-43 found on dry-dock at N.Y.	Butt in bilge strake, starboard, cracked 3" extending into next strake below for 18".
HARVEY W. SCOTT 552 Group I	7-42	12-42 off Strait of Magellan.	Shell and upper deck starboard side, fractured at cut for accommodation ladder. Miscellaneous other cracks in welds.
JOHN C. AINSWORTH 554 Group I	8-42	12-42 No. Pacific	Shell and upper deck port side, fractured at cut for accommodation ladder.
Group II		9-43 Alaska to Seattle.	SECOND DAMAGE: Heavy weather. Welded butt in deck 15" from forward port corner #3 hatch and after starboard corner of #4 hatch cracked15". Crack in upper deck on way of starboard forward corner of deckhouse starting 12" aft of corner and curving 24" inboard. Fillet weld at after starboard corner of deckhouse to deck cracked 4 ft.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE, NATURE OF DAMAGE.
OREGON S. B. CORP. (Continued)			
EUGENE SKINNER 556 Group III	8-42	1-43 at San Francisco	Welding of deckhouse to deck cracked at all four corners.
DANIEL H. LOWNSDALE 557 Group III	8-42	9-42	On voyage from Wellington, New Zealand. Weld connecting forward bridge stanchions to gunwale angle fractured.
HARRY LANE 559 Group II	8-42	8-43 at Philadelphia.	Four cracks in butts of sheer strake above deck and several cracks in bulwark rail and plate.
GEORGE CHAMBERLAIN 560 Group I	8-42	12-42 in Red Sea.	Upper deck at after end No.3 hatch fractured 12 ft. in from shell, starboard side, and 1 ft. on port side.
Group I		12-43 in No.Atlantic Westbound.	SECOND DAMAGE: Heavy weather, ballast condition. Two major cracks occurred: 1. In way of entrance to midship accommodation on starboard side, deck cracked including sheerstrake and strake below. 2. Forward end of #4 hatch portside deck cracked to bulwark and thru sheerstrake, first and second below. Hatch coaming cracked thru in way.
WILLIAM H. SEWARD 562 Group II	8-42	3-43 in Drydock at N.Y.	Welded butt in bilge strake, port side amidships, cracked, crack extended into next strake.
CLEVELAND ABBE 565 Group II	9-42	5-43	Shell plate D-8 fractured 4" vertically in way of bilge keel.
ANDREW CARNEGIE 566 Group II	9-43	7-43 at Mobile.	Five butts in bilge keels cracked.
WILLIAM S. ROSECRANS 570 Group II	9-42	4-43 at N. Y.	Fourth shell plate from aft in "C" strake fractured 8".

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
OREGON S. B. CORP. (Continued)			
SAMUEL SEABURY 572 Group II	9-42	12-42 San Francisco to Honolulu.	Butt of bilge strake in No.3 hold cracked 8", extending into next strake below 8".
HENRY GEORGE 574 Group II	10-42	Date unknown.	Upper deck butts at forward end of boiler casing, port and starboard, cracked across passageway.
JAMES McNEILL WHISTLER 576 Group I	10-42	11-42 in Bering Sea.	Light condition. Shell, upper and 2nd decks fractured at after end of No.3 hatch, port side upper deck hatch coaming fractured. Bilge strake and margin plate fractured in No. 3 hold.
JOSEPH N. TEAL 581 Group II	9-42	3-43 at Baltimore.	Upper deck plating fractured in way of slot for topping lift pad.
Group II		11-43 in No.Atlantic	SECOND DAMAGE: 6'-3½" vertical fracture in port side, bilge plate (D-9) between Fr.92 & Fr.93 in way of cracked bilge keel. Tank top was fractured 4'-0" in way of same crack.
ELMER A. SPERRY 588 Group II	10-42	1-44 No.Atlantic Westbound.	Heavy weather Deck stringer plate fractured 3'-0" from sheerstrake inboard, 15'-0" forward of #3 hatch on starboard side. Sheerstrake in way of above cracked 9".
JOHN P. HOLLAND 589 Group III	11-42	8-43 in No.Atlantic.	Forward port life boat welded butt cracked in curtain plate. Stringer plate and next strake cracked for 2 ft. in way of same crack.
S. M. BABCOCK 590 Group I	11-42	10-43 in Mid-Atlantic.	Heavy weather. Starboard side shell, for 3 strakes & upper deck just forward of the after bulkhead of house from shell to ventilator cracked.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
OREGON S. B. CORP. (Continued)			
JOSEPH GALE 594 Group III	11-42	5-43 at Savannah	Welding of shaft alley to tank top incomplete in 5 places about 12" long.
SAMUEL J. TILDEN 597 Group II	11-42	6-43 at N. Y.	Butt weld in D strake cracked for 2 ft. and butt in C strake between plates 4 & 5 starboard cracked for 18" extending 6" into D plate.
G. W. GOETHALS 599 Group II	12-42	11-43 in N. Y. C.	Welded shell butt, between Frs. 36 & 37, portside cracked for about 4" above margin plate. Margin plate cracked 4". 12" crack in the after vertical butt of plate D-3, portside.
WILLIAM T. SHERMAN 600 Group I	12-42	1-43 West Coast port to Dutch Harbor	Sheerstrake and upper deck, port side, fractured at after end of No.4 hatch. Welds at corners of Nos. 3 & 4 hatches in upper deck cracked.
CARL SCHURZ 602 Group II	12-42	2-43 Seattle	Three sheerstrake butt welds cracked.
Group II		10-43 in Pacific.	SECOND DAMAGE: Deck butts at after port corner of #3 hatch and starboard after corner of #4 hatch cracked 12".
HENRY BARNARD 603 Group II	12-42	2-43 at San Francisco	Welding cracked at intersection of 4 shell panels in No. 1 starboard deep tank.
JOHN BURKE 609 Group II	12-42	3-43 in No.Pacific	Loaded condition. Deck plating cracked at forward starboard corner of #3 hatch between Frs. 74 & 75 for about 18" and into hatch coaming for 6". Crack in deck plating at forward port corner of #3 hatch bet. 74 & 75 for about 18".
EZRA MEEKER 611 Group III	12-42	1-43 at San Francisco	Curtain plate of boat deck port, cracked in butt weld, stringer plate fractured 4 ft.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
OREGON S. B. CORP. (Continued)			
SACAJAWEA 612 Group II	12-42	4-43 at Seattle	Welding of deck butts cracked at side of hatches as follows: Forward end of No.3 hatch, port and starboard, after end of No. 4 port. Hatch coaming cracked 10" above and below deck in way of cracked weld at forward starboard corner of No.3 hatch.
CHIEF WASHAKIE 613 Group II	12-42	7-43 at Seattle	Welded butts of upper deck cracked about 18" from coamings at all four corners of #2 and #3 hatches & forward corners of #4 hatch
Group I		12-43 off Alaska	SECOND DAMAGE: Bad crack at #3 hatch across main deck and down shell to water.
LINDLEY M. GARRISON 616 Group II	1-43	Date unknown.	Vessel loaded. Vertical crack in bulwark from top down to deck plate abeam of #2 hatch, starboard. Vertical crack in bulwark from top down to deck plate abeam #4 hatch, port.
JOHN W. WEEKS 617 Group II	1-43	Date unknown.	Fracture in bulwark across top & down side for 9" abeam #5 hatch, port. Top of bulwark cracked abeam #3 hatch, port.
SAMUEL D. INGHAM 622 Group II	1-43	4-43 at Seattle	Welding of deck butt cracked at forward starboard corner of No. 3 hatch. Coaming fractured in way of cracked weld 12" above deck and down thru face plate of hatch girder.
GEORGE W. CAMPBELL 623 Group II	1-43	4-43 in No Atlantic	Heavy weather. Sheer plates J-8 & J-9, starboard side cracked thru butt for 9". Main deck in way also cracked for 9". Bulwark plate and rail in way of Frame 69, starboard cracked from rail to freeing port.
JOHN WHITAKER 631 Group III	2-43	Date unknown.	Welding in longitudinal seam of starboard shell plating in way of second frame from after bulkhead cracked for about 4" at the 13' draft mark.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
OREGON S. B. CORP. (Continued)			
NATHANIEL J. WYETH 639 Group II	3-43	4-43 at San Francisco.	Welded butt between sheerstrake plates 8 & 9 cracked 10".
JAMES HARROD 643 Group II	3-43	6-43 at San Francisco	Welding in way of half round on sheerstrake, starboard side, at after end of No.4 hatch, cracked, deck plate cracked at end of sloping plate at starboard hawse pipe.
CHRISTOPHER GREENUP 644 Group I	3-43	3-43 Alaska.	Sheerstrake, deck stringer plate and next strake inboard fractured in way of welded butt in half-round on sheerstrake at opening in bulwarks, port side. Welding of deck butts cracked at forward and after starboard corner of No.2 hatch, and at port and starboard after corners of No.3 hatch.
Group II		2-44 in No.Pacific	SECOND DAMAGE: Crack in port side strake E from butt in strake D, 51" above tanktop. Fr.96½ to Fr.97.
BENJAMIN H. GRIERSON 650 Group II	3-43	1-44 in No.Atlantic.	Welded butt at forward hatch corner #3 on the starboard side cracked 2'-8" outboard. Hatch coaming cracked 27".
SEVASTOPAL EX: De Witt Clinton 670 Group III	4-43	1-44 at anchor in Vladivostok	Loaded. Boat deck cracked between Fr.99 & 100, for full width of one plate 4" crack in deckhouse.
MOSES CLEVELAND 676 Group III	2-43	5-43 U.S. to U.K. - some port.	Heavy weather. Loaded. Deck plate cracked athwartship about 42" between port and starboard hawse pipes.
ROBERT NEWELL 684 Group II	5-43	10-43 in No.Atlantic.	Heavy weather. Loaded. Deck butt at #3 hatch starboard, forward corner cracked 20". Port side cracked 22" then diagonally outward and forward 27". Hatch coaming cracked 15" in way of port side fracture.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
OREGON S. B. CORP. (Continued)			
THOMAS A. HENDRICKS 689 Group II	5-43	10-43 in No.Atlantic.	Sheerstrake cracked for 2 ft. and deck 18" between No.4 & 5 hatches starboard side in way of opening in bulwarks.
HENRY S. LANE 692 Group I	5-43	Date unknown.	Heavy weather damage. Starboard side of main deck at frame #139, a crack extending 3 ft. on main deck, thru stringer bar down 6 ft. on shell.
R. C. BRENNAN 695 Group III	5-43	6-43 at Los Angeles.	Two butts in boat deck curtain plate, and 8 butts in bulwark rail bar rewelded.
Group II		11-43 at Baltimore	SECOND DAMAGE: Butt weld in upper deck nr. forward port corner of No.3 hatch cracked 12" outboard from coaming.
KHERSON EX: Joseph C. Avery 698 Group I	6-43	12-43 No. Pacific	Grounded and broke in two.
DONALD MACLEAY 718 Group II	7-43	7-43 at Portland.	Sheerstrake butt at Fr.128½ cracked from 3" below top to header for hatch end beam.
JOHN P. GAINES 723 Group I	7-43	11-43 No.Pacific off Alaskan Coast.	Moderate swell, ballast condition. Ship fractured in two. The crack on port side went from the aft end of #3 hatch at an angle aft across the deck, then vertically through sheerstrake, then angled aft to the forward fire room bulkhead, then vertically downward to the bottom of the ship. The fracture on the starboard side went from a point 3 ft. forward of the after end of the hatch straight across to the side and down a frame to the waterline, ripping the plate from the frame. The bow sunk and the aft end drifted aground.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
OREGON S. B. CORP. (Continued)			
JOHN STRAUB 808 Group III	12-43	1-44 in No. Pacific.	Four to Five foot cracks, fore and aft of #3 hold in second deck.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
RICHMOND SHIPYARD NO. 1			
JOAQUIN MILLER 484	8-42	3-43 U. S. to England	Shell and upper deck, port side, fractured forward end No. 3 hatch, from corner of hatch.
Group I			
Group II		9-43 in New York	SECOND DAMAGE: Welded butt joints of deck plating located 16" aft of the starbd. after corner of #3 hatch cracked about 18".
Group I		12-43 at Newport News	THIRD DAMAGE: Upper deck and shell stbd. side fractured at cut in gunwale for accommodation ladder.
LEW WALLACE 485	9-42	3-43 Alaska to San Francisco	Shell and deck fractured at cut for gangway. Deck fractured 6'-0" inboard.
Group I			
MOSES ROGERS 492	10-42	6-43 at Calcutta	Bulwark plate cracked into freeing port in way of #4 hatch, port side. Miscellaneous welds cracked.
Group II			
FREDERIC REMINGTON 508	12-42	5-43 at Capetown	Deck and shell cracked to waterline thru ice box.
Group I			
GEORGE D. PRENTICE 536	4-43	11-43 at Baltimore	Heavy weather. Hatch end beam at after end of No. 1 hatch in 2nd deck fractured vertically full depth; center strake and next strake outbd. to port also cracked. No.1 'tween deck sagged. Pillar fitted under coaming.
Group III			

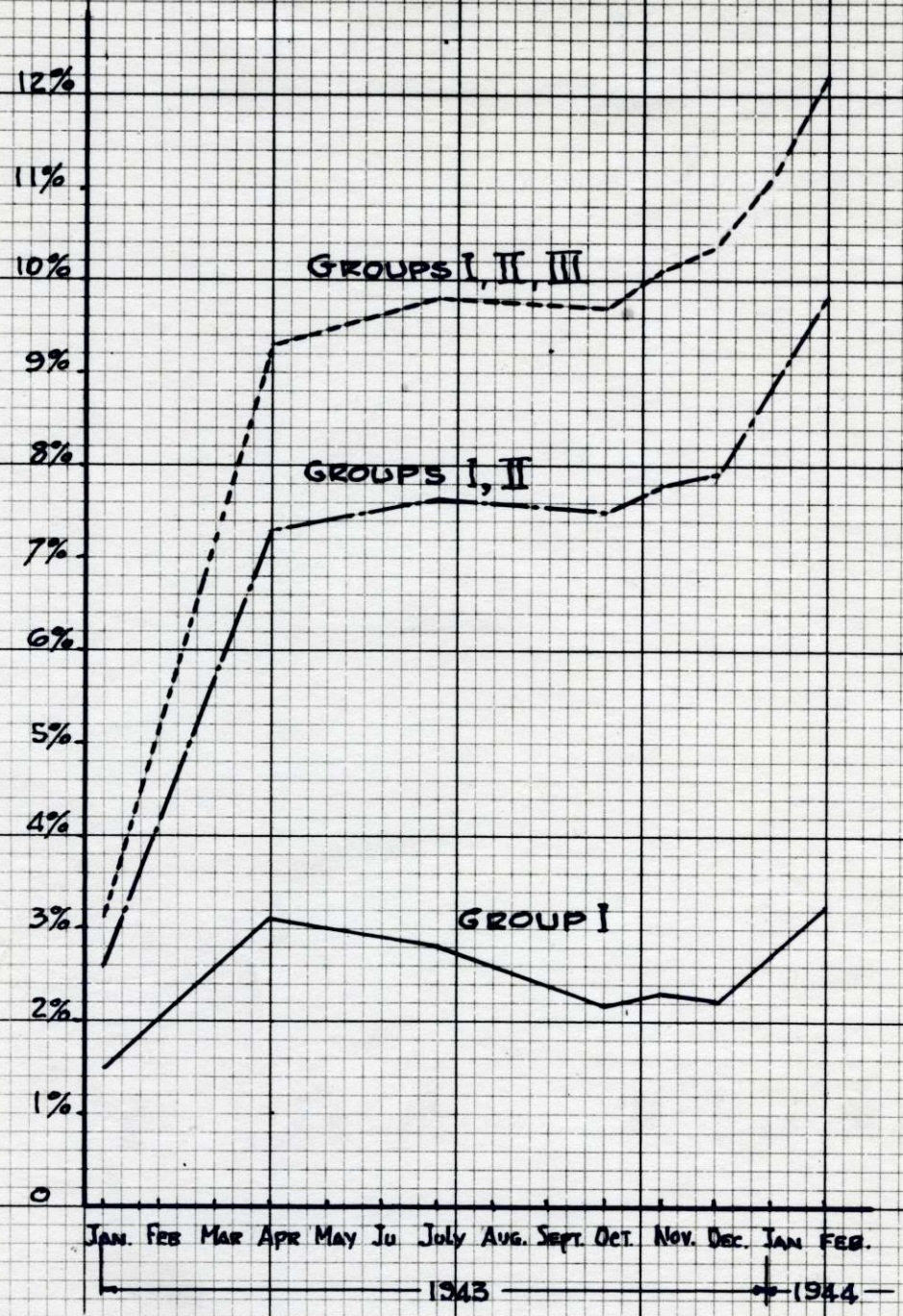
NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
RICHMOND SHIPYARD NO. 2			
STEPHEN HOPKINS 47 Group III	5-42	5-43 enroute to South Africa	Heavy weather. Welding fractured at Ft. of port and stbd. stanchions at forward end of deckhouse at connection to gunwale angle .12" cracks on house and deck at forward corners, port & stbd. Welding connection to bulkhead aft end #3 in way of refrig. room fractured.
JOHN MORTON 58 Group II	8-42	2-43 on dry-dock at San Francisco	Bilge plate, port side, fractured in way of bilge keel butt which cracked. Margin plate also fractured 4 feet.
JOHN FITCH 72 Group I	9-42	2-43 at anchor in N. Y.	Loaded. Shell, upper and 2nd decks, port side, fractured at forward corner of house.
SAMUEL F. B. MORSE 75 Group I	10-42	6-43 at N. Y.	Sheerstrake and deck stringer, port side, abreast forward end of No. 3 hatch fractured.
CYRUS H. McCORMICK 76 Group II	10-42	7-43 at Boston	Crack in bulwark rail at forward end of house, just below stanchion supporting boat deck above, extending 2" into bulwark plate.
JOHN F. APPLEBY 421 Group III	10-42	5-43 N. Y. to U. K.	Heavy weather. Boat deck stringer plate fractured under No. 3 starboard davit. Cracks in butts of rail bars.
Group II		10-43 in No. Atlantic	<u>SECOND DAMAGE:</u> Heavy seas. Ballast condition, Fracture of upper deck plating, or weld in the vicinity of aft corners of #3 hatch & the for'd port corner of #4 hatch.
GEORGE B. SELDEN 428 Group I	11-42	12-43 in No. Atlantic Westbound	Heavy weather in ballast. Gunwale fracture in portside of recess for accommodation ladder. Sheerstrake fractured and strake below fractured for 2'. Deck stringer plate fractured in way of stbd. Bulwark rail & plate fractured. Shell plating in way of tank top starboard side cracked 12" between Fr. 64 & 65. Boat deck on stbd. side cracked for one strake in way of lifeboat.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
RICHMOND SHIPYARD NO.2 (Continued)			
ROBERT E. PEARY 440 Group I	11-42	5-43 N. Y. to Liverpool	Heavy weather, ice fields, underwater explosions. Bottom and side shell fractured on the port side at after end of No.3 hold (frames 84-5). Fracture extends from 13" outboard of A-B seam, around turn of bilge and up to 20" from top to E strake, about 25'-0". Butt in bilge keel cracked. Intercostal girder cracked to lightening hole, tank top cracked 7'-0" in line of shell crack.
DAVID GAILLARD 441 Group II	2-42	12-43 in So. Pacific	Heavy weather 6' vertical crack in bulkhead (FR. 68) between tank top and 2nd deck. Starboard hawse pipe and deck cracked. Port side bulwark rail butt cracked near hatch.
GEORGE ROGERS CLARK 448 Group II	1-43	10-43 in No. Atlantic	Heavy weather cracked deck and doubler plate at forward stbd. corner of #4 hatch.
Group II		11-43 in No. Atlantic	SECOND DAMAGE: Heavy weather. Cracked deck and doubler plate at forward stbd. corner of #4 hatch. Forward side of hatch coaming slightly crack from corner.
DAN BEARD 464 Group II	2-43	12-43 at N. Y.	Upper deck and doubler at after port corner of #3 hatch cracked 30" also girder below.
HIRAM S. MAXIM 468 Group II	3-43	5-43 in Indian Ocean	Heavy weather. Upper deck butt cracked at starboard forward corner of No. 4 hatch, hatch coaming also cracked.
VALERI CHAKLOV 481 EX. ALEXANDER BARANOFF Group I	4-43	12-43 at Sea nr. Aleutians Is.	In ballast, heavy seas. Three cracks developed. 1. On the main deck portside, fr. 74, from forward corner #3 hatch to bulwark and down shell plating to the turn of bilge. 2. On the stbd. side fr. 74 thru sheerstrake to the 'tween deck level. 3. On the stbd. side, Fr. 76 thru sheerstrake. Dec. 13 the ship suddenly broke in two at Fr. 74. Two section of ship salvaged.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
RICHMOND SHIPYARD NO. 2 (Continued)			
ELISHA GRAVES OTIS 1110 Group II	4-43	12-43 Eastbd. in No. Atlantic	Heavy seas. Loaded. After corner of #3 hatch, stbd. side cracked for 15".
Group II		1-44 in London	SECOND DAMAGE: Deck fractures in way of #2 & #3 hatch corners
JOSEPH SMITH 1119 Group I	6-43	1-44 No. Atlantic	Vessel cracking abandoned by crew and left in a sinking condition.
JOHN L. SULLIVAN 1121 Group II	5-43	12-43 Eastbd. in No. Atlantic	Heavy weather damage. Small cracks at #3 & 4 hatches and deckhouse.

NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
ST. JOHNS RIVER S.B. CO.			
JOHN GORRIE 2 Group I	5-43	10-43 between Iceland & Greenland, Westbound.	1500 tons ballast. Whole gale WNW. Upper deck and shell fractured from forward port corner of No. 3 hatch, stbd. side at forward end of house, and between Nos. 4 &5 hatches stbd. side in way of opening in bulwarks; shell fractured to or just below second deck. Welded butts of deck cracked and hatch coaming in way fractured at ford. stbd. corner of No. 3 hatch and forwd. port corner of No. 4 hatch.
WILLIAM BYRD 11 Group III	9-43	10-43 in No. Atlantic.	Heavy weather. Bulwark rail at base of forward gusset stanchion supporting boat deck port and stbd. fractured.
RUFUS C. DAWES 12 Group III	9-43	10-43	Heavy weather. Boat deck plating, portside, fractured in way of forward life boat.

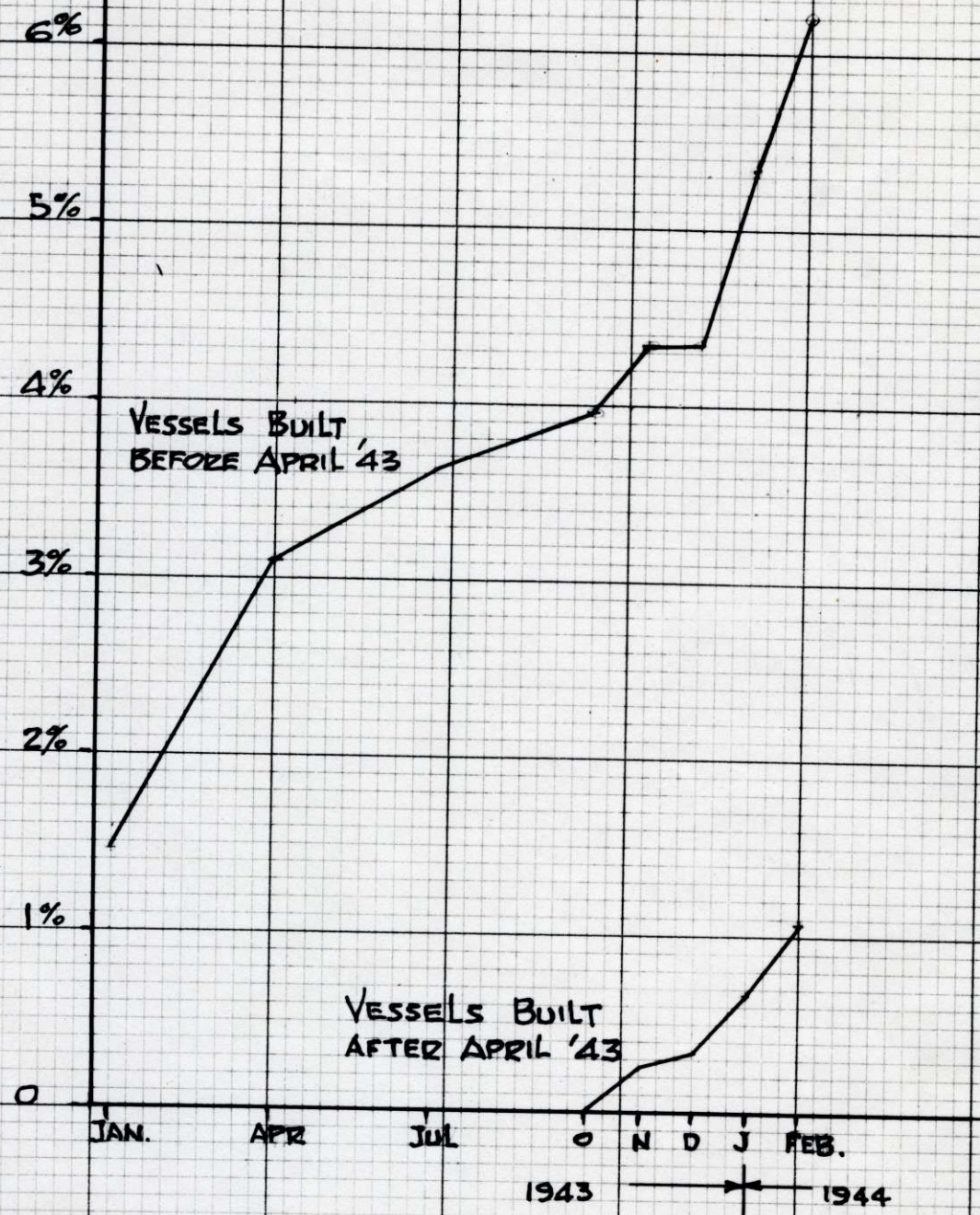
NAME YARD HULL NUMBER	DATE BUILT	DATE & PLACE OF CASUALTY	CONDITIONS AT TIME OF FAILURE. NATURE OF DAMAGE.
SOUTHEASTERN S.B. CO.			
GEORGE WALTON 4 Group III	3-43	11-43	Heavy weather. Welding of stanchion at forwd. corner of boat deck on port and starboard side cracked.
LYMAN HALL 5 Group II	4-43	9-43 in So. Pacific	Heavy weather. Loaded, welded butts at hatch corners of #2,3 & 4 cracked 12" outboard.
CASIMIR PULASKI 15 Group II	7-43	8-43 U.S. to U. K.	Upper deck butt at after end of No. 3 hatch cracked at corner insert plates, port & starb'd. Welded butts of bulwark rail, boat deck curtain plate etc. cracked. Welding of deck house to upper deck cracked for 18'-0" port & starboard.
GEORGE WHITEFIELD 19 Group II	8-43	1-44 at Boston	Conditions unknown. Butt weld at after part corner of #3 hatch cracked for length of insert. Hatch coaming cracked 18". Forward starboard corner of #4 hatch cracked 8".
WILLIAM BLACK YATES 24 GroupI	9-43	12-43 in No. Atlantic (Westbd.)	Heavy seas in ballast condition. Sheerstrake between Fr.101 & Fr. 102 on port side cracked thru. Stringer deck plate in way of same, cracked 40".



RATIO of CUMULATIVE TOTALS of CASUALTIES TO CUMULATIVE TOTALS of VESSELS DELIVERED, for GROUP I, for GROUPS I & II, AND for GROUPS I, II & III.
LIBERTY VESSELS.

AMERICAN BUREAU of SHIPPING
FEB. 15. 1944.

GROUP I



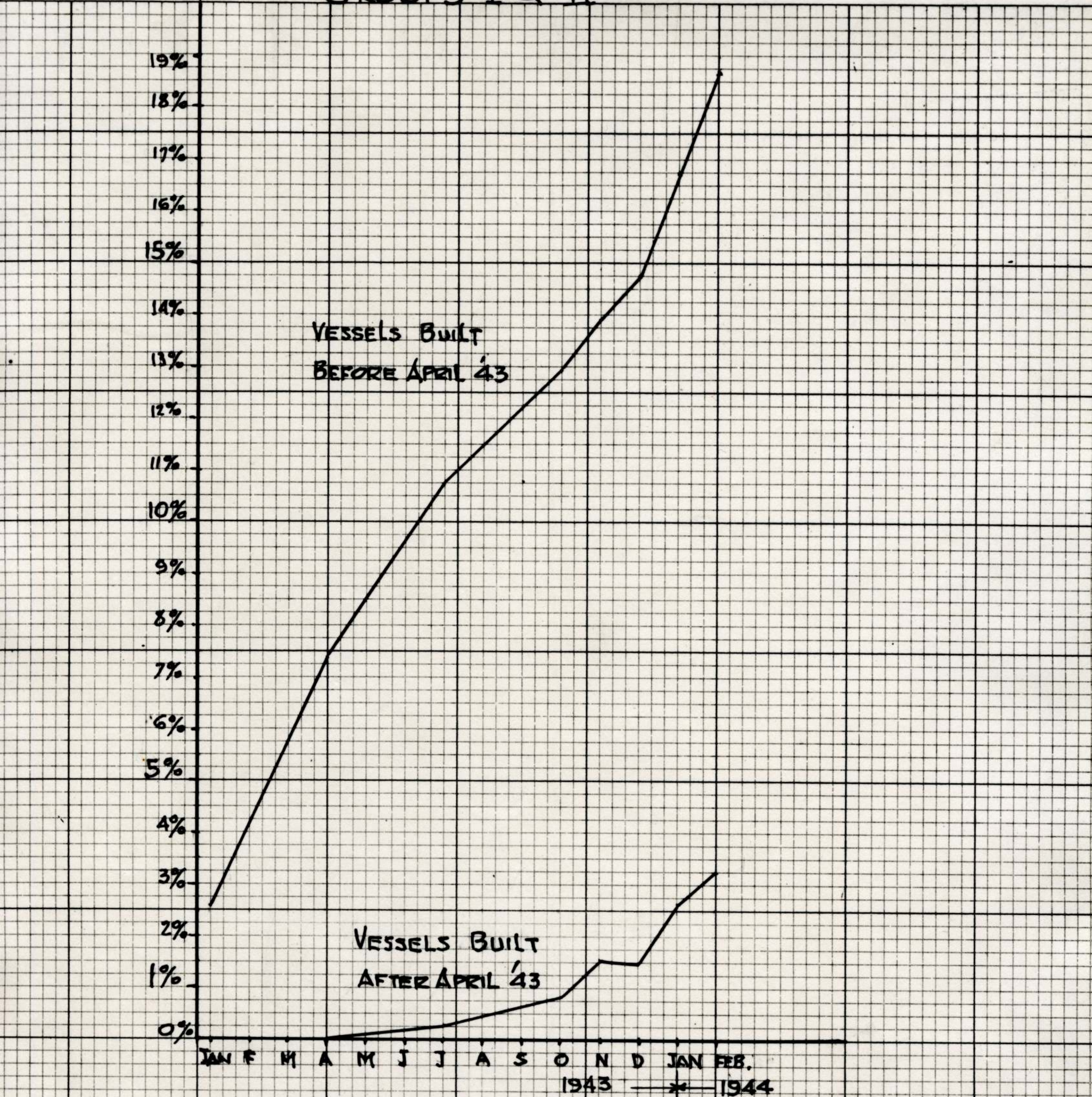
RATIO of CUMULATIVE TOTALS of CASUALTIES IN GROUP I TO CUMULATIVE TOTALS of VESSELS DELIVERED BEFORE AND AFTER APRIL 1. 1943

LIBERTY VESSELS.

AMERICAN BUREAU of SHIPPING

FEB. 15. 1944.

GROUPS I & II

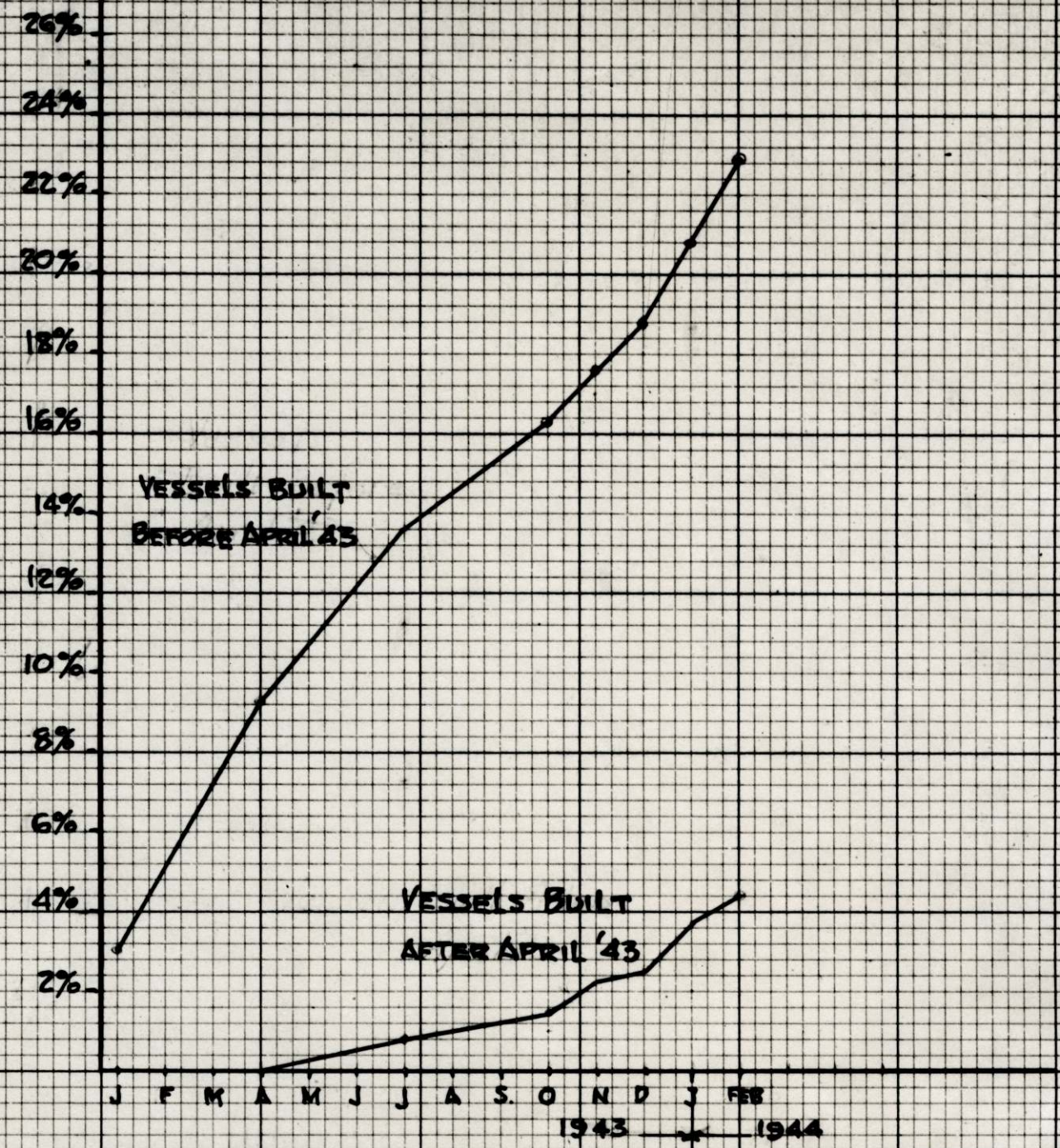


RATIO of CUMULATIVE TOTALS of CASUALTIES IN GROUPS I & II TO CUMULATIVE TOTALS of VESSELS DELIVERED BEFORE AND AFTER APRIL 1943

LIBERTY VESSELS

AMERICAN BUREAU of SHIPPING
FEB. 15. 1944

GROUPS I, II & III



RATIO OF CUMULATIVE TOTALS OF CASUALTIES IN GROUPS I, II & III TO CUMULATIVE TOTALS OF VESSELS DELIVERED BEFORE AND AFTER APRIL 1, 1943.

LIBERTY VESSELS

AMERICAN BUREAU OF SHIPPING

FEB 15. 1944

February 15, 1944.

Cumulative Totals of Liberty Ships (EC2) Delivered, Number & Percentage of Structural Failures in Group I.

	To Jan. 1-'43			To April 1-'43			To July 1-'43			To October 1-'43		
	Del.	Casual-ties	%	Del.	Casual-ties	%	Del.	Casual-ties	%	Del.	Casual-ties	%
Alabama D. D.	18	0	0	20	1	5.0	20	1	5.0	20	1	5.0
Beth.-Fairfl.Syd.	78	0	0	107	1	1.0	155	1	.7	207	1	.5
Calship	109	1	.9	154	1	.7	211	3	1.4	258	3	1.2
Delta S.B.	28	0	0	43	3	7.0	62	4	6.5	68	4	5.9
Houston S.B.	32	1	3.1	48	6	12.5	68	7	10.3	85	7	8.2
Jones(Brunswick)	0	0	0	0	0	0	4	0	0	11	0	0
Jones(Panama City)	0	0	0	1	0	0	7	0	0	13	0	0
Kaiser Vancouver	2	0	0	10	0	0	10	0	0	10	0	0
Marinship	5	0	0	12	0	0	13	0	0	15	0	0
New England	14	1	7.1	32	2	6.3	56	2	3.6	79	2	2.5
North Carolina	51	0	0	79	1	1.3	109	1	.9	126	1	.8
Oregon S.B.	114	5	4.4	155	7	4.5	206	7	3.4	264	7	2.7
Richmond #1	30	0	0	48	2	4.2	70	3	4.3	96	3	3.1
Richmond #2	63	0	0	93	1	1.1	138	3	2.2	191	3	1.6
St.Johns River	0	0	0	0	0	0	4	0	0	13	0	0
Southeastern	0	0	0	4	0	0	13	0	0	23	0	0
Walsh-Kaiser	0	0	0	1	0	0	6	0	0	6	0	0
TOTALS	544	8	1.47%	807	25	3.10%	1152	32	2.78%	1485	32	2.16%

FEBRUARY 15, 1944.

Cumulative Totals of Liberty Ships (EC2) Delivered, Number & Percentage of Structural Failures in Group I.

	To Nov.1-'43			To Dec.1-'43			To Jan1-'44			To Feb.1-'44		
	Del.	Casualties	%	Del.	Casualties	%	Del.	Casualties	%	Del.	Casualties	%
Alabama D.D.	20	1	5.0	20	1	5.0	20	1	5.0	20	1	5.0
Beth.-Fairfl.Syd.	229	1	.4	249	1	.4	270	1	.4	282	1	.4
Calship	271	4	1.5	282	4	1.4	305	5	1.6	316	8	2.5
Delta S. B.	75	5	6.7	81	5	6.2	90	5	5.6	93	9	9.7
Houston S. B.	92	7	7.6	99	7	7.1	106	9	8.5	110	11	10.0
Jones(Brunswick)	13	0	0	17	0	0	21	0	0	24	1	4.2
Jones(Panama City)	15	0	0	17	0	0	21	0	0	24	0	0
Kaiser Vancouver	10	0	0	10	0	0	10	1	10.0	10	1	10.0
Marinship	15	0	0	15	0	0	15	0	0	15	0	0
New England	87	2	2.3	95	2	2.1	105	2	1.9	111	2	1.8
North Carolina	126	1	.8	126	1	.8	126	2	.8	126	2	.8
Oregon S. B.	281	9	3.2	295	10	3.4	311	13	4.2	322	14	4.4
Richmond #1	107	3	2.8	114	3	2.6	122	4	3.3	123	4	3.3
Richmond #2	212	3	1.4	231	3	1.3	250	5	2.0	269	6	2.2
St.Johns River	16	1	6.3	20	1	5.0	25	1	4.0	28	1	3.6
Southeastern	27	0	0	31	0	0	36	1	2.8	38	1	2.6
Walsh-Kaiser	6	0	0	6	0	0	6	0	0	6	0	0
TOTALS	1602	37	2.31%	1708	38	2.23%	1839	50	2.72%	1917	62	3.23%

February 15, 1944.

Cumulative Totals of Liberty Ships (EC2) Delivered, Number & Percentage of Structural Failures in Group I and Group II.

	To Jan.1,'43 Del.	Casual-ties	%	To April 1,'43 Del.	Casual-ties	%	To July 1,'43 Del.	Casual-ties	%	To October 1,'43 Del.	Casual-ties	%
Alabama D.D.	18	1	5.5	20	6	30.0	20	6	30.0	20	6	30.0
Beth.-Fair. Shyd.	78	0	0	107	2	1.9	155	2	1.3	207	3	1.4
Calship	109	2	1.8	154	8	5.2	211	15	7.1	258	19	7.4
Delta S.B.	28	0	0	43	6	14.0	62	8	12.9	68	9	13.2
Houston S.B.	32	1	3.1	48	6	12.5	68	8	11.8	85	9	10.6
Jones (Brunswick)	0	0	0	0	0	0	4	0	0	11	0	0
Jones (Panama City)	0	0	0	1	0	0	7	0	0	13	0	0
Kaiser Vancouver	2	0	0	10	1	10.0	10	1	10.0	10	2	20.0
Marinship	5	0	0	12	1	8.3	13	1	7.7	15	1	6.7
New England	14	1	7.2	32	2	6.3	56	3	5.4	79	5	6.3
North Carolina	51	2	3.9	79	8	10.1	109	9	8.3	126	12	9.5
Oregon S.B.	114	6	5.3	155	15	9.7	206	26	12.6	264	32	12.1
Richmond #1	30	0	0	48	2	4.2	70	4	5.7	96	5	5.2
Richmond #2	63	1	1.6	93	2	2.2	138	5	3.6	191	6	3.1
St. Johns River	0	0	0	0	0	0	4	0	0	13	0	0
Southeastern	0	0	0	4	0	0	13	0	0	23	2	8.7
Walsh-Kaiser	0	b 0	0	1	0	0	6	0	0	6	0	0
TOTALS	544	14	2.58	807	59	7.32	1152	88	7.63	1485	111	7.48

February 15, 1944.

Cumulative Totals of Liberty Ships (EC2) Delivered, Number & Percentage of Structural Failures in Group I and Group II.

	To Nov. 1,'43			To Dec. 1,'43			To Jan. 1,'44			To Feb. 1,'44		
	Del.	Casual-ties	%	Del.	Casual-ties	%	Del.	Casual-ties	%	Del.	Casual-ties	%
Alabama D.D.	20	6	30.0	20	6	30.0	20	6	30.0	20	7	35.0
Beth.-Fair. Shyd.	229	3	1.3	249	3	1.2	270	4	1.5	282	5	1.8
Calship	271	24	8.9	282	27	9.6	305	35	11.5	316	45	14.2
Delta S.B.	75	10	13.3	81	11	13.6	90	12	13.3	93	16	17.2
Houston S.B.	92	9	9.8	99	9	9.1	106	13	12.3	110	15	13.6
Jones (Brunswick)	13	0	0	17	0	0	21	0	0	24	1	4.2
Jones (Panama City)	15	0	0	17	0	0	21	0	0	24	0	0
Kaiser Vancouver	10	2	20.0	10	2	20.0	10	3	30.0	10	3	30.0
Marinship	15	1	6.7	15	1	6.7	15	1	6.7	15	1	6.7
New England	87	5	5.8	95	6	6.3	105	6	5.7	111	6	5.4
North Carolina	126	12	9.5	126	12	9.5	126	13	10.3	126	13	10.3
Oregon S.B.	281	37	13.2	295	41	13.9	311	44	14.2	322	48	14.9
Richmond #1	107	5	4.7	114	5	4.4	122	6	4.9	123	6	4.9
Richmond #2	212	8	3.8	231	9	3.9	250	15	6.0	269	17	6.3
St. Johns River	16	1	6.3	20	1	5.0	25	1	4.0	28	1	3.6
Southeastern	27	2	7.4	31	2	6.5	36	3	8.3	38	4	10.5
Walsh-Kaiser	6	0	0	6	0	0	6	0	0	6	0	0
TOTALS	1602	125	7.80	1708	135	7.91	1839	162	8.82	1917	188	9.81

February 15, 1944.

Cumulative Totals of Liberty Ships (EC2) Delivered, Number & Percentage of Structural Failures in Group I, II and III

	To Jan.1-'43 Del.	Casualties	%	To April 1-'43 Del.	Casualties	%	To July 1-'43 Del.	Casualties	%	To October 1-'43 Del.	Casualties	%
Alabama D. D.	18	1	5.6	20	7	35.0	20	7	35.0	20	7	35.0
Beth.-Fairfl.Syd.	78	1	1.3	107	5	4.7	155	5	3.2	207	7	3.4
Calship	109	2	1.8	154	8	5.2	211	15	7.1	258	22	8.5
Delta S.B	28	0	0	43	7	16.3	62	9	14.5	68	10	14.7
Houston S.B	32	1	3.1	48	6	12.5	68	8	11.8	85	11	12.9
Jones(Brunswick)	0	0	0	0	0	0	4	1	25.0	11	1	9.1
Jones(Panama City)	0	0	0	1	0	0	7	0	0	13	0	0
Kaiser Vancouver	2	0	0	10	2	20.0	10	2	20.0	10	3	30.0
Marinship	5	0	0	12	1	8.3	13	1	7.7	15	1	6.7
New England	14	1	7.1	32	4	12.5	56	6	10.7	79	8	10.1
North Carolina	51	3	5.9	79	12	15.2	109	15	13.7	126	18	14.3
Oregon S.B.	114	7	6.1	155	19	12.3	206	33	16.0	264	41	15.5
Richmond #1	30	0	0	48	2	4.2	70	4	5.7	96	5	5.2
Richmond #2	63	1	1.6	93	2	2.2	138	7	5.1	191	8	4.2
St.Johns River	0	0	0	0	0	0	4	0	0	13	0	0
Southeastern	0	0	0	4	0	0	13	0	0	23	2	8.7
Walsh-Kaiser	0	0	0	1	0	0	6	0	0	6	0	0
TOTALS	544	17	3.13%	807	75	9.30%	1152	113	9.80%	1485	144	9.69%

February 15, 1944

Cumulative Totals of Liberty Ships (EC2) Delivered, Number & Percentage of Structural Failures in Group I, II and III

	To Nov.1-'43			To Dec.1-'43			To Jan.1-'44			To Feb.1-'44		
	Del.	Casualties	%	Del.	Casualties	%	Del.	Casualties	%	Del.	Casualties	%
Alabama D.D.	20	7	35.0	20	7	35.0	20	7	35.0	20	8	40.0
Beth.Fairfl.Syd.	229	7	3.1	249	8	3.2	270	9	3.3	282	10	3.5
Calship	271	28	10.3	282	31	11.0	305	40	13.1	316	50	15.8
Delta.S.B.	75	11	14.7	81	13	16.1	90	14	15.5	93	18	19.4
Houston	92	11	12.0	99	12	12.1	106	16	15.1	110	18	16.3
Jones(Brunswick)	13	1	7.7	17	1	5.9	21	1	4.8	24	2	8.3
Jones (Panama City)	15	0	0	17	0	0	21	1	4.8	24	1	4.2
Kaiser Vancouver	10	3	30.0	10	3	30.0	10	4	40.0	10	4	40.0
Marinship	15	1	6.7	15	1	6.7	15	1	6.7	15	1	6.7
New England	87	8	9.2	95	9	9.5	105	9	8.6	111	9	8.1
North Carolina	126	19	15.1	126	19	15.1	126	20	15.9	126	20	15.9
Oregon S.B.	281	46	16.4	295	50	16.9	311	53	17.0	322	59	18.3
Richmond #1	107	5	4.7	114	6	5.3	122	7	5.7	123	7	5.7
Richmond #2	212	10	4.7	231	11	4.8	250	17	6.8	269	19	7.1
St.Johns River	16	3	18.7	20	3	15.0	25	3	12.0	28	3	10.7
Southeastern	27	2	7.4	31	3	9.7	36	4	11.1	38	5	13.2
Walsh-Kaiser	6	0	0	6	0	0	6	0	0	6	0	0
TOTALS	1602	162	10.10	1708	177	10.37	1839	206	11.11	1917	234	12.21

February 15, 1944.

Liberty Ships Converted to Tankers

There have been sixty-two Liberty vessels which have been converted to tankers, thirty-two being built by the Delta Shipbuilding Company, Inc. and thirty by the California Shipbuilding Corporation. The first of these vessels was delivered from each yard in September 1943 and all have now been completed.

These vessels have the appearance and in general, the same hull construction as the cargo ships. The alterations consist of the addition of a centerline bulkhead in the holds, six transverse bulkheads, a stringer at the shell in the holds between the tank top and second deck and trunks in the hatches between the second and upper decks which are divided by a longitudinal bulkhead.

Liberty Ships Converted for Carrying Troops

A number of existing Liberty vessels have been fitted with accommodations for prisoners of war or for troops by fitting companion ways on openings in the upper deck or on the hatches cutting water tight doors in transverse bulkheads and by adding certain galley and sanitary equipment, some of these vessels had only No. 2 'tween decks converted while others had several of the 'tween deck space fitted with additional accommodations. No material structural alterations were required in making these changes.

Liberty Ships Designed for Carrying Tanks

J. A. Jones Construction Co. of Panama City has contracted to build 18 Liberty vessels specially designed to carry army tanks. The appearance of the vessel is similar to the standard cargo ship, except for the cargo handling gear. There is a platform deck below the usual second deck, and the bulkheads have been arranged to provide only 4 holds, with 2 large hatches forward and 1 large and 1 small hatch aft of the midship house. Additional girders and stanchions are fitted to carry the heavy cargo. Seven of these vessels have been delivered.

February 15, 1944.

LIBERTY SHIPS CONVERTED TO HOSPITAL SHIPS

Six vessels are being converted to Army hospital ships, which involves changes and additions to bhe hull structure as follows:

Two Lower decks fitted in the holds, with additional deep fresh water tanks in Nos. 4 and 5 hold.

The centerline bulkhead in the holds removed.

The hatches in the present second deck and upper decks plated over, leaving only a small hatch in the present No.1 hatch.

The midship deckhouse on the upper deck extended forward to just aft of No.1 hatch, and aft to the present after deckhouse.

Two superstructure decks added above the upper deck, of about the same extent as the new deckhouse.

An elevator shaft fitted from theinner bottom to the superstructure deck.

BETHLEHEM-FAIRFIELD SHIPYARD

Name of Ship	Hull No.
St. Olaf	2020
William Osler	2104

CALIFORNIA S. B. CORP.

Name of Ship	Hull No.
Stanford White	163

NORTH CAROLINA S. B. COMPANY

Name of Ship	Hull No.
Zebulon B. Vance	1

PERMANENTE METALS CORP.
RICHMOND #1

Name of Ship	Hull No.
George Washington Carver	542

PERMANENTE METALS CORP.
RICHMOND #2

Name of Ship	Hull No.
Samuel F.B. Morse	75

EC-2 Vessels transferred to British Ministry of War Transport

Vessel	New Name	Builder	Hull No.
David De Vries	Samwater	Bethlehem-Fairfield S.B. Co.	2210
Henry Van Dyke	Samhain	"	2211
Lionel Copley	Sambrake	"	2213
Matthew Brush	Samoa	"	2214
Holland Thompson	Samita	"	2215
Peter Cooper	Samarkand	"	2217
Tench Tilghman	Samos	"	2218
James Blair	Samarina	"	2219
Emma Lazarus	Samshire	"	2220
Charles C. Long	Samur	"	2221
William Smallwood	Sampa	"	2222
James T. Earle	Samaye	"	2223
John H. Hatton	Sampenn	"	2224
Orville P. Taylor	Samothrace	"	2225
John J. McGraw	Samaris	"	2238
Adolph S. Ochs	Samwyo	"	2239
Nikola Tesla	Samkansa	"	2240
Franz Boas	Sammex	"	2241
John Russell Pope	Samdak	"	2242
Jesse De Forest	Samuta	"	2246
Lyon G. Tyler	Samnebra	"	2247
Adolph Lewishon	Samota	"	2248
Edward Cook	Samwis	"	2249
Simon B. Elliott	Samnesse	"	2250
J. Whitridge Williams	Samsylvan	"	2256
Edith Wharton	Samvem	"	2257
W. Walter Husband	Samyork	"	2258
Jose Artigas	Samokla	"	2260
Priscilla Alden	Samlouis	"	2261
Samuel M. Ralston	Samois	"	2263
Edwin A. Robinson	Samsip	"	2264
Augustine Herman	Samsette	"	2265
Edward Bruce		"	2267
Israel Merritt	Samflora	"	2268
Frank A. Vanderlip		"	2269
Jacob H. Schiff	Samburgh	"	2271
John T. Clark	Samcleve	"	2272
James Carroll	Samgara	"	2274
Daniel Appleton	Samfield	"	2276
Willis J. Abbot	Samboston	"	2280
Ross G. Marvin	Samtroy	"	2282
Amala		"	2285
Israel Wheelen	Samport	"	2287
Hugh L. Kerwin	Samyale	"	2288
Robert Wickliffe	Sambalt	"	2290
Ben H. Miller		"	2292
Martha C. Thomas	Samharle	"	2293
Carl Thusgaard	Samkey	"	2295
Melvil Dewey	Samsacola	"	2297
Frederick Banting		"	2298

Vessel	New Name	Builder	Hull No.
Samtweed		Bethlehem-Fairfield S.B. Co.	2300
Samforth		"	2301
Samclyde		"	2302
Samettrick		"	2304
Samcree		"	2305
Samfeugh		"	2306
Sameveron		"	2307
Samtay		"	2308
Samnid		"	2309
Samouse		"	2310
Samchess		"	2312
Samesk		"	2314
Samleven		"	2319
Jacob Riis	Samholt	California S. B. Corporation	218
John J. Ingalls	Samson	"	219
Granville Stuart	Samaritan	"	221
Cornelius Cole	Samsurf	"	228
Augustus H. Garland	Samblade	"	230
Edwin Joseph O'Hara	Sambo	"	232
James H. Robinson	Samsteel	"	233
William I. Kip	Sampan	"	234
Henry M. Robinson	Samarovsk	"	236
Victor F. Lawson	Sampep	"	242
Dwight B. Heard	Sambur	"	247
Samson Occum	Samrinda	"	249
John Tipton	Samtredy	"	251
Lorrin A. Thurston	Samcalia	"	252
Annie Oakley	Samida	"	253
Henry M. Stanley	Samneva	"	254
E. H. Sothern	Sammont	"	255
Patrick H. Morrissey	Samdee	J. A. Jones Construction Co.	123
Barrett Wendell	Samphill	New England S. B. Corporation	2196
William Pitt Preble	Samrich	"	2197
Percy D. Haughton	Samtrent	"	2199
Samdon		"	2210
Samythian		"	2212
Samearn		"	2214
Samteviot		"	2218
William Blackstone	Samtucky	"	250
Jeremiah Chaplin	Samakron	"	2190
Elias H. Derby	Samlong	"	2191
Bronson Alcott	Samavon	"	2204
Samannan		"	2216
Charles A. Young	Samspring	"	2202
Peleg Wadsworth	Samtampa	"	2203

Vessel	New Name	Builder	Hull No.
Montfort Stokes	Samphire	North Carolina S. B. Co.	184
John Branch	Sambrian	"	186
William C. Lane	Sampler	Oregon S. B. Corporation	724
Anton M. Holter	Sambay	"	733
C. J. Jones	Sambut	"	742
Charles A. Broadwater	Samthar	"	751
Victor C. Vaughan	Samzona	"	761
Manasseh Cutler	Samouri	"	772
William F. Vilas	Samana	Richmond Shipyard No. 1 of the Permanente Metals Corp.	1699
John Reed	Sampford	"	2099
John G. North	Samark	"	2107
John E. Wilkie		Richmond Shipyard No. 2 of the Permanente Metals Corp.	1588
Frank D. Phinney	Samovar	"	1713
George Inness	Sambre	"	1717
Harmon Judson	Samwash	"	2143
Charles Devens	Samdel	"	2148
William S. Clark		"	2162
Louis A. Godey	Samvannah	Southeastern S. B. Corp.	36

EC-2 Vessels transferred to Navy Department

Francis P. Duffy		Bethlehem-Fairfield S.B. Co.	2253
Theodore Roosevelt		"	2262
Culebra Island		"	2278
J. Fred Essary		"	2283
William R. Cox		"	2303
Daniel Boone		California S. B. Corporation	6
Peter H. Burnett		"	55
Brigham Young		"	58
George C. Yount		"	133
Ansel Briggs		"	150
Benjamin N. Cardozo		"	164
Josiah D. Whitney	Livingston	"	170
William M. Gwin	Lesuth	"	171
General Vallejo		"	175
Andrew Rowan	Rutilicus	"	176
Thomas Oliver Larkin		"	189
Juan Bautista De Anza		"	190
James H. McClintock		"	197
Eugene B. Daskam		"	202
D. W. Harrington		"	204

Vessel	New Name	Builder	Hull No.
William Williams		Richmond Shipyard No. 2 of the Permanente Metals Corp.	65
John James Audubon		"	420
G. H. Corliss	Adhara	"	425
Richard March Hoe	Prince George	"	426
Robert T. Lincoln	Aludra	"	437
Redfield Proctor	Celeno	"	439
William G. McAdoo	Grumium	"	443
George B. Cortelyou		"	445
John A. Logan	Alnitah	"	451
John M. Palmer		"	453
Betsy Ross		"	476
Luther Burbank	Eridanus	"	1099
Isaac Babbitt		"	1106
James W. Nye		"	1571
Increase A. Lapham	Alkas	"	1584
M. H. de Young	Antelope	"	1587
Mary Patten	Azimech	"	1725
James Rowan	Allioth	"	1730
Peter Stuyvesant	Crux	St. John's River S. B. Co.	20
James Screven		"	21
Napoleon B. Broward	Metar	"	22
Elisabeth C. Bellamy		"	25
William G. Sumner		"	19

EC-2 Vessels transferred to Soviet Government

Thomas Nast	Jan Jores	California S. B. Corporation	126
Samuel P. Langley	Voikov	"	127
Jose Sepulveda	Sutchan	"	180
E. H. Harriman	Dekabrist	Oregon Shipbuilding Corporation	641
Elijah P. Lovejoy	Alexandr Suvrov	"	651
Graham Taylor	Mikhail Kutuzov	"	652
Henry W. Corbett	Alexandr Nevsky	"	657
Louis Agassiz	Emilian Pugacrev	"	665
Cass Gilbert	Stephen Razin	"	667
Gouverneur Morris	Leningrad	"	668
De Witt Clinton	Sevastopol	"	670
George L. Shoup	Pskov	"	682
William G. T'Vault	Kuban	"	686
Edward Eggleston	Novorisiisk	"	688
John Minto	Vitebsk	"	699
Pleasant Armstrong	Vladivostak	"	700
Samuel A. Worcester	Sovetskaya Cavan	"	708
Irving W. Pratt	Nahedka	"	712
Henry L. Pittock	Askold	"	714
Joseph Watt	Erevan	"	720
David Douglas	Baku	"	725
Willis C. Hawley	Stalinobad	"	730
Grant P. Marsh		"	818

Vessel	New Name	Builder	Hull No.
Charles S. Fairchild	Krasnogvardeec	Richmond Shipyard No. 1 of the Permanente Metals Corp.	518
Mary Cassatt	Odessa	"	1555
Michael Pupin		"	1554
Sieur Duluth	Tungas	Richmond Shipyard No. 2 of the Permanente Metals Corp.	457
Charles Wilkes	Kolkhoznik	"	460
Alexander Baranoff	Valeri Chaklov	"	481
Charles E. Duryea	Orel	"	1107

EC-2 Vessels transferred to Norwegian Government

William Strong	Roald Amundsen	Bethlehem-Fairfield S.B. Co.	2120
Thomas F. Bayard	Edward Grieg	"	2139
John Wright Stanly	Leiv Eiriksson	North Carolina S. B. Co.	59
Francis Nash	Fridtjof Nansen	"	60
Sallie S. Cotten	Ole Bull	"	155

EC-2 Vessels transferred to Chinese Government

Murat Halstead	Chung Cheng	Richmond Shipyard No. 1 of the Permanente Metals Corp.	2102
Henry M. Teller	Chung Shan	Richmond Shipyard No. 2 of the Permanente Metals Corp.	2144

EC-2 Vessels transferred to Greek Government

William De Witt Hyde	Hellas	New England S. B. Corp.	245
William H. Todd	Ameriki	"	242

EC-2 Vessels transferred to Netherlands Government

Tobias Lear	Fort Orange	New England S. B. Corp.	241

February 15, 1944

AMERICAN BUREAU OF SHIPPING - LIBERTY VESSELS REPORTED LOST

Bethlehem-Fairfield Shipbuilding Co., Baltimore, Md.

Name of Ship	Hull No.
Roger B. Taney	2004
John Randolph	2006
Benjamin Harrison	2012
Christopher Newport	2008
Richard Bland	2015
George Calvert	2016
John Witherspoon	2018
Thomas McKean	2051
Alexander Macomb	2023
Thomas Ruffin	2026
Oliver Ellsworth	2029
John Carter Rose	2043
Pierce Butler	2056
John Mitchell	2061
Molly Pitcher	2085
James W. Denver	2099
Bushrod Washington	2118
John Morgan	2128
Frederick Douglass	2138
John M.T. Finney	2141

California Shipbuilding Corp. Los Angeles, Cal.

Name of Ship	Hull No.
Rufus King	14
Henry Knox	17
George Thacher	39
Starr King	52
Samuel Gompers	65
Fitz John Porter	74
Lewis Cass	114
Elihu B. Washburne	116
Phoebe A. Hearst	119
James Robertson	128
Theodore Dwight Weld	142
Lydia M. Child	145
Alice F. Palmer	151

Delta Shipbuilding Company, New Orleans, La.

Name of Ship	Hull No.
Thomas Sinnickson	16
Jonathan Sturges	17
Wade Hampton	23
Samuel Jordan Kirkwood	22
Walter Q. Gresham	36
Robert Bacon	38

Houston Shipbuilding Company, Houston, Texas

Name of Ship	Hull No.
Sam Houston	1
Thomas T. Tucker	30
Jeremiah Wadsworth	31
James Longstreet	18
William Eustis	38
John Bell	44
J. Pinckney Henderson	72

Marinship Corporation
W. A. Bechtal Company
Marinship Plant
Sausalito, Cal.

Name of Ship	Hull No.
Sebastian Cermeno	11

New England S.B. Co. (as of 4/1/43)
Formerly South Portland S.B. Co.
South Portland, Me., West Yard

Name of Ship	Hull No.
John Winthrop	202
Thomas Hooker	203
William King	206
Julia Ward Howe	210
William Pierce Frye	212

North Carolina Shipbuilding Co.
Wilmington, N. C.

Name of Ship	Hull No.
William Hooper	4
Daniel Morgan	5
John Penn	27
Charles C. Pinckney	7
Jeremiah Van Rensselaer	11
Edward Rutledge	29
James K. Polk	17
Richard D. Spaight	19
John Drayton	34
Benjamin Smith	25
Richard Caswell	48
Flora MacDonald	63
James Spruat	64
Edward B. Dudley	67
Robert Rowan	82
Cornelia P. Spencer	89

Oregon Shipbuilding Corp.
Portland, Ore.

Name of Ship	Hull No.
Meriwether Lewis	170
Star of Oregon	171
William Clark	172
Robert Gray	173
John Hancock	176
William Dawes	183
Edgar Allen Poe	192
Nathaniel Hawthoren	193
John Sevier	229
Anne Hutchinson	238
Marcus Whitman	547
Harvey W. Scott	552
James B. Stephens	580
Thomas A. Edison	584
Joseph C. Avery	698
John P. Gainers	723

Richmond Shipyard No. 1 of the
Permanento Metals Corp.,
Richmond, Cal.

Name of Ship	Hull No.
William K. Vanderbilt	493

Richmond Yard No. 2
Permanente Metals Corp.
Richmond, Cal.

Name of Ship	Hull No.
John Adams	41
Timothy Pickering	46
Stephen Hopkins	47
Richard Henderson	458
Melville E. Stone	1715

Southeastern Shipbuilding Corp.
Savannah, Ga.

Name of Ship	Hull No.
James Oglethorpe	1

Alabama Dry Dock & Shipbuilding Co.
Mobile, Ala.

Name of Ship	Hull No.
J. L. M. Curry	231
William C. Gorgas	286

TYPES OF VESSELS OVER 200' IN LENGTH IN WHICH WELDING HAS BEEN EXTENSIVELY USED AS OF DECEMBER 31st, 1943.

Type No. (See Casualty List)		Number Completed
1	Bulk Freighters	21
2	Cargo C-3	61
3	C-2	56
4	C-4	1
5	C-1B	90
6	C-1A	40
7	Waterman	14
8	Export 450'	4
10	Robin	6
11	N-3 Coasters	36
12	Cargo-Pass.573' Beth. & Federal	4
13	496' Sun & Kaiser	4
14	Mississippi Ship. Co.	6
15	Alcoa S.S. Co.	2
16	389' Navy Transport	2
17	C-3 Sun & Ingalls	11
18	Tankers 525' Navy Type	18
19	521' Atlantic Ref. Co.	23
20	505' Sincl. (Beth & Federal)	6
21	503' T-2	156
22	500' Welding Syd.	5
23	500' Sun	11
24	487'6" Beth.	30
25	485' Texas (Sun)	10
26	450' Sincl. (Beth.)	4
27	442' Fed. & Beth.	10
28	355' S.O. Co. N. J.	7
29	R.T.C. Type	5
30	T1 USMC	20
31	Barges 202' Cargo and Oil Ingalls (Decatur)	19
32	BB3 Aircraft	19
33	Frigates	32
34	Cargo EC2 - Liberty	1782
35	C-2 (Refrigerated)	12

CASUALTY LIST TO DECEMBER 31, 1943
ALL TYPES OF VESSELS

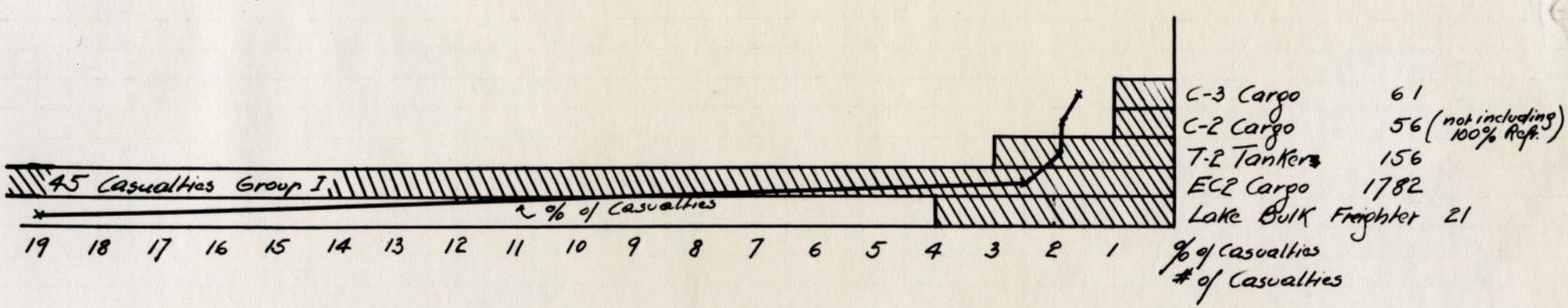
Name	Builder	Type (See list of Types of Vessels)	Casualty Group 1	Group 2	Group 3
Abel Stearns	California S.B. Corp.	34		X	
Abraham Baldwin	Delta S. B. Co.	34	X		
" "	" " "	34	X		
Agwimonte	Consolidated Steel Corp	5		X	
Albert Gallatin	California S.B. Corp.	34		X	
American Manufacturer	Western P. & S. Co.	5		X	
Andrew Carnegie	Oregon S. B. Corp.	34		X	
Andrew Moore	Delta S. B. Co.	34	X		
Anna Howard Shaw	New England	34		X	
Archbishop Lamy	California S. B. Corp.	34		X	
Bald Eagle	Moore D. D. Co.	35			X
Benjamin Chew	Bethlehem Fairfield	34			X
Benjamin Franklin	California S.B.Corp.	34		X	
Benjamin H. Latrobe	Alabama D.D. & S.B. Co.	34		X	
" " "	" " "	34		X	
Benjamin Lundy	California S.B.Corp.	34		X	
Benjamin Williams	North Carolina S.B.Corp.	34			X
Bennington	Sun S.B. & D.D. Co.	21			X
Brockholst Livingston	California S. B. Corp.	34	X		
Bunker Hill	Sun S.B. & D.D. Co.	21			X
Cape Henlopen	Pusey & Jones Corp.	6			X
Carl Schurz	Oregon S. B. Corp.	34		X	
Casimir Pulaski	Southeastern S.B.Co.	34		X	
Champlain (ex:Belle Isle)	American S.B. Co.(Cleve.)	1	X		
Charles Treadwell	Pacific Bridge Co.	11		X	
Chief Washakie	Oregon S. B. Corp.	34		X	
" "	" " "	34	X		
China Mail	Sun S.B. & D.D. Co.	3		X	
Christopher Gadsden	North Carolina S.B.Corp.	34			X
Christopher Greenup	Oregon S. B. Corp.	34	X		
Cimarron	Sun S.B. & D.D. Co.	18		X	
Cleveland Abbe	Oregon S.B. Corp.	34		X	
Collis P. Huntington	North Carolina S.B.Corp.	34		X	
Conastoga	Sun S.B. & D.D.Co.	21		X	
"	" " "	21		X	
Cyrus H. McCormick	Richmond #2	34		X	
Daniel Drake	California S.B. Corp.	34		X	
Daniel H. Lownsdale	Oregon S. B. Corp.	34			X
Daniel Hiester	Houston S. B. Corp.	34	X		
David Wilmot	Houston S.B.Corp.	34			X
Dolly Madison	J.A. Jones (Panama City)	34		X	
Donald Macleay	Oregon S.B. Corp.	34		X	
Edward Rutledge	North Carolina S.B.Corp.	34		X	
Edward Sparrow	Delta S.B.Co.	34		X	
Edwin Markham	California S.B.Corp.	34		X	
Elbridge Gerry	California S.B.Corp.	34		X	
Elias Howe	Kaiser, Vancouver	34		X	
Enders M. Voorhees	Gt.Lakes Engineering Wks.	1	X		
Esso Manhattan	Sun S.B. & D.D. Co.	21	X		
" "	" "	21			X

			Group 1	Group 2	Group 3
Esso New Orleans	Sun S.B. & D.D.Co.	23		X	
Esso Paterson	Sun S.B. & D.D.Co.	21		X	
Esso Raleigh	Sun S.B. & D.D. Co.	23		X	
Esso Richmond	Sun S.B. & D.D.Co.	19			X
Esso Rochester	Sun S.B. & D.D.Co.	19		X	
Esso Washington	Sun S.B. & D.D. Co.	21		X	
Esso Wilmington	Sun S.B. & D.D.Co.	21		X	
Eugene Skinner	Oregon S.B. Corp.	34			X
Ezra Meeker	Oregon S.B.Corp.	34			X
Fairland	Gulf S. B. Corp.	7		X	
"	" "	7		X	
Fallen Timbers	Kaiser, Swan Is.	21		X	
Fort Washington	Kaiser, Swan Is.	21		X	
Francis Marion	No.Carolina S.B.Co.	34		X	
Frederic Remington	Richmond #1	34	X		
G.W. Goethals	Oregon S.B.Corp.	34		X	
General George W. Goethals	Ingalls S. B.Corp.	17		X	
George A. Sloan	Gt.Lakes Eng.Wks.	1	X		
George Chamberlain	Oregon S.B.Corp.	34	X		
George D. Prentice	Richmond #1	34		X	
George Gale	Delta S.B.Co.	34		X	
George M. Bibb	Oregon S.B.Corp.	34			X
George Rogers Clarke	Richmond #2	34		X	
George W. Campbell	Oregon S.B.Corp.	34	X		
George Walton	Southeastern S.B.	34			X
George Wythe	Bethlehem-Fairfl.	34			X
Grace Abbott	Bethlehem-Fairfl.	34			X
Great Meadows	Sun S.B. & D.D.Co.	21		X	
Guadalupe	Newport News S.B.Co.	18			X
Harry Lane	Oregon S.B.Corp.	34		X	
Harvey W. Scott	Oregon S.B.Corp.	34	X		
Hat Creek	Alabama D.D.& S.B.	21	X		
Henry Bacon	No.Carolina S.B.Co.	34		X	
Henry Baldwin	California S.B.Corp.	34	X		
Henry Barnard	Oregon S.B.Corp.	34		X	
Henry George	Oregon S.B.Corp.	34		X	
Henry M. Rice	California S.B.Corp.	34		X	
" " "	" " "	34		X	
Henry S. Lane	Oregon S.B.Corp.	34	X		
Henry Wynkoop	Delta S.B.Corp.	34	X		
Herman Melville	New England S.B.Corp.	34			X
Hiram S. Maxim	Richmond #2	34		X	
Hugh Williamson	No.Carolina S.B.Corp.	34		X	
Israel Putnam	Ala.D.D. & S.B.Co.	34			X
J. H. Tuttle	Sun S.B.& D.D.Co.	19		X	
J. L. M. Curry	Ala.D.D. & S.B.Co.	34	X		
Jacques Cartier	California S.B.Co.	34		X	
" "	" " "	34		X	
James Bowie	Houston S.B.Corp.	34	X		
" "	" " "	34			X
James Harrod	Oregon S.B.Corp.	34		X	
James Hoban	Ala.D.D.& S.B.Co.	34			X
James Longstreet	Houston S.B.Corp.	34		X	
James M. Wayne	J.A.Jones(Brunswick)	34		X	
James McNeill Whistler	Oregon S.B.Corp.	34	X		
James Schureman	California S.B.Corp.	34		X	
James Whitcomb Riley	Oregon S.B.Corp.	34			X

			Group 1	Group 2	Group 3
Jeremiah Wadsworth	Houston S. B. Co.	34	X		
Joaquin Miller	Richmond #1	34	X		
" "	" "	34		X	
" "	" "	34	X		
John Barry	Oregon S.B. Corp.	34		X	
John Burke	Oregon S.B.Corp.	34		X	
John C. Ainsworth	Oregon S.B.Corp.	34	X		
" "	Oregon S.B.Corp.	34		X	
John Carver	New England S.B.Corp.	34		X	
John Davenport	New England S.B.Corp.	34		X	
John Drake Sloat	California S.B.Corp.	34		X	
" " "	" " "	34		X	
John F. Appleby	Richmond #2	34			X
" "	" "	34		X	
John Fitch	Richmond #2	34	X		
John Gorrie	St.John's River S.B.Co.	34	X		
John Harvey	North Carolina S.B.Corp.	34			X
John Henry	Bethlehem-Fairfield Syd.	34			X
John Mary Odin	Houston S. B. Corp.	34			X
John Morton	Richmond #2	34		X	
John Murray Forbes	New England S.B.Corp.	34			X
John P. Gaines	Oregon S.B. Corp.	34	X		
John P. Holland	Oregon S.B.Corp.	34			X
John Paul Jones	California S.B.Corp.	34			X
John S. Casement	California S.B.Corp.	34		X	
John Straub	Oregon S.B.Corp.	34			X
John Vining	Delta S.B.Co.	34			X
" "	" "	34	X		
John W. Weeks	Oregon S. B. Corp.	34		X	
John Whitaker	Oregon S. B. Corp.	34		X	
Jonathan Trumball	Delta S.B.Co.	34		X	
Joseph Sale	Oregon S.B.Corp.	34			X
Joseph H. Hollister	California S.B.Corp.	34		X	
Joseph Henry	Kaiser, Vancouver	34			X
Joseph M. Teal	Oregon S. B. Corp.	34		X	
" "	" "	34	X		
Joseph Smith	Richmond #2	34	X		
Josiah G. Holland	California S.B.Corp.	34		X	
Kaskaskia	Newport News S.B.&D.D.Co.	18			X
Lambert Cadwalader	Houston S. B. Corp.	34	X		
Laura Keene	Kaiser, Vancouver	34	X		
Lawton B. Evans	Ala. D. D. & S. B. Co.	34		X	
Leland Stanford	California S.B.Corp.	34		X	
Lew Wallace	Richmond #1	34	X		
Lightning	Sun S.B. & D.D. Co.	35			X
"	" " "	35			X
"	" " "	35			X
Lindley M. Garrison	Oregon S. B. Corp.	34		X	
Louis McLane	California S.B.Corp.	34			X
Lyman Hall	Southeastern S.B.Co.	34		X	
Mahlon Pitney	Bethlehem-Fairfield Syd.	34		X	
Marie M. Meloney	Bethlehem-Fairfield Syd.	34			X
Marine Eagle	Sun S.B. & D.D. Co.	4			X
Mark Twain	Oregon S. B. Corp.	34		X	

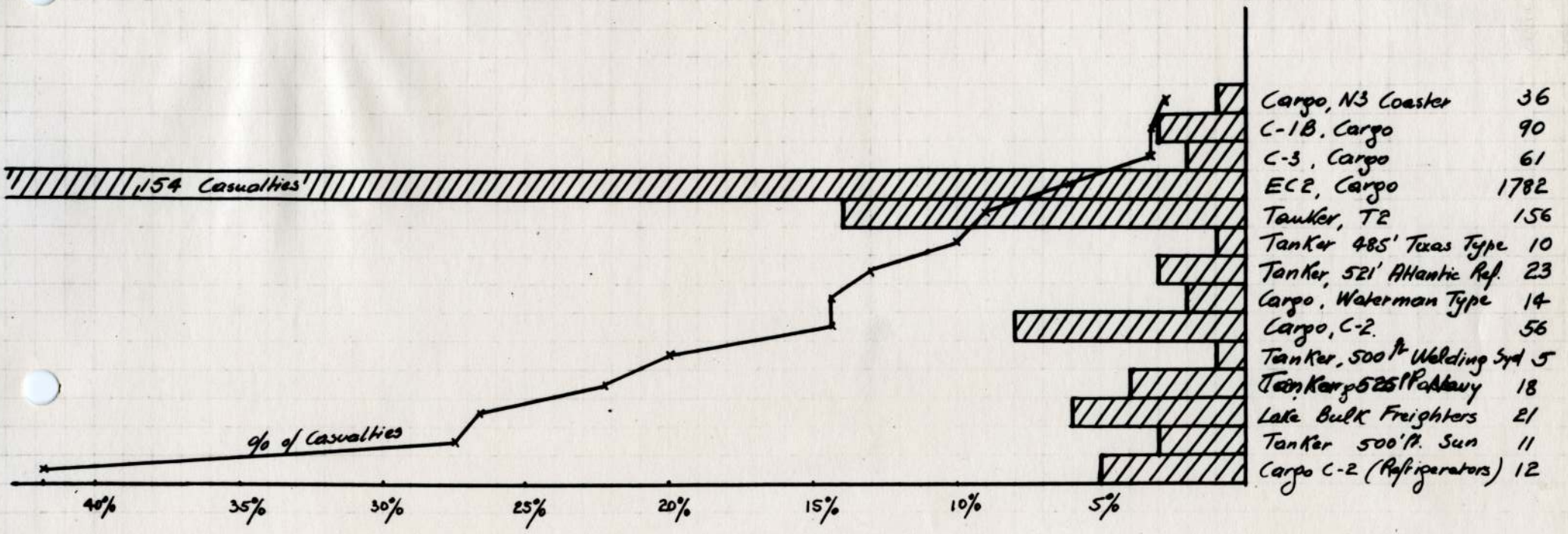
			Group 1	Group 2	Group 3
Markay	Sun S. B. & D.D. Co.	23		X	
Mathew P. Deady	Oregon S.B. Corp.	34		X	
Montana	Sun S.B. & D.D. Co.	25		X	
Mormacmoon	Ingalls S.B. Corp.	2		X	
Mormacswan	Federal S.B. & D.D. Co.	3	X		
"	" " "	3		X	
Moses Cleveland	Oregon S.B. Corp.	34		X	
Moses Rogers	Richmond #1	34		X	
Nathaniel Bacon	Alabama D.D. & S.B. Co.	34		X	
Nathaniel J. Wyeth	Oregon S.B. Corp.	34		X	
Neches	Sun S.B & D.D. Co.	18			X
New London	Kaiser, Swan Island	21			X
Nicholas Gilman	Houston S.B. Corp.	34	X		
Ocean Mail	Sun S.B. & D.D. Co.	3		X	
" "	" " "	3		X	
P.T. Barnum	California S.B. Corp.	34			X
Palo Alto	Sun S.B. & D.D. Co.	21		X	
Phineas Banning	California S.B. Corp.	34		X	
" "	" " "	34	X		
Platte	Bethlehem Sparrows Point	18			X
Pocahontas	North Carolina S.B. Corp.	34		X	
R.C. Brennan	Oregon S.B. Corp.	34			X
" "	" " "	34		X	
" "	" " "	34			X
R. C. Stoner	Sun S.B. & D.D. Co.	19			X
Richard Caswell	North Carolina	34		X	
Richard J. Reiss	Great Lakes EngineeringWks.	1	X		
Richard Olney	Delta S.B. Corp	34		X	
Richard Mumford Pearson	Delta S.B. Corp.	34		X	
Robert C. Stanley	Great Lakes Engineering Wks	1	X		
Robert C. Tuttle	Sun S.B. & D.D. Co.	19		X	
Robert E. Peary	Richmond #2	34	X		
Robert Howe	North Carolina S.B. Corp.	34		X	
Robert Newell	Oregon S.B. Corp.	34		X	
S. M. Babcock	Oregon S.B. Corp.	34	X		
Sacajawea	Oregon S.B. Corp.	34			X
Salamonie	Newport News S.B.&D.D. Co.	18		X	
Samuel Ashe	North Carolina S.B. Corp.	34			X
Samuel D. Ingham	Oregon S.B. Corp.	34		X	
Samuel Dexter	Delta S.B. Corp.	34		X	
Samuel F.B. Morse	Richmond #2	34	X		
Samuel J. Tilden	Oregon S.B. Corp.	34		X	
Samuel McIntyre	Bethlehem Fairfield	34		X	
Samuel Seabury	Oregon S.B. Corp.	34		X	
Santa Cruz	Bethlehem, Union	5		X	
Santa Isabel	Newport News.S.B.&D.D.Co.	3		X	
Santa Maria	Federal S.B & D.D. Co.	3		X	
Santa Monica	Federal S.B. & B.D. Co.	3		X	
Schenectady	Kaiser, Swan Island	21	X		
"	" " "	21		X	
"	" " "	21			X
Sea Bass	Western P. & S. Co.	2	X		
Sea Serpent	Sun S.B. & D.D. Co.	35		X	
" "	" " "	35		X	
Sebastian Cermano	Marinship Corp.	34		X	
Sewell Avery	American S.B. Co.(Cleve.)	1		X	

			Group 1	Group 2	Group 3
Shooting Star	Sun S.B. & D.D. Co.	35		X	
" "	" " "	35		X	
" "	" " "	35		X	
Solon Turman	Bethlehem, Sparrows Point	5			X
Stag Hound	Sun S.B. & D.D. Co.	35			X
" "	" " "	35			X
Stephen C. Foster	Houston S.B. Corp.	34		X	
Stephen H. Long	California S.B. Corp.	34			X
Stephen Hopkins	Richmond #1	34			X
Surprise	Sun S.B. & D.D. Co.	35			X
Suwanee	Federal S.B. & D.D.Co.	18		X	
Tappahannock	Sun S.B. & D.D. Co.	18		X	
Theodore Sedgewick	Houston S.B. Corp.	34	X		
Theodore Dwight Weld	California S.B. Corp.	34		X	
Thomas A. Hendricks	Oregon S.B. Corp.	34	X		
Thomas Hooker	New England S.B. Corp.	34	X		
Thomas Johnson	California S.B. Corp.	34		X	
" "	" " "	34		X	
" "	" " "	34		X	
Thomas L. Clingman	North Carolina S.B.Corp.	34		X	
Thomas MacDonough	Oregon S.B. Corp.	34	X		
Thomas Scott	Delta S.B. Corp.	34	X		
Thomas Sumter	North Carolina S.B.Corp.	34	X		
Trade Wind	Moore D.D. Co.	35			X
Virginia	Welding Shipyards, Inc.	22		X	
Virginia Dare	North Carolina S.B.Corp.	34		X	
Walt Whitman	Oregon S.B. Corp.	34		X	
Walter Hines Page	North Carolina S.B. Corp.	34		X	
White Plains	Sun S.B. & D.D. Co.	21		X	
William A. Graham	North Carolina S.B.Corp.	34		X	
William Black Yates	Southeastern S.B.Co.	34	X		
William Blount	Delta S.B. Corp.	34		X	
William Bradford	New England S.B. Corp.	34			X
William Brewster	New England S.B. Corp.	34		X	
William Byrd	St. John's River S.B.Co.	34			X
William Carson	California S.B. Corp.	34		X	
William D. Pender	North Carolina S.B.Corp.	34			X
William Few	Bethlehem, Fairfield	34		X	
William H. Crawford	Houston S.B. Corp.	34	X		
William H. Seward	Oregon S.B. Corp.	34		X	
William L. Marcy	California S.B. Corp.	34		X	
" "	" " "	34		X	
William L. Smith	Houston S.B. Corp.	34	X		
" "	" " "	34		X	
William MacLay	Bethlehem, Fairfield	34		X	
William Moultrie	North Carolina S.B.Corp.	34		X	
William Mulholland	California S.B.Corp.	34		X	
" "	" " "	34		X	
William S. Rosecrans	Oregon S.B. Corp.	34		X	
William T. Sherman	Oregon S.B. Corp.	34	X		
William Wirt	Bethlehem, Fairfield	34		X	
Winslow Homer	New England	34		X	
	TOTALS		54	154	61



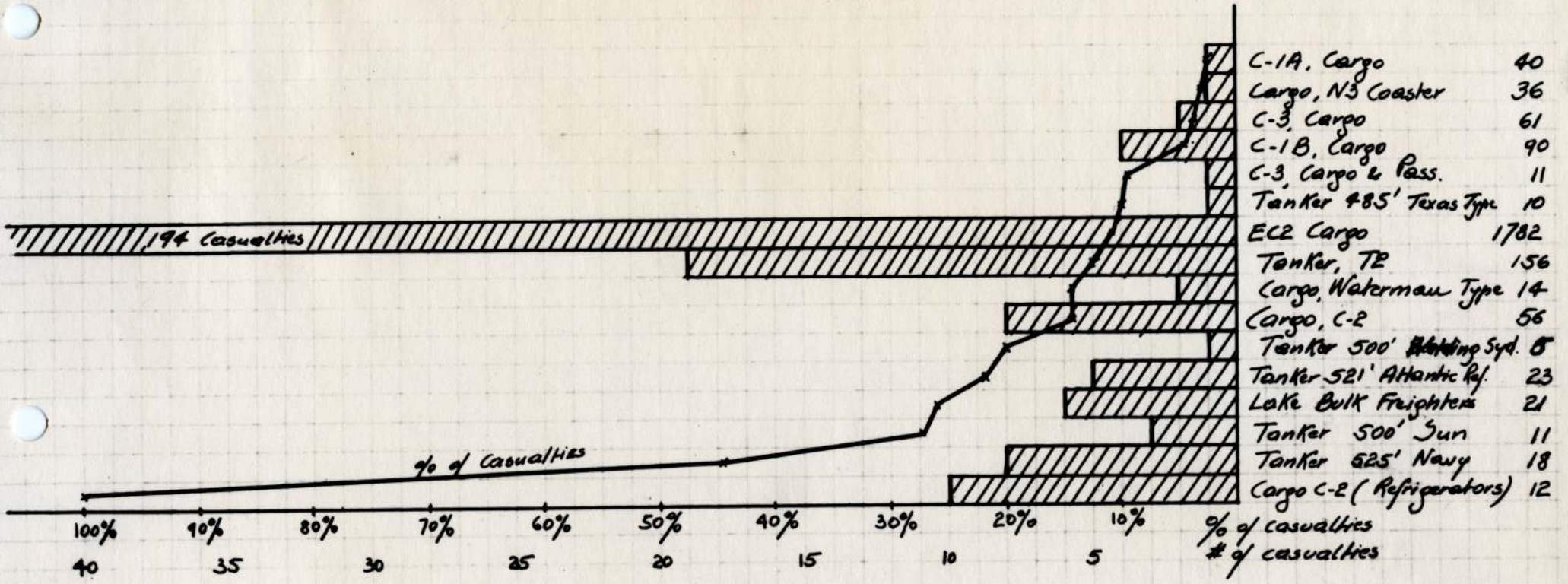
Group 1 Casualties according to Type of Ship.

Date: Dec 31, 1943



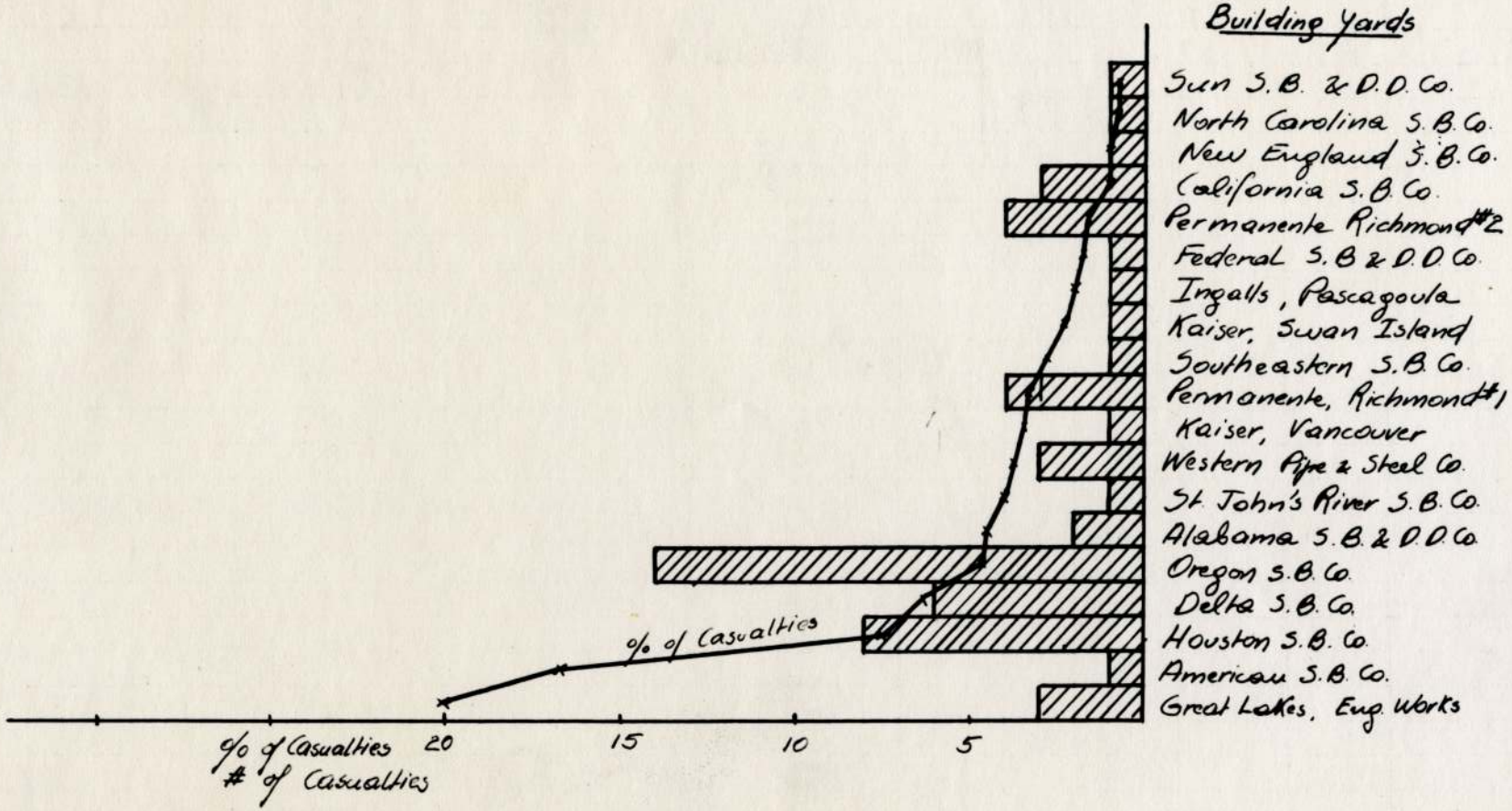
Group 1+2, Casualties according to Type of Ship.

Date: Dec 31, 1943



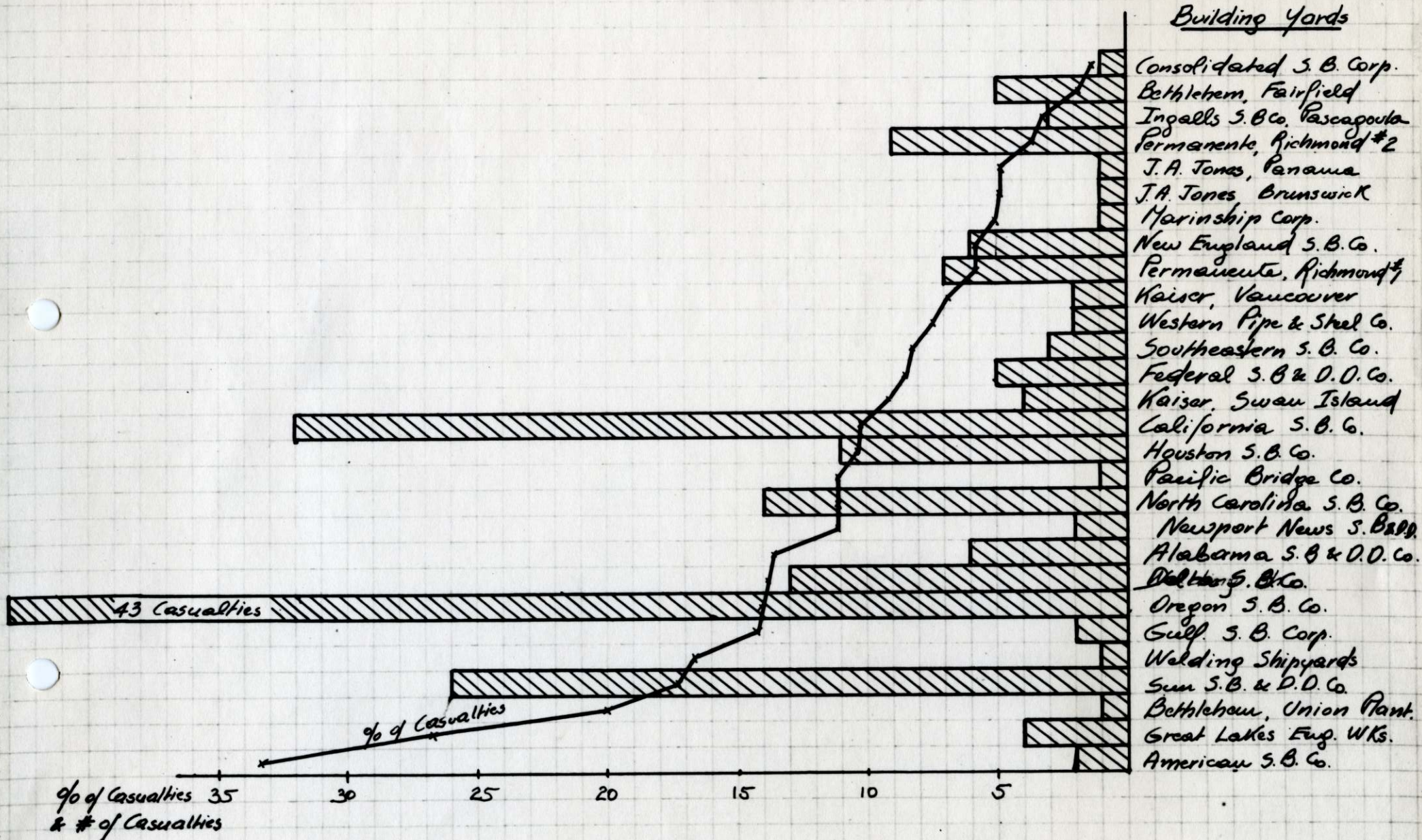
Group 1+2+3, Casualties according to Type of Ship.

Date: Dec 31, 1943



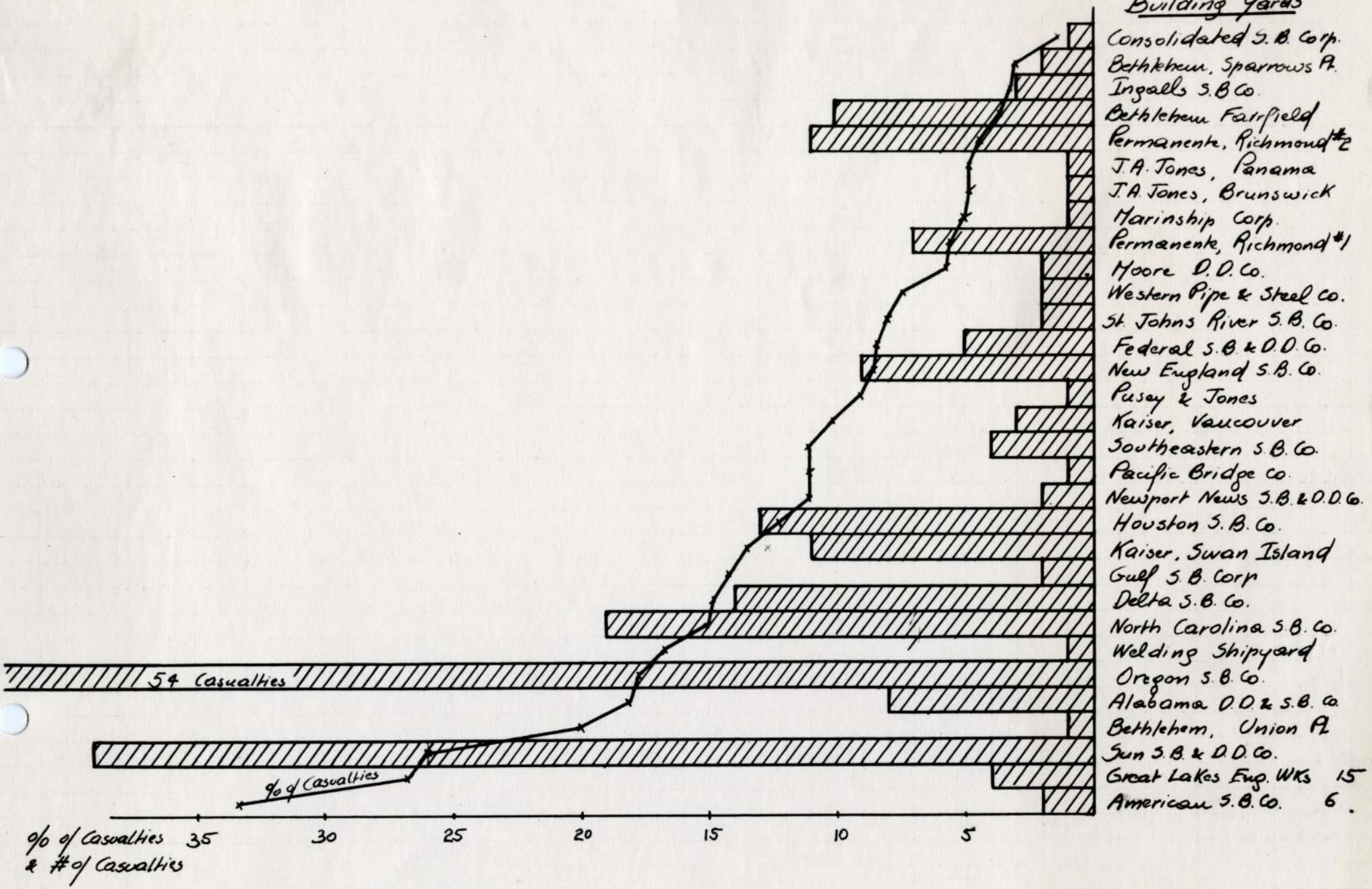
Group I Casualties according to Building Yard

Date: Dec 31, 1943



Goup 1+2, Casualties according to Building Yard

Date: Dec 31, 1943



Group 1+2+3 Casualties according to Building Yard

Date: Dec 31, 1943

February 15, 1944.

Hatch Corners of Liberty Vessels

When it appeared that some of the fractures in the upper deck plating of the Liberty Vessels originated in the corners of the hatches, particularly at the forward and after ends of No. 3 and 4 hatches, it was recommended that new structural details be used at those points. In collaboration with the Maritime Commission and the Coast Guard, drawings were developed and approved on July 29, 1943, and immediately put into effect, which provided for a radius at the corners of Nos. 2, 3 and 4 hatches on the upper deck of all new Liberty Vessels. Similar details are being added to existing vessels as they become availsble.

So far as the records of the Bureau indicate, no failures of this nature have occurred on vessels which have been built or altered to include the new details.

February 15, 1944

ACTIVITIES OF THE BUREAU'S WELDING STAFF

In January 1943 one of the Surveyors who was well trained in good welding practise was appointed to the position of Welding Surveyor in each of the following districts: West Coast, Gulf Coast, Southern Atlantic Coast, New England and the Great Lakes. These Surveyors make periodical trips to all the yards in their districts and report directly to the Chief Surveyor on all matters relating to the quality of welding, including management, organization, training and the Bureau's own personnel. Several improvements have been effected as a result of their recommendations.

In addition to bringing information on the most successful methods to all the yards in their districts, correspondence between the Welding Surveyors and the New York office is always communicated to the others so that a continuous exchange of information is maintained.

In May 1943 the Welding Surveyors collaborated in New York on the preparation of the "Instructions to Surveyors" which was issued shortly thereafter and became a guide to all the Surveyors in applying the best practises to the construction of welded vessels. These "Instructions" became the basis for the booklet published by the U.S. Maritime Commission, developed in association with the Bureau, for the instruction of welding supervisors and foremen.

The Welding Surveyors have assisted the shipyards in preparing their welding procedure and sequences for submisssion to the Bureau for approval. While the Rules of the Bureau do not at present contain specific requirements in this respect, rules are now being developed covering this important part of successful ship welding, and the experience of the Welding Surveyors is being incorporated in them.

The Bureau's offices have all been advised to notify the New York office at once in case of important structural failures in welded vessels, as well as the district Welding Surveyor, who attends whenever possible. Proper procedures for making repairs have now become standardized in most yards where this work is done.

In addition to the Welding Surveyors in the field, the New York office staff has been augmented to give more time to the metallurgical phase of welding and to consideration of welding procedures which are now developed for repair work as well as new construction, and submitted for approval.

AMERICAN BUREAU OF SHIPPING
INTER-OFFICE CORRESPONDENCE

FROM New York Office

December 11, 1942
Circular Letter 12-11-42

TO All Surveyors

SUBJECT Preheating in Welding

Gentlemen:

Enclosed is a copy of a letter from our Boston office and a sketch showing the welding detail referred to, from which you will note that preheating was necessary in making this large weld of a 1 1/2" plate to a casting.

With a view to determining the general practise in welding heavy sections of this nature, we would be pleased to have you advise us, with respect to each yard in your district, whether or not preheating is ordinarily used, in welds of this type and whether any difficulty has been experienced with the welding of castings or heavy plate members. Please describe any other methods which have been used to overcome welding fractures in similar circumstances.

Very truly yours,

AMERICAN BUREAU OF SHIPPING

D. Arnott
Chief Surveyor

Replies indicate that preheat is usually used only when welding heavy members, and that no difficulty has been experienced.

AMERICAN BUREAU OF SHIPPING
INTER-OFFICE CORRESPONDENCE

December 9, 1942
Circular Letter 12-9-42

FROM Boston

TO New York

SUBJECT General Ship & Engine Works
Tugs - Hulls 405 - 410

Attention Mr. D. Arnott, Chief Surveyor

Dear Mr. Arnott:

In looking over the welding of the main vertical strut to the hub, the value of preheating has been demonstrated on Hull 405.

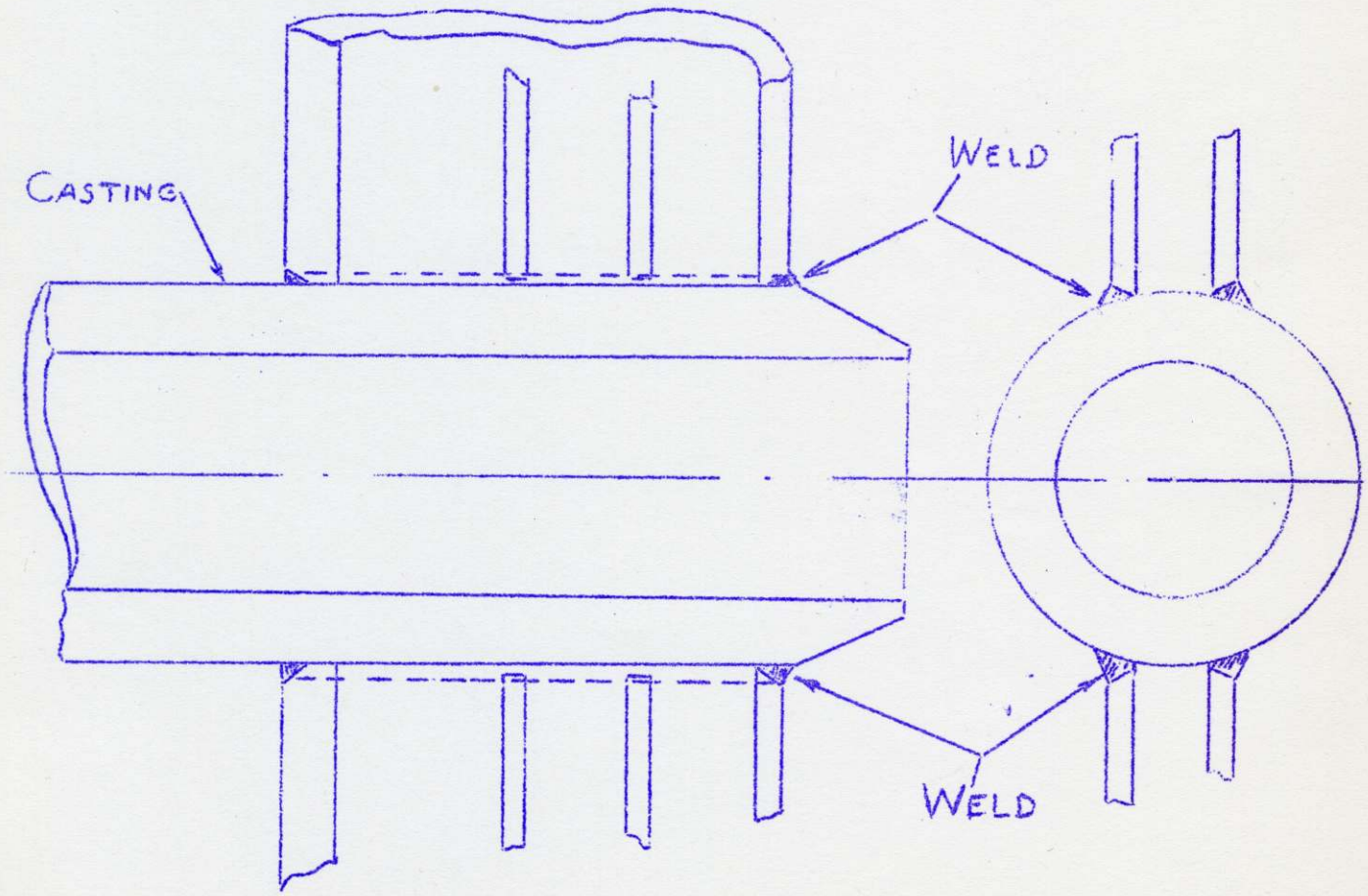
The strut was being welded to the hub in the shop at temperature of about 50°. The joint was properly v'd out the first passes of welding were laid-in and peened. The welding fractured, was cut out and the performance repeated with the same result of fractured welds.

The contractors then cut out all the welding and heated the hub with flame heat until same was quite hot. The welding then proceeded as before with no further evidence of fractures and was again examined after all the metals had cooled down and appeared to be a very satisfactory weld.

Very truly yours,

(signed) William Renz
Principal Surveyor

SECTION THRU ARM



AMERICAN BUREAU OF SHIPPING

INTER-OFFICE CORRESPONDENCE

FROM New York Office June 21, 1943

TO All Coast Offices

SUBJECT Liberty Ships - Correction of Construction details

Gentlemen:

In order to eliminate as far as possible some of the conditions which have been found to contribute to various plate and weld failures on the Liberty ships, it is intended to correct those conditions on all vessels of this type as they become available at ports in this country.

The following details should be examined and corrected where necessary: -

The cutout in the sheer strakes in way of the accommodation ladder platforms should be rounded off as much as practicable, as indicated in circular letter of January 20th.

Butts in bulwark plating should be slightly scalloped where they adjoin the sheer strake and similarly, the bulwark plate should be scalloped in way of the butts in the sheer strake.

The scuppers from the upper deck through the sheer strakes should be rounded at their lower corners, at least within the midship half-length of the vessel.

When available on dry dock, the bilge keel plates should have a small scallop cut in way of each butt in the bilge keel and shell plates.

Please arrange to have the surveyors request that these items be taken care of whenever Liberty type vessels are undergoing survey.

Very truly yours,

AMERICAN BUREAU OF SHIPPING

D. Arnott

D. Arnott
Chief Surveyor

AMERICAN BUREAU OF SHIPPING

INTER-OFFICE CORRESPONDENCE

FROM New York Office July 29, 1943.

TO All Surveyors - Circular letter 7-~~29~~-43

SUBJECT Reports of Failures in Welded Vessels in Service.

Gentlemen:

In order to have full and detailed information on file at this office in regard to the nature of any failure in classed vessels which are largely or wholly welded, and which are obviously not the result of collision or other accident, it has been found necessary to adopt a uniform procedure in reporting on such failures. The steps to be taken as outlined below should be rigidly adhered to.

In the case of a serious structural failure, the New York office should be notified by phone or wire at once so that, if it seems desirable, arrangements can be made to have the vessel attended from the home office or from some other office, before repairs are commenced. Owing to the delay in making up and forwarding reports, it is requested that a letter be sent in as soon as possible after the nature and extent of the failure have been established, accompanied by sketches, which may be rough, provided they locate the damage accurately.

It is important that the surveyor in attendance determine from the officer personnel, on his first visit if practicable:

1) The date on which the failure occurred.
2) The approximate location of the vessel at the time.
3) The sea conditions encountered.
4) The approximate temperature.
5) The conditions of loading or ballasting and the drafts.
6) Any unusual condition of loading such as heavy deck cargo, poorly stowed cargo, etc.
7) All facts in the recent history of the vessel which might be considered as having contributed to the failure, such as bombs falling near by, together with any other data that appear to be relevant. This information need not necessarily be included in the body of the report.

A sketch should be made by the surveyor at first hand, giving the location of the damage in relation to some easily identified location such as a bulkhead or hatch, and showing:

1) The location of fractures.
2) The length of the fractures and distance from some convenient line of reference such as a frame or beam.
3) The relative positions of nearby seams and butts, (stating which appear to have been machine welded) fittings, openings, and previously repaired fractures, if any.
4) The point of origin of the fracture if it can be definitely determined by the character of the fractured edges. The arrows or "chevrons" sometimes seen in the texture of fractured edges point in the direction from which a fracture of a tearing nature began.

The approximate size and location of doublers, headers, new plates or shapes used in making the repairs should also be indicated, on a separate sketch, if required for clarity. There have been a number of cases in which sketches prepared by the shipyard making repairs have been found incomplete or actually erroneous in some pertinent detail.

In describing the nature of any failure, it is most important that the precise location be given. For example, it is often stated that "deck plating was found cracked at the corner of No. 3 hatch" or "in way of the corner", whereas, the crack may actually have been 15" away from the corner, in which case entirely different causes might be attributed to the fracture.

Whenever photographs of failures are obtainable, they should accompany the report or preliminary letter, although it is recognized that there are close restrictions on photographing such subjects at this time.

Complete reports on such failures will be of assistance in determining their causes and in helping to eliminate them. It is requested that the foregoing procedure be adhered to in future cases of failures in welded vessels.

Very truly yours,

AMERICAN BUREAU OF SHIPPING

D. ARNOTT
Chief Surveyor

AMERICAN BUREAU OF SHIPPING

Inter-Office Correspondence

FROM: New York Office November 6, 1943

TO: All Surveyors

SUBJECT: Welding Operators
Qualification
Repair Plants

Gentlemen:

The question has been raised as to what extent welding operators are qualified in the various ship repair plants. Since these plants are dealing with repair of fractures on welded ships, besides a considerable amount of welded reconstruction and repairs on both rivetted or welded ships, the necessity of having qualified welders has become increasingly important. Does the repair plant make a practice of qualifying all welders or only a limited number of welders, and if the latter be the case, what means are taken to keep unqualified men off important work?

Very truly yours,

AMERICAN BUREAU OF SHIPPING

(signed) D. Arnott
Chief Surveyor

Replies indicate effort to qualify all welders, but some unqualified men usually employed as a result of labor turnover. Surveyors require qualified men to weld important joints in strength members.

AMERICAN BUREAU OF SHIPPING

INTER-OFFICE CORRESPONDENCE

November 11, 1943.

FROM New York Office

TO Surveyors at Yards building Liberty Ships

SUBJECT Bulwark Detail

Gentlemen:

We have had a number of cases of fractures in Liberty vessels which apparently started at the top of the sheer strake where it is fitted with two half-rounds in way of the opening in the bulwarks for the torpedo net defense gear. These fractures usually occur at a butt in the half-rounds, indicating that they have probably been welded as the last operation in the sequence. As a result, it is requested that if it is necessary to piece together several lengths of half-round bar, the butts be completely and properly welded before attaching the bars to the sheer strake. Also, a minimum of welding should be used in making the attachment to the sheer strake.

One yard has substituted pipe for the half-rounds, which is a better arrangement, if the material is available.

It will be seen that considerable care is necessary in fitting any such appendage, even when of a very minor nature.

Very truly yours,

AMERICAN BUREAU OF SHIPPING

D. ARNOTT
Chief Surveyor

AMERICAN BUREAU OF SHIPPING

Inter-Office Correspondence

December 10, 1943.

FROM: New York Office

TO: All Offices

SUBJECT: Recording Structural Failures
of Welded Ships During Construction.

Gentlemen:

Experience has shown the advisability of providing in future more efficient methods for keeping a record of the plate and weld failures which occur from time to time during the construction of welded ships. In this connection, the cooperation of the shipyards is essential, first by the management calling all such failures to the attention of the Surveyors, and also in assisting in preparing the necessary sketches which might otherwise involve a considerable amount of the Surveyors' time. We believe that it can be shown to be in the interest of the shipyards themselves to keep such records, as is now the established practice in some yards.

Proper handling of this matter between the yard officials and the Surveyors will ensure not only that repairs are correctly made, but that there will be a permanent record for future reference in the event of later damage to the vessel in service. From a careful study of the various reports it is hoped that the primary causes of the failures will be determined and means developed for preventing their occurrence.

The information given in the report must be explicit and exact in every detail to be of any value as otherwise erroneous conclusions may be drawn as to the real cause of the damage. The minimum amount of information required is listed as follows and illustrated by attached sample.

1. Hull number and name.

2. Afloat or on ways.

3. Date and time of day when failure occurred or was first noticed.

4. Temperature at time of fracture and temperature range preceding failure, mentioning any sudden drop in temperature.

5. Approximate period elapsed between time of welding of structural members involved and time of fracture.

6. If fracture occurred in a weld, give type and size of electrodes used and detail of joint.

7. Sketch of fracture giving frame numbers, plate numbers or other means of locating fracture exactly, also notes or symbols to indicate extent of completion of surrounding welds at time of failure, and sequence of welding members in the vicinity of the fracture.

8. The apparent starting point of fracture. If the defective plate is cut out for renewal, the chevrons on the fractured edge will definitely indicate the starting point.

9. Opinions as to reasons for fracture.

10. Results of any physical tests or chemical analysis made from material involved.

11. Method of repair, mentioning attachments released, welding sequence followed, use of peening or preheating.

It is suggested that the shipyard might be agreeable to prepare the necessary sketch and furnish copies to the Surveyors who would then check same and add the necessary notes giving the desired information outlined above. No standard form will be adaptable to all cases, but a sketch of letter size would be the most convenient for filing.

Very truly yours,

AMERICAN BUREAU OF SHIPPING

D. Arnott.

D. ARNOTT
Chief Surveyor.

Enclosure

TYPICAL SAMPLE

John Smith Shipbuilding Co.

Report of Fracture

Hull 123, S.S. JOHN SMITH, on ways.

Fracture occurred about 6 A.M., December 1, 1943.

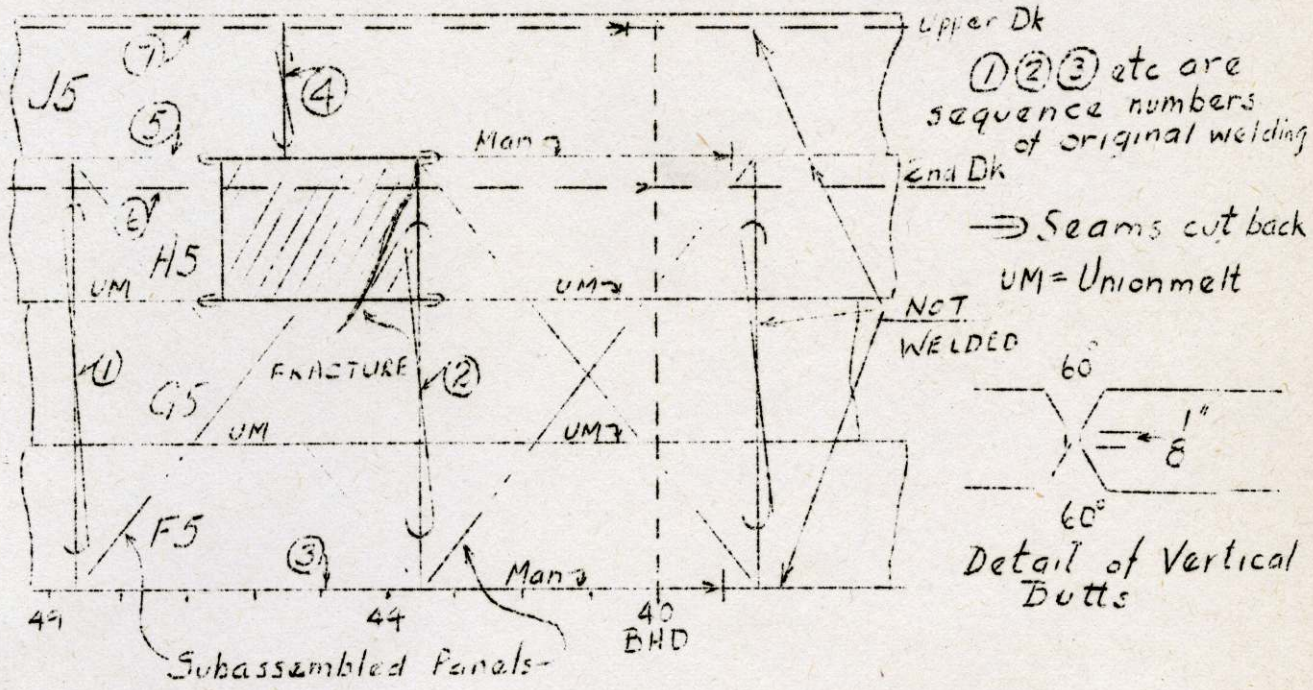
Temperature at time 20° F, previous day 30° to 20° (sudden drop in 6 hours).

Shell had been completely welded to upper deck and forward to bulkhead 40 by November 20.

Shell butts welded with Blank Co. electrode #25, 3/16" diameter.

Fracture started in welded butt, then progressed down. Some lack of fusion in butt.

Tensile specimens taken from H5 in vicinity of crack showed ultimate 60,000, YP 35,000, elongation 25% in 8".



Method of repair: Shaded area is new portion of plate fitted. Seams and 2nd deck released 12" each side of butts. Fracture in G5 veed and welded. New plate welded as follows: after butt, forward butt, top seam, bottom seam, 2nd deck to shell. Forward butt and both seams peened. All welds back stepped.

American Bureau of Shipping

and representing in the United States
The British Corporation Register of Shipping and Aircraft

47 Beaver Street, New York 4, N. Y.

December 22, 1943.

Circular letter to all Shipyards
building welded vessels to American
Bureau classification.

Gentlemen:

The following matters relating to ship welding are submitted for the consideration of all shipbuilders with a view to eliminating, so far as possible, some of the major troubles that are being experienced in the carrying out of the emergency shipbuilding program.

1. Welding procedures and sequences.

The Rules of this Bureau now require that welding procedures, the methods and details of welding, including welding sequences for typical subassemblies and the sequence of final welding to be followed on the ways be developed and submitted for approval before the work of construction is commenced. Our experience has shown that many failures during construction of a more or less serious nature can be traced to improper procedures and sequences and we have consequently found it necessary to have the details of welding procedures supervised by our Surveyors. It is believed, however, that the shipyards will benefit directly from laying down the best possible practices in this respect through a reduction in the time and material lost in correcting the results of improper welding.

2. Plate and Weld Failures.

As you may be aware certain fractures of welds and plates have been experienced in some of our welded ships, not only during construction but also under service conditions. The reasons for these fractures which may involve welding procedures, sequences, etc., are not always self-evident and it is realized that no complete solution of such welding problems is possible without a full knowledge of all the circumstances in each individual case. The cooperation of the yard management in calling such failures to the immediate attention of our Surveyors in attendance at the shipyard is, therefore, earnestly requested in order that (1) suitable sketches showing the nature and extent of the failures may be prepared, and (2) that the proper method of repairing the defect may be agreed upon by all parties concerned.

3. Cracking of machine and "deep fillet welds".

Experience indicates that the cracking of welds within a short time after being deposited is most common during cold weather, as a result of the weld metal becoming brittle through too rapid cooling. It is desirable that a heating torch or other suitable means be used to bring the temperature of the steel in the vicinity of the welding groove up to about 150 degrees F. immediately before depositing the weld metal. Our Surveyors have been instructed to insist on this practice being carried out whenever the surrounding air temperature is below 32° F.

In the unionmelt process, the slag formed over the weld by solidification of the granular melt tends to prevent the sudden cooling of the weld metal, and for this reason it should be left in place until the weld zone is reasonably cool. It has been found that uniformly sound welds free from porosity are made by this process only when the joints are thoroughly dried out and made absolutely clean before welding. It is obviously desirable to incorporate these practices in the welding procedure in order to avoid the necessity for cutting out unsatisfactory work and our Surveyors have been requested to see that these practices are adhered to.

4. Shipyard training and allocation of welders, etc.

It is a responsibility of the shipbuilder to see that the system of training welders is adequate and properly organized. That a man has been able to pass the comparatively simple so-called qualification test is merely an indication that he is suitable material for further training under competent welding supervisors. A welder cannot be considered experienced until he has some knowledge of the basic principles of welding and has acquired skill in shipwelding as a result of considerable practice in production work under actual working conditions. The difficulties of obtaining sufficient numbers of experienced welders for the work in hand during the present emergency are keenly appreciated and under the circumstances it is strongly urged that arrangements be made for each foreman to assign their most proficient welding operators to the more important joints in the region of the midship body such as the butts between panels of shell and deck plating and tie-in field joints such as that at the gunwale. Our experience has shown that the best results can be obtained only where the leadermen are experienced and adequate in numbers and where the shipyard training and inspection forces are entirely divorced from production work.

5. Electrodes.

Complaints are received occasionally with regard to alleged unsatisfactory electrodes delivered to the shipyard despite the fact that the particular electrode in question appears on the American Bureau

approved list. Such experiences seem to indicate that the high standard of quality originally required for acceptance has not been maintained but may also result from improper storage conditions. We will be obliged if such matters are drawn to the attention of the Surveyors who will communicate the facts to this office for any action this Bureau may consider desirable, such as the requiring of additional tests and the deletion from our approved list of any electrode found unsatisfactory until such time as the condition is remedied by the manufacturer.

6. Machine Settings.

Difficulties which have been attributed to defective electrodes such as transverse cracking, undercutting, lack of fusion, etc., are sometimes found on investigation to be the result of incorrect current settings. The correct setting of machines to furnish optimum welding currents for a particular job requires more experience than the newly trained operator can be expected to have especially in the case of automatic welding machines. Since the output of a particular machine would vary considerably depending on its age and condition it should be the duty of the Supervisors to check settings periodically and for this purpose standard portable meters should be made available as the meters built into some machines are apt to be unreliable.

Your cooperation and kind attention to above matters will be appreciated.

Yours very truly,

AMERICAN BUREAU OF SHIPPING

D. ARNOTT
Chief Surveyor

DA:R

AMERICAN BUREAU OF SHIPPING
Inter-Office Correspondence

FROM: New York Office January 26, 1944

TO: All Surveyors

SUBJECT: WELDED SHIPS

Gentlemen:

This communication is primarily intended for the surveyors at the shipyards and also for those surveyors attending vessels in drydock. It is desired that particular attention be paid to the fairness of the bottom shell within the midship half length. We have had cases of major failures in welded ships where the strength of the hull girder is suspicioned to have been decreased by reason of pronounced transverse indentations in the bottom shell (and tank top) in some cases extending from the keel plate to the bilge. It is true that it is somewhat difficult to tell whether these transverse indentations occurred under compressive stresses after the upper deck cracked under tensile stresses, or whether the transverse indentations already existed in the bottom shell (and tank top), and therefore weakened the hull girder by decreasing the effectiveness of the bottom of the hull girder in compression.

It is not proposed to lay down any hard and fast rules as to the degree of transverse bottom indentations between the frames which can be accepted. However, in the case of new vessels under construction it is considered that any pronounced transverse bottom indentations extending across more than one strake within the midship half length should be made fair.

In the case of existing ships somewhat more latitude may be advisable in the extent and degree of bottom transverse indentations within the midship half length which should be accepted. This must remain a matter of judgment of the surveyor. However, when a vessel has sustained cracks at hatch corners and on deck and pronounced transverse indentations occur on the bottom in about the same fore and aft location, it is quite obvious that eliminating the most pronounced indentations extending over more than one strake should help the main hull girder in resisting the longitudinal strains imposed on it in service.

This unfairness can be corrected by cutting straight across in way of the indentation, fairing, beveling the edges, and welding from both sides. The surveyors should particularly note whether the cut edges close up after being freed.

Please furnish this office full information on any such cases coming under your survey.

Very truly yours,

AMERICAN BUREAU OF SHIPPING

(signed) D. Arnott
Chief Surveyor

AMERICAN BUREAU OF SHIPPING

INTER-OFFICE CORRESPONDENCE

FROM New York Office February 4, 1944.

TO All Surveyors

SUBJECT "Maritime Arc Welding Procedures"
Published by Lincoln Electric Co.

Gentlemen.

With reference to the subject pamphlet distributed by the U.S. Maritime Commission to their inspectors as a guide, there are a few practices mentioned in this pamphlet, which are not in accordance with our Rules and approved practices, which, while called to the attention of the Commission before publication of the pamphlet, were apparently inadvertently included.

You may be asked to accept some work for which this booklet has been the basis, and to avoid any misunderstanding with local Maritime Commission inspectors or others, we wish to restate our requirements in certain particulars for your information.

In the booklet, emphasis is placed upon speed of welding. We believe that speed should be considered secondary to quality and soundness of all welds.

On page two, it is stated that "foreign matter such as dirt, oil, etc. in the seam will decrease the speed of welding". As you know, our Rules require that joints be made clean before welding.

On page six, a procedure is given for welding butts of plates up to 3/8" thick having no bevel, using 5/16" diameter electrodes. In this connection, we may say that our Rules now permit plates up to 1/4" thick to be welded without bevelling, but for greater thickness, the procedure should be demonstrated in each yard to the Surveyors' satisfaction by making the appropriate procedure qualification tests. The conditions under which the actual work is done are to be such that all factors can be adequately controlled to insure that the results obtained in production will be equal to those of the tests.

On pages 5, 7, 8, 10, 13, 16 and 19, there are references to joints welded without back chipping and joints welded from one side only. With the exception of a few places where there is no access to the root side or where omission of the root weld has been specially approved, all joints are required by our Rules to be welded from both sides, with back chipping of the root before welding the second side.

On page twenty, the "Fleet-Fillet" or deep

fillet technique is described, substantially as originally approved by this Bureau except that the table of sizes includes fillets of 7/16" and 1/2". Our approval covered its use on plates up to 1/2" thick, for which the table size fillet is 3/8" nominal leg length and all approvals of this method have been restricted to fillets of 3/8" maximum leg length. All applications of deep fillet welding should be subject to the most rigid control of currents, qualified operators, and the use of electrodes approved for the deep fillet technique.

We will be glad to have the Surveyors furnish us with any information concerning the position the Commission inspectors and shipyards are taking in the matter.

Very truly yours,

AMERICAN BUREAU OF SHIPPING

D. Arnott

D. ARNOTT
Chief Surveyor