485

ELECTRICAL INFORMATION

Wire and Cable Sizes Bulkhead, Deck and Box Fittings For Navy Standard Cable and Equipment

NAVSHIPS-CNSTVD-P-111

EXHIBIT
P-485

CRMC-Motley1000-Subj-001835

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/1

ELECTRICAL INFORMATION

Wire and Cable Sizes

Bulkhead, Deck and Box Fittings

For Navy Standard Cables

and Equipment

CRMC-Motley1000-Subj-001836

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/2

CABLE SIZES BY STRANDS

This information given to enable electricians to determine various cable sizes, when not otherwise identified. As each conductor is made up of a number of strands, the size of the conductor (wire) is thus given.

Conductor Size	Number of Strands	A.W.G. Size	Dia. in Mils per Strand	C.M. Size
	19	28	12.64	2828
	7	24	20.1	2828
	7	22	25.35	4494
9	7	19	35.89	9030
14	7	17	45.26	14350
23	7	15	57.07	22820
30	19	18	40.3	30780
40	19	17	45.26	38950
50	19	16	50.82	49020
60	37	18	40.3	59940
75	37	17	45.26	75850
100	61	18	40.3	98820
125	61	17	45.26	125050
150	61	16	50.82	157380
200	61	15	57.07	198860
250	61	14	64.08	250710
300	91	15	57.07	296660
400	127	15	57.07	414020
500	127	14	64.08	521970
650	127	13	71.96	657860
800	127	12	80.81	829310
1000	127	11	90.74	1046000
1500	127	9	114.4	1662000

CRMC-Motley1000-Subj-001837

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/3

INDEX AND CABLE INSTALLATIONS

INSULATED CABLES FOR FIXED INSTALLATIONS

RUBBER INSULATION

Page		
33	BC	Bell cord
35	BW	Bell Wire
35	DLB	Double lighting braided
22	DLPA	Double lighting and power armored
	DRHLA	Double, radio, high-tension, leaded and armored
35	DRLL	Double, radio, low-tension, leaded
35	FLA	Four conductor, lighting, armored
35	FLB	Four conductor, lighting, braided
28	GICA	General interior communication armored
35	SICP	Single, instrument cable, plain
21	SLPA	Single, lighting and power, armored
35	SRHLA	Single, radio, high-tension, leaded and armored
35	SRLL	Single, radio, low-tension, leaded
23	TLPA	Triple, lighting and power armored
25	TPTA	Twisted pair telephone armored
35	TRHLA	Triple, radio, high-tension, leaded and armored
	TRLL	Triple, radio, low-tension, leaded
35	VLS	Voltmeter leads, (submarines)

CRMC-Motley1000-Subj-001838

RUBBER INSULATED FLEXIBLE

Par.

30 DCR Double conductor, portable

30 DCOR Double conductor, oil resistant, portable

34 FCP Four conductor, portable

34 FCOR Four conductor, oil resistant, portable

29 GICP General, interior communication, flexible

35 MCMB Multiple, conductor, marker buoy

32 MCP Multiple, conductor, portable

32 MCS Multiple, conductor, shielded

32 MCOS Multiple, conductor, oil resistant, shielded

34 SCP Single, conductor, portable

SCOP Single conductor, oil resistant, portable

31 TCP Triple, conductor, portable

31 TCOP Triple, conductor, oil resistant, portable

27 TPTP Twisted pair telephone, flexible

26 TPTP Twisted pair telephone, plain.

CRMC-Motley1000-Subj-001839

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/5

HEAT AND FLAME RESISTANT INSULATION

Page		
17	DHFA	Double conductor, heat and flame resistant, armored
	DHFW	Double, heat and flame resistant wire
34	FHFA	Four conductor, heat and flame resistant, armored
36	MDGA	Multiple conductor, dehausing, armored
19	MHFA	Multiple conductor, heat and flame resistant armored
20	MHFF	Multiple conductor heat and flame resistant, flexible
36	SDGA	Single conductor, dehausing, armored
16	SHFA	Single conductor, heat and flame resistant, armored
33	SHFL	Single conductor, heat and flame resistant, leaded
	SHFS	Single conductor, heat and flame resistant, switchboard
	SHFW	Single, heat and flame resistant wire
	SFPS	Single, flameproof switchboard
	SRI	Synthetic resin insulated
	SRIB	Synthetic resin insulated, braided
	SRIG	Synthetic resin insulated, glass braid
18	THFA	Triple conductor heat and flame resistant, armored
24	TTHFA	Twisted pair, telephone, heat and flame resistant, armored
	TTHFF	Twisted pair, telephone, heat and flame resistant, flexible

CRMC-Motley1000-Subj-001840

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/6

SPECIAL WIRE AND CABLE

Para.

35 MIL-W-16878 Two conductor, shielded, rubber covered

35 MIL-W-16878 Two conductor; shielded, rubber covered

35 MIL-W-16878 Five conductor, shielded, rubber covered

35 MIL-W-16878 Two conductor, shielded, rubber covered

35 MIL-W-16878 Five conductor, shielded, rubber covered

35 MIL-W-16878 Two conductor, shielded, lead and armor

35 MIL-W-16878 Six conductor, three shielded pairs, lead and armor

35 MIL-W-16878 Two conductor, high tension, shielded, lead and armor

Telephon switchboard wire

Promiter wire

Cablor wire

W. E. 700

I.C. and P.C. Standard Navy Color Code

Telephone Color Code (Enamel and Cotton Insulated)

Telephone Color Code (Synthetic Insulated)

Pipe Information

Pressed Steel Terminal Tubes (sketches)

Pressed Steel Terminal Tubes (clearance and drill)

Bulkhead and Deck Tubes (sketches)

Cable Construction (I.C. F.C.)

Circuit Identification (I.C. F.C.)

Battle Telephone Circuit Identification

Supplementary Sound Powered Circuit Identification

Notes

Sketch of filter for pressed steel terminal tubes

Information for filter

Sketch of Type "A" Cable Clamp

Sketch of Type "B" Cable Clamp

CRMC-Motley1000-Subj-001841

CABLE CONSTRUCTION

B.F.P.S. (up to 100,000 CM)

(A) Copper
(B) Varnished Cambric
(C) Felted Asbestos
(D) Cotton Braid.

D.H.F.A. and T.H.F.A.

(A) Copper
(B) Felted Asbestos
(C) Varnished Cambric
(D) Felted Asbestos
(E) Felted Asbestos
(F) Special Heat Impervious Sheath
(G) Armor.

Conductor

Cable

B.H.F.A. (up to 800,000CM).

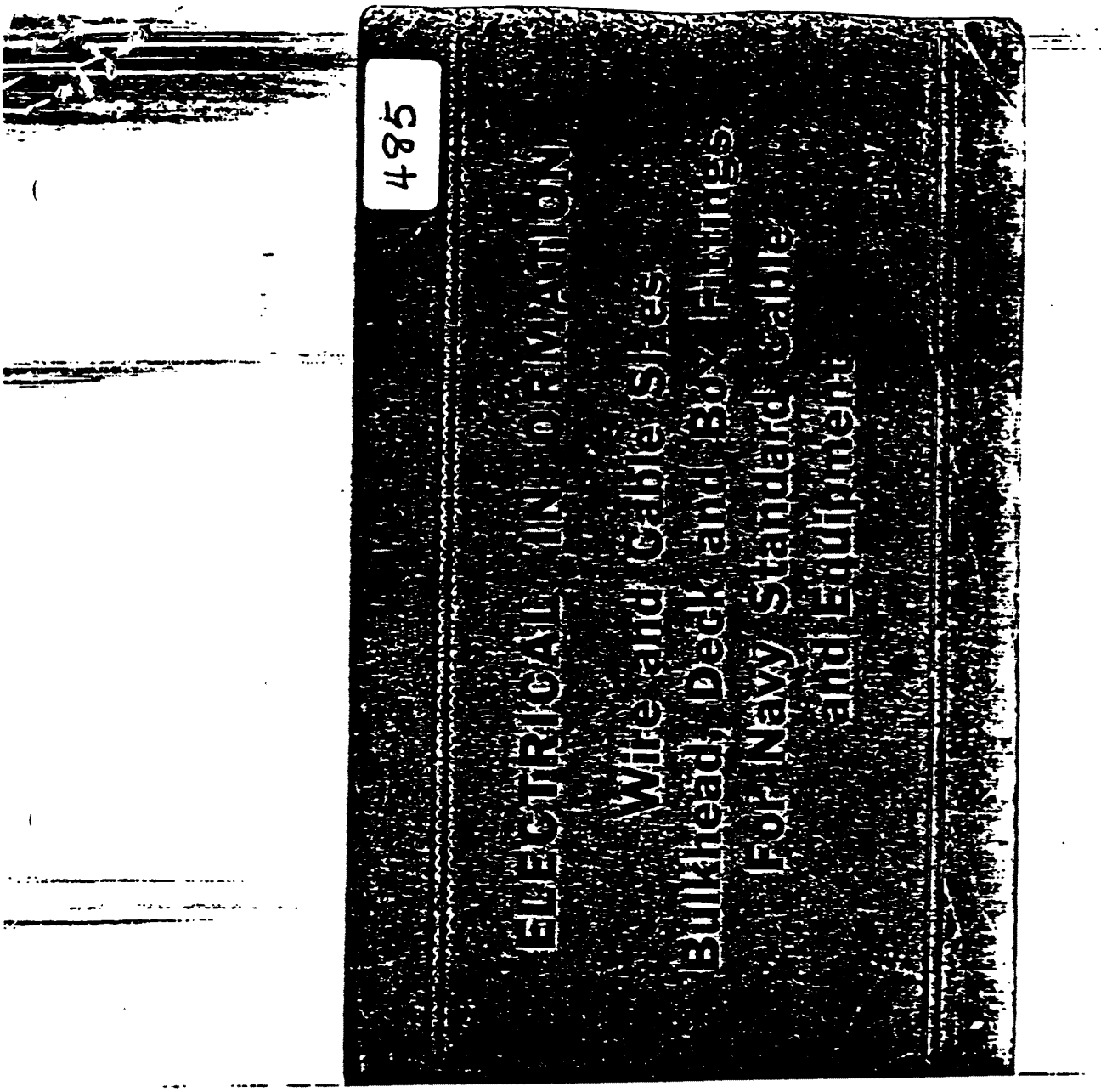
(A) Copper
(B) Felted Asbestos
(C) Varnished Cambric
(D) Felted Asbestos
(E) Heat Impervious Sheath
(F) Armor.

M.H.F.A.

(A) Copper
(B) Felted Asbestos
(C) Rayon or Cellulose Acetate Color Coded braid, and flame retardink compound
(D) Cellophane Wrapping
(E) Felted Asbestos
(F) Special Heat Impervious Sheath
(G) Armor.

CRMC-Motley1000-Subj-001842

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/8



CRMC-Motley1000-Subj-001843

COLOR CODE USED IN MARINE ELECTRICAL I.C. AND F.C. CABLES
NAVY TYPE

Wire No.	Base Color	Tracer Color	Tracer Color	Wire No.	Base Color	Tracer Color	Tracer Color
1	Black			23	White	Black	Red
2	White			24	Red	Black	White
3	Red			25	Green	Black	White
4	Green			26	Orange	Black	White
5	Orange			27	Blue	Black	White
6	Blue			28	Black	Red	Green
7	White	Black		29	White	Red	Green
8	Red	Black		30	Red	Black	Green
9	Green	Black		31	Green	Black	Orange
10	Orange	Black		32	Orange	Black	Green
11	Blue	Black		33	Blue	White	Orange
12	Black	White		34	Black	White	Orange
13	Red	White		35	White	Red	Orange
14	Green	White		36	Orange	White	Blue
15	Blue	White		37	White	Red	Blue
16	Black	Red		38	Brown		
17	White	Red		39	Brown	Black	
18	Orange	Red		40	Brown	White	
19	Blue	Red		41	Brown	Red	
20	Red	Green		42	Brown	Green	
21	Orange	Green		43	Brown	Orange	
22	Black	White	Red	44	Brown	Blue	

CRMC-Motley1000-Subj-001844

TELEPHONE TWISTED PAIR, COLOR CODE
ENAMEL AND COTTON

Pair No.	One Wire	Other Wire
1	Blue	White
2	Orange	White
3	Green	White
4	Brown	White
5	Slate	White
6	Blue White	White
7	Blue Orange	White
8	Blue Green	White
9	Blue Brown	White
10	Blue Slate	White
11	Orange White	White
12	Orange Green	White
13	Orange Brown	White
14	Orange Slate	White
15	Green White	White
16	Green Brown	White
17	Green Slate	White
18	Brown White	White
19	Brown Slate	White
20	Slate White	White
21-40	First Twenty Repeated	Red
41-60	First Twenty Repeated	Black
61-80	First Twenty Repeated	Red White
81-100	First Twenty Repeated	Black White
101-120	First Twenty Repeated	Red Black
121-140	First Twenty Repeated	Black Orange
141-160	First Twenty Repeated	Black Green
161-180	First Twenty Repeated	Black Brown
181-200	First Twenty Repeated	Black Slate

CRMC-Motley1000-Subj-001845

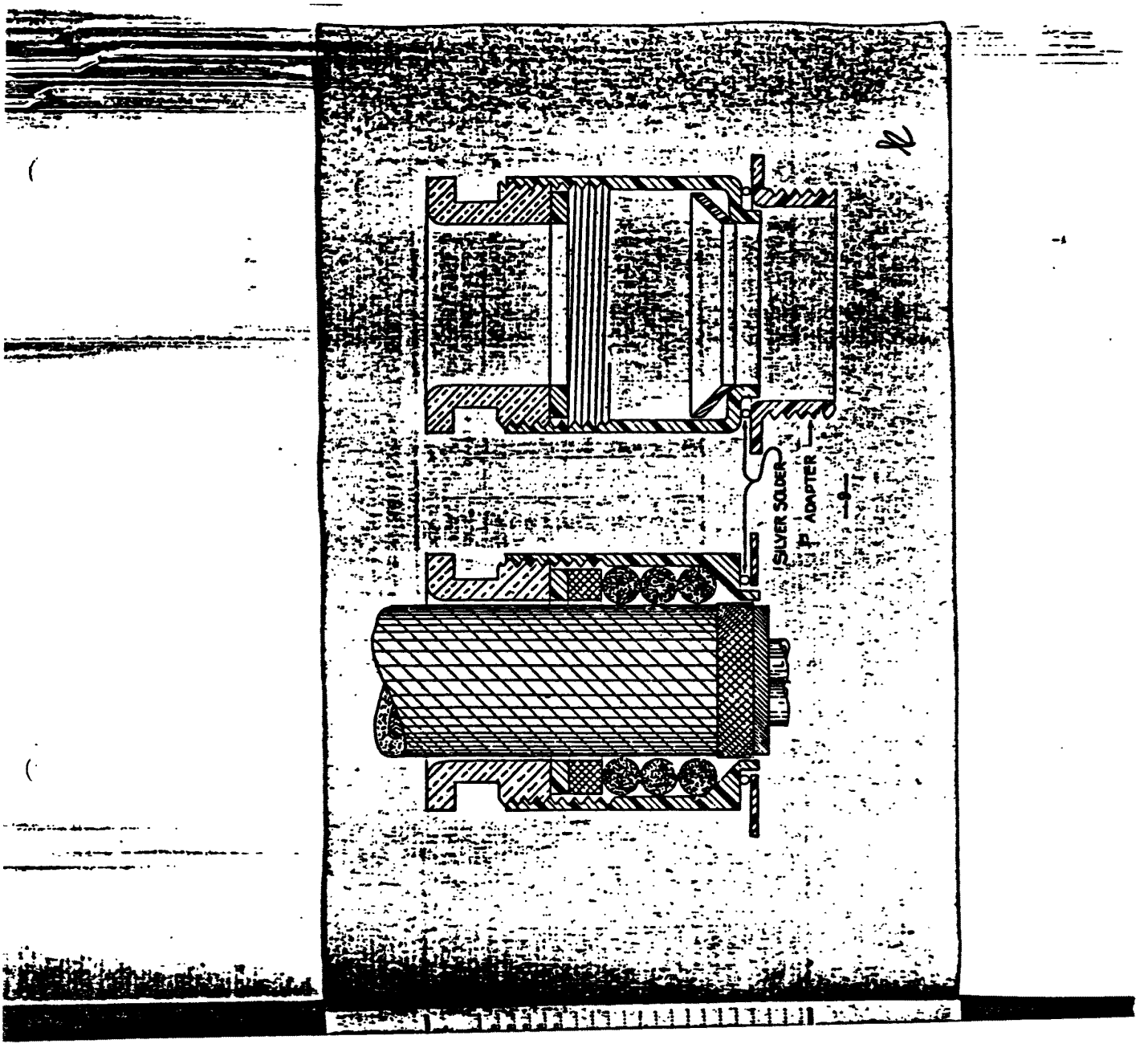
Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/11

COLOR CODE

FOR NAVY TYPE TWISTED PAIR TELEPHONE WIRE (SNYTHETIC INSULATED)

Pair No.	One Wire	Other Wire	Pair No.	One Wire	Other Wire	Pair No.	One Wire	Other Wire
1	White	Black	21	Pink	White	41	Slate	Orange
2	Red	Black	22	Green	Red	42	Yellow	Orange
3	Green	Black	23	Orange	Red	43	Purple	Orange
4	Orange	Black	24	Blue	Red	44	Tan	Orange
5	Blue	Black	25	Brown	Red	45	Pink	Orange
6	Brown	Black	26	Slate	Red	46	Brown	Blue
7	Slate	Black	27	Yellow	Red	47	Slate	Blue
8	Yellow	Black	28	Purple	Red	48	Yellow	Blue
9	Purple	Black	29	Tan	Red	49	Purple	Blue
10	Tan	Black	30	Pink	Red	50	Tan	Blue
11	Pink	Black	31	Orange	Green	51	Pink	Blue
12	Red	White	32	Blue	Green	52	Slate	Brown
13	Green	White	33	Brown	Green	53	Yellow	Brown
14	Orange	White	34	Slate	Green	54	Purple	Brown
15	Blue	White	35	Yellow	Green	55	Tan	Brown
16	Brown	White	36	Purple	Green	56	Pink	Brown
17	Slate	White	37	Tan	Green	57	Yellow	Slate
18	Yellow	White	38	Pink	Green	58	Purple	Slate
19	Purple	White	39	Blue	Orange	59	Tan	Slate
20	Tan	White	40	Brown	Orange	60	Pink	Slate

CRMC-Motley1000-Subj-001846



CRMC-Motley1000-Subj-001847

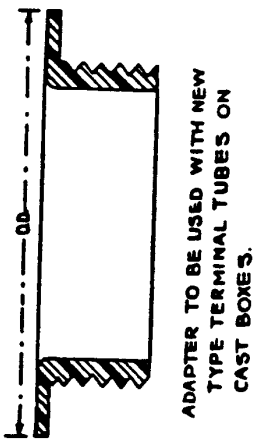
Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/13

STEEL TERMINAL TUBE INFORMATION

Tube Size	Tube Clearance Drill Size	I. D. Packing Gland	Tube Size	Tube Clearance Drill Size	I. D. Packing Gland
A	9/16	13/32	N	1¾	1-17/32
B	11/16	17/32	P	1-7/8	1¾
C	13/16	21/32	R	2	1-25/32
D	15/16	25/32	S	2¼	1-29/32
E	1	27/32	T	2¼	2-1/16
F	1	7/8	V	2¼	2-3/16
G	1¼	29/32	W	2-11/16	2-5/16
H	1¼	31/32	X	2-13/16	2¼
J	1¼	1-1/16	Y	2-15/16	2¾
K	1¼	1-5/32	Z	3¼	2-13/16
L	1-7/16	1¾	Z-1	3¼	3
M	1-9/16	1-13/32	AA	3-3/16	2-29/32
			BB	3-7/16	3¼

CRMC-Motley1000-Subj-001848

SIZE OF FITTER	O.D. OF FITTER	PIPE TAP SIZE	FOR STEEL TUBE SIZE	SIZE OF FITTER	O.D. OF FITTER	PIPE TAP SIZE	FOR STEEL TUBE SIZE
A	1 1/4	1/2	A	N	2 1/8	2	N P&R
A-1	1 1/4	1/2	B	N-1	2 3/8	2	S
C	1 1/2	3/4	C	T	3 3/8	2 1/2	T
D	1 3/4	1	D E & F	T-1	3 3/8	2 1/2	V
D-1	1 3/4	1	G	W	4	3	W X & Y
J	2 3/16	1 1/4	J & K	W-1	4	3	Z
J-1	2 3/16	1 1/4	L	AA	4 1/2	3 1/2	AA & BB
M	2 7/16	1 1/4	M				



ADAPTER TO BE USED WITH NEW TYPE TERMINAL TUBES ON CAST BOXES.

—11—

CRMC-Motley1000-Subj-001849

Deck and Bulkhead Type Stuffing Tubes

Type XXX	Type XXXI	Type XXXII
Used on bulkheads or decks, when pipe risers are not required.	Used in decks where pipe risers, or kick pads are required. Not required on extra strong pipe	Used in decks where cement covering, wood, or tiling is present. Not required on extra strong pipe

—12—

CRMC-Motley1000-Subj-001850

STANDARD PIPE DIMENSIONS
BLACK AND GALVANIZED

Size, Inch	Diameters, Inches		Thickness, Inches	Drill Clearance Hole	Inside Pipe Measurement
	External	Internal			
⅛	.675	.493	.091	11/16"	31/64"
¼	.840	.622	.109	7/8"	39/64"
⅜	1.050	.824	.113	1⅛"	13/16"
1	1.315	1.049	.133	1⅜"	1-3/64"
1¼	1.660	1.380	.140	1-11/16"	1⅜"
1½	1.900	1.610	.145	1-15/16"	1-36/64"
2	2.375	2.067	.154	2-7/16"	2-1/16"
2½	2.875	2.469	.203	2-15/16"	2-15/32"
3	3.500	3.068	.216	3-9/16"	3-1/16"
3½	4.000	3.548	.226	4-1/16"	3-35/64"
4	4.500	4.026	.237	4-9/16"	4-1/64"
4½	5.000	4.506	.247	5-1/16"	4½"
5	5.563	5.047	.258	5-9/16"	5-3/64"
6	6.625	6.065	.280	6-11/16"	6-1/16"

EXTRA STRONG PIPE, CLEARANCE HOLE SIZES, ETC.
BLACK AND GALVANIZED

Size, Inch	Diameters, Inches		Thickness, Inches	Drill Clearance Hole	Inside Pipe Measurement
	External	Internal			
⅛"	.675	.423	.126	11/16"	27/64"
¼"	.840	.546	.147	7/8"	35/64"
⅜"	1.050	.742	.154	1⅛"	47/64"
1"	1.315	.957	.179	1⅜"	61/64"
1¼	1.660	1.278	.191	1-11/16"	1-17/64"
1½	1.900	1.500	.200	1-15/16"	1½"
2	2.375	1.939	.218	2-7/16"	1-15/16"
2½	2.875	2.323	.276	2-15/16"	2-5/16"
3	3.500	2.900	.300	3-9/16"	2-57/64"
3½	4.000	3.364	.318	4-1/16"	3-23/64"
4	4.500	3.826	.337	4-9/16"	3-53/64"
4½	5.000	4.290	.355	5-1/16"	4-9/32"
5	5.563	4.813	.375	5-9/16"	4-13/16"
6	6.625	5.761	.432	6-11/16"	5¾"

CRMC-Motley1000-Subj-001851

SHFA

MIN DIA. 92.5% MAX.

Cable Size	Max. Dia.	Tube	Pipe Size	Clearance Holes XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill	Clamp Size	Pack Size	Cap. Amp.
.3	23/64	B	½	1-7/16	7/8	35/64	½	1-7/16	¾	27/64	A	¾	22
.4	½	C	¾	1-9/16	1⅛	47/64	⅝	1½	1	37/64	C11	3/16	30
.9	21/32	D*	¾	1-11/16	1⅛	47/64	⅝	1½	1⅛	47/64	G	¾	62
.14	11/16	D*	¾	1-11/16	1⅛	47/64	13/16	1⅝	1⅛	49/64	H	3/16	89
.23	23/32	E*	¾	1-11/16	1⅛	47/64	13/16	1⅝	1-3/16	51/64	J	¾	112
.30	3/4	E*	¾	1-11/16	1⅛	47/64	13/16	1⅝	1-3/16	27/32	K-1	¾	135
.40	25/32	F	1	1⅝	1⅜	61/64	⅞	2	1¼	7/8	K-11	3/16	159
.50	51/64	F	1	1⅝	1⅜	61/64	⅞	2	1¼	29/32	L	3/16	181
1.60	53/64	G	1	2-1/16	1⅜	61/64	⅞	2	1¼	15/16	M	¾	204
.75	7/8	G	1	2-1/16	1⅜	61/64	15/16	2	1¼	31/32	N	¾	240
.100	59/64	G	1	2-1/16	1⅜	61/64	1-1/16	2	1¼	1	O	3/16	279
.125	61/64	J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2¾	1½	1-5/64	P-11	¾	325
.150	1-1/64	J	1¼	2-3/16	1-11/16	1-17/64	1⅛	2¾	1½	1-7/64	Q-1	¾	375
.200	1-1/16	K	1¼	2-5/16	1-11/16	1-17/64	1-5/16	2¾	1-9/16	1-7/64	W-1	¾	482
.300	1-3/16	M	1½	2-9/16	1-15/16	1½	1⅜	2¾	1-13/16	1-13/64	W-2	¾	556
.400	1-11/32	M	1½	2-9/16	1-15/16	1½	1-7/16	2¾	1-13/16	1-19/64	W-4	¾	694
.500	1-27/64	N	1½	2¾	1-15/16	1⅝	1-9/16	2¾	1-15/16	1-13/32	W-5	¾	812
.660	1-17/32	P	2	2¾	2-7/16	1-15/16	1¾	3-3/16	2-1/16	1-17/32	X-6	¾	945
.800	1-21/32	R	2	3	2-7/16	1-15/16	1-13/16	3-3/16	2¼	1-39/64	X-7	¾	1120

* D&E Riser Heads are furnished in ¾" or 1" Pipe Size.
Aluminum Bushing identifications are the same as tubes.

—14—

CRMC-Motley1000-Subj-001852

DHFA

MIN. DIA. 92.5% MAX.

Cap. Amp.	Size CM	Max. Dia.		Tube	Pipe Size	Clearance Holes						Clamp Size	Pack Size	Cap. Amp.
						XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill			
22	3	17/32		C	¾	1-9/16	1½	47/64	¾	1½	1	39/64	D	¼	19
30	4	25/32		F	1	1¾	1¾	61/64	¾	2	1¼	¾	K-11	3/16	26
62	9	27/32		G	1¼	2-1/16	1¾	61/64	15/16	2	1¾	15/16	M	¼	54
89	14	59/64		J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2¾	1¾	1-3/64	P-1	¼	71
112	23	63/64		J	1¼	2-3/16	1-11/16	1-17/64	1¼	2¾	1½	1-7/64	Q-1	¼	94
135	30	1-7/64		K	1¼	2-5/16	1-11/16	1-17/64	1-3/16	2¾	1-9/16	1-9/64	W-1	¼	114
159	40	1-11/64		L	1¼	2⅝	1-11/16	1-17/64	1¼	2¾	1-11/16	1-13/64	W-2	¼	130
181	50	1-7/32		M	1¼	2-9/16	1-15/16	1½	1-5/16	2¾	1-13/16	1¾	W-3	¼	150
204	60	1-11/32		N	1½	2¾	1-15/16	1¾	1-7/16	2¾	1-15/16	1¾	W-5	¼	170
240	75	1-15/32		P	2	2-7/8	2-7/16	1-15/16	1-9/16	3-3/16	2-1/16	1-31/64	X-6	¼	200
279	100	1-19/32		R	2	3	2-7/16	1-15/16	1-11/16	3-3/16	2¼	1-39/64	X-7	5/16	238
325	125	1-43/64		S	2	3¼	2-7/16	1-15/16	1-13/16	3-3/16	2⅝	1-45/64	X-8	5/16	276
375	150	1-55/64		T	2½	3-9/16	2-15/16	2-5/16	2	3-11/16	2-9/16	1-55/64	Y-10	⅜	320
482	200	1-31/32		T	2½	3-9/16	2-15/16	2-5/16	2-1/16	3-11/16	2-9/16	1-31/32	Y-11	⅜	365
556	250	2-9/64		W	2½	3-13/16	2-15/16	2-5/16	2¼	3-11/16	2-13/16	2-5/32	Y-12	7/16	430
694	300	2-9/32		X	3	3-15/16	3-9/16	2-7/8	2⅝	4-5/16	3	2-9/32	Y-13	7/16	490
812	400	2½		Y	3	4-1/16	3-9/16	2-7/8	2¾	4-5/16	3-1/16	2-33/64	Z-15	⅜	590
945															
1121															

Aluminum Bushing identifications are the same as tubes.

—15—

CRMC-Motley1000-Subj-001853

TIFA

MIN. DIA 92.5% MAX.

Size C.M.	Dia. Max.		Tube	Pipe Size	Clearance Holes						Clamp Size	Pack. Size	Cap. Amp.
					XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXXI Deck	Alum. Bush.	Clamp Drill			
3	9/16		C	¾	1-9/16	1¼	47/64	⅝	1⅝	1	41/64	E	3/16	16
4	13/16		G	¾	2-1/16	1¾	61/64	7/8	2	1¾	15/16	M	3/16	22
9	7/8		G	1	2-1/16	1¾	61/64	1	2	1¾	1	O	¼	49
14	31/32		J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2⅜	1½	1-5/64	P-11	¼	62
23	1-3/64		K	1¼	2-5/16	1-11/16	1-17/64	1¼	2⅜	1-9/16	1-9/64	Q-11	¼	82
30	1-11/64		L	1¼	2⅜	1-11/16	1-17/64	1¼	2⅜	1-11/16	1-13/64	W-11	¼	100
40	1-15/64		M	1½	2-9/16	1-15/16	1½	1-5/16	2⅝	1-13/16	1¾	W-3	¼	115
50	1-19/64		M	1½	2-9/16	1-15/16	1½	1⅜	2⅝	1-13/16	1-19/64	W-4	¼	134
60	1-27/64		N	1½	2¾	1-15/16	1½	1-9/16	2⅝	1-15/16	1-7/16	W-5	¼	151
75	1-9/16		P	2	2¾	2-7/16	1-15/16	1-11/16	3-3/16	2-1/16	1-9/16	X-7	¼	176
100	1-11/16		R	2	3	2-7/16	1-15/16	1-13/16	3-3/16	2¼	1-45/64	X-8	¼	208
125	1-25/32		S	2	3¾	2-7/16	1-15/16	1-7/8	3-3/16	2¾	1-51/64	Y-9	⅜	245
150	1-31/32		T	2½	3-9/16	2-15/16	2-6/16	2-1/16	3-11/16	2-9/16	1-31/32	Y-11	⅜	281
200	2-3/32		V	2½	3-11/16	2-15/16	2-5/16	2-3/16	3-11/16	2-11/16	2-7/64	Y-12	⅜	325
250	2-9/32		X	3	3-15/16	3-9/16	2-57/64	2⅜	4-5/16	3	2-9/32	Y-13	7/16	375
300	2-7/16		X	3	3-15/16	3-9/16	2-57/64	2½	4-5/16	3	2-29-64	Z-15	5/16	417
400	2-43/64		Z	3	4-5/16	3-9/16	2-57/64	2⅝	4-5/16	3½	2-11/16	Z-16	⅜	520

Aluminum Bushing identifications are the same as tubes.

CRMC-Motley1000-Subj-001854

MIN. DIA. 92.5% MAX. MHFA

No. Wires	Max. Dia.	Appr.	Tube	Pipe Size	Clearance Holes							Clamp Size	Pack. Size	Cab. Amps.
					XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill			
2	17/32		C	¾	1-9/16	1¼	47/64	¾	1¾	1	39/64	D	3/16	16.
4	¾		D*	¾	1-11/16	1¼	47/64	¾	1¾	1¼	7/8	K11	3/16	22.
7	27/32		G	1	2-1/16	1¾	61/64	7/8	2	1¾	31/32	N	¼	49.
10	1-3/64		J	1¼	2-3/16	1-11/16	1-17/64	1¼	2¼	1¾	1-9/64	Q11	3/16	62.
14	1⅛		K	1¼	2-5/16	1-11/16	1-17/64	1-3/16	2¼	1-9/16	1-9/64	W1	¼	82.
19	1-3/16		L	1½	2¾	1-11/16	1-17/64	1¼	2¾	1-11/16	1¼	W3	¼	00.
22	1-21/64		M	1½	2-9/16	1-15/16	1½	1¾	2¾	1-13/16	1¾	W5	¼	15.
26	1-7/16		N	1½	2¾	1-15/16	1½	1¾	2¾	1-15/16	1-7/16	W5	¼	34.
30	1-27/64		N	1½	2¾	1-15/16	1¾	1-9/16	2¾	1-15/16	1-31/64	X6	¼	51.
37	1-19/32		P	2	2-7/8	2-7/16	1-15/16	1-11/16	3-3/16	2-1/16	1-39/64	X7	¼	76.
44	1-23/32		S	2	3	2-7/16	1-15/16	1-13/16	3-3/16	2¾	1-47/64	Y9	¾	08.

* D & E Riser Heads are furnished in ¾" or 1" Pipe Size.
Aluminum Bushing identifications are the same as tubes.

—17—

CRMC-Motley1000-Subj-001855

MHFP

MIN. DIA. 92.5% MAX.

No. Wires	Max. Dia.	Tube	Pipe Size	Clearance Holes: XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill	Clamp Size	Pack. Size	Cap. Amps.
2	15/32	C	¾	1-9/16	1¼	47/64	¾	1¾	1	9/16	C-11		
4	17/32	C	¾	1-9/16	1¼	47/64	¾	1¾	1	41/64	E		
7	39/64	D*	¾	1-11/16	1¼	47/64	¾	1¾	1¼	11/16	F		
10	49/64	E*	¾	1-11/16	1¼	47/64	13/16	1-11/16	1-3/16	29/32	L		
14	55/64	G	1	2-1/16	1¾	61/64	7/8	2	1¾	31/32	N		
19	61/64	J	1¼	2-3/16	1-11/16	1-17/64	1	2¾	1¾	1-6/64	P-11		
22	1⅛	K	1¼	2-5/16	1-11/16	1-17/64	1¼	2¾	1-9/16	1-9/64	W1		
26	1-5/32	L	1¼	2¾	1-11/16	1-17/64	1¼	2¾	1-11/16	1-11/64	W2		
30	1-13/64	L	1¼	2¾	1-11/16	1-17/64	1¼	2¾	1-11/16	1¾	W3		
37	1-19/64	M	1½	2-9/16	1-15/16	1¼*	1½	2¾	1-13/16	1-19/64	W4		
44	1-29/64	N	1½	2¾	1-15/16	1½	1½	2¾	1-13/16	1-31/64	X6		

* D & E. Riser Heads are furnished in ¾" or 1" Pipe Size.
Aluminum Bushing identifications are the same as tubes.

CRMC-Motley1000-Subj-001856

MIN. DIA. 92.5% MAX.

Size C.M.	Max. Dia.	Tube	Pipe Size	Clearance Holes: XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXXI Deck	Alum. Bush.	Clamp Drill	Clamp Size	Pack Size	Cap Amps
4	11/32	A	¾	1-5/16	11/16	31/64	¾	1¼	¾	¾	AA	¼	17
9	39/64	C	¾	1-9/16	1¼	47/64	11/16	1½	1	11/16	P	3/16	35
14	41/64	D*	¾	1-11/16	1¼	47/64	¾	1½	1¼	11/16	F	¼	47
23	11/16	D*	¾	1-11/16	1¼	47/64	¾	1½	1¼	49/64	H	¼	62
30	23/32	E*	¾	1-11/16	1¼	47/64	13/16	1½	1-8/16	27/32	I	¼	76
40	¾	E*	¾	1-11/16	1¼	47/64	13/16	1½	1-3/16	27/32	I	¼	86
50	25/32	F	1	1¾	1¼	61/64	7/8	2	1¼	29/32	L	¼	100
60	13/16	G	1	2-1/16	1¼	61/64	7/8	2	1¼	15/16	M	5/16	113
75	55/64	G	1	2-1/16	1¼	61/64	16/16	2	1¼	31/32	N	¼	132
100	29/32	G	1	2-1/16	1¼	61/64	1	2	1¼	1	O	¼	156
125	31/32	J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2½	1½	1-5/64	P-11	5/16	180
150	1-3/64	J	1¼	2-3/16	1-11/16	1-17/64	1¼	2½	1½	1-9/64	Q-11	½	210
200	1-3/32	K	1¼	2-5/16	1-11/16	1-17/64	1-3/16	2½	1-9/16	1-11/64	W-1	3/16	242
250	1-11/64	L	1¼	2¾	1-11/16	1-17/64	1¼	2½	1-11/16	1-13/64	W-2	¼	280
300	1-15/64	M	1½	2-9/16	1-15/16	1½	1-5/16	2½	1-13/16	1¼	W-3	5/16	312
400	1¾	M	1½	2-9/16	1-15/16	1½	1-7/16	2½	1-13/16	1-13/32	W-5	¼	387
500	1-15/32	N	1½	2¾	1-15/16	1½	1-9/16	2½	1-15/16	1-31/64	X-6	¼	450
650	1-37/64	P	2	2-7/8	2-7/16	1-15/16	1-11/16	3-3/16	2-1/16	1-39/64	X-7	5/16	535
800	1-11/16	R	2	3	2-7/16	1-15/16	1-13/16	3-3/16	2¼	1-45/64	X-8	¼	620
1000	1-63/64	S	2	3¾	2-7/16	1-15/16	1-15/16	3-3/16	2¾	1-55/64	Y-10	¾	720
1600	2¼	V	2½	3-11/16	2-15/16	2-5/16	2-3/16	3-11/16	2-11/16	2-5/32	Y-12	¾	940

* D & E Riser Heads are furnished in ¾" or 1" Pipe Size.
Aluminum Bushing identifications are the same as tubes.

CRMC-Motley1000-Subj-001857

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/23

DLPA

MIN. DIA. 92.5% MAX.

Size M.	Max. Dia.		Tube	Pipe Size	Clearance Holes						Clamp Size	Pack Size	Cap. Amps.
					XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill			
4	11/16		D*	¾	1-11/16	1¾	47/64	13/16	1¾	1¾	51/64	J	¾	15
9	16/16		J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2¾	1¾	1-3/64	P-1	5/16	30
14	1		J	1¼	2-3/16	1-11/16	1-17/64	1⅛	2¾	1¾	1-7/64	Q-1	¾	40
23	1-3/32		K	1¼	2-5/16	1-11/16	1-17/64	1-3/16	2¾	1-9/16	1-7/64	W-1	¾	53
30	1-11/64		L	1¼	2¾	1-11/16	1-17/64	1¼	2¾	1-11/16	1-13/64	W-2	5/16	64
40	1-7/32		L	1¼	2¾	1-11/16	1-17/64	1-5/16	2¾	1-11/16	1¾	W-3	¾	73
50	1-19/64		M	1¾	2-9/16	1-15/16	1½	1¾	2¾	1-13/16	1-19/64	W-4	5/16	85
60	1-23/64		M	1¾	2-9/16	1-15/16	1¾	1-7/16	2¾	1-13/16	1¾	W-5	5/16	96
75	1-29/64		N	1¼	2¾	1-15/16	1½	1-9/16	2¾	1-15/16	1-31/64	X-6	5/16	111
100	1-9/16		P	2	2-7/8	2-7/16	1-15/16	1-11/16	3-3/16	2-1/16	1-9/16	X-7	¾	133
125	1-11/16		R	2	3	2-7/16	1-15/16	1-13/16	3-3/16	2¾	1-45/64	X-8	¾	163
150	1-51/64		S	2	3¼	2-7/16	1-15/16	1-7/8	3-3/16	2¾	1-51/64	Y-9	⅝	179
200	1-57-64		T	2½	3-9/16	2-15/16	2-5/16	2-1/16	3-11/16	2-9/16	1-15/16	Y-10	7/16	206
250	2-7/64		V	2½	3-11/16	2-15/16	2-5/16	2-3/16	3-11/16	2-11/16	2-7/16	Y-12	⅝	238
300	2¼		W	2½	3-13/16	2-15/16	2-5/16	2-5/16	3-11/16	2-13/16	2¼	Y-13	⅝	265
400	2½		Y	3	4-1/16	3-9/16	2-7/8	2½	4-5/16	3-1/16	2-33/64	Z-15	½	329

* D & E Riser Heads are furnished in ¾" or 1" Pipe Size.
Aluminum Bushing identifications are the same as tubes.

—20—

CRMC-Motley1000-Subj-001858

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/24

TPTA

MIN. DIA. 92.5% MAX.

No. Pairs	Max. Dia.		Tube	Pipe Size	Clearance Holes							C Clamp Size	Pack
					XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX-1 Deck	Alum. Bush.	Clamp Drill		
1	⅜		B	½	1-7/16	7/8	35/64	7/16	1-7/16	7/8	½	B	¼
3	15/32		B	½	1-7/16	7/8	35/64	9/16	1-7/16	7/8	37/64	C11	¼
6	43/64		D*	¾	1-11/16	1¼	47/64	¾	1¾	1⅛	49/64	H	¼
10	¾		E*	¾	1-11/16	1¼	47/64	13/16	1¾	1-3/16	7/8	K11	3/16
15	13/16		F	1	1¾	1¾	61/64	7/8	2	1¼	29/32	L	3/16
20	27/32		G	1	2-1/16	1¾	61/64	15/16	2	1⅜	31/32	N	¼
25	29/32		G	1	2-1/16	1¾	61/64	1	2	1⅜	1	O	5/16
30	15/16		J	1¼	2-3/16	1-11/16	1-17/64	1	2¼	1½	1-3/64	P1	¼
40	1		J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2¼	1-9/16	1-7/64	Q1	¼
50	1-5/64		K	1¼	2-5/16	1-11/16	1-17/64	1-3/16	2¼	1-9/16	1-7/64	W1	5/16
60	1⅛		K	1¼	2-5/16	1-11/16	1-17/64	1-3/16	2¼	1-9/16	1-9/64	W1	5/16

* D & E Riser Heads are furnished in ¾" or 1" Pipe Size.
Aluminum Bushing identifications are the same as Tubes.

—23—

CRMC-Motley1000-Subj-001859

TPTP

MIN. DIA. 92.5% MAX.

Pipe Size	Dia.	Tube	Adapter Size	Clearance Holes							Pack
				XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill	SQ Clamp Size	
3	7/16	B	¼	1-7/16	7/8	35/64	¼	1-7/16	7/8	17/32	C1	3/16
5	41/64	D*	¾	1-11/16	1¼	47/64	¾	1¾	1¼	47/64	G	¼
10	¾	E*	¾	1-11/16	1¼	47/64	13/16	1¾	1-3/16	27/32	K1	3/16
15	51/64	G	1	2-1/16	1½	61/64	7/8	2	1½	29/32	L	3/16
20	27/32	G	1	2-1/16	1½	61/64	15/16	2	1½	31/32	N	¼
25	57/64	G	1	2-1/16	1½	61/64	15/16	2	1½	1	O	¼
30	59/64	G	1	2-1/16	1½	61/64	15/16	2	1½	1-3/64	P1	¼
40	1	J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2½	1½	1-7/64	Q1	¼
50	1-5/64	K	1¼	2-5/16	1-11/16	1-17/64	1-3/16	2½	1-9/16	1-7/64	W1	5/16
60	1¼	K	1¼	2-5/16	1-11/16	1-17/64	1-3/16	2½	1-9/16	1-9/64	W1	¼

*D & E Riser Heads are furnished in ¾" or 1" Pipe Size.
Aluminum Bushing identifications are the same as Tubes.

CRMC-Motley1000-Subj-001860

TPTF

MIN. DIA. 92.5% MAX.

No. Pairs	Max. Dia.		Tube	Pack Size	Clearance Holes						Clamp Size	Pack Size
					XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXXI Deck	Alum. Bush.	Clamp Drill	
1	29/64		B	¼	1-7/16	7/8	35/64	¼	1-7/16	7/8	17-32	C-1 3/16
3	13/16		G	1	2-1/16	1-3/8	61/64	7/8	2	1¼	29/32	L 5/16
5	15/16		J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2¼	1¼	1-3/64	P-1 5/16
10	1-23/64		M	1½	2-9/16	1-15/16	1½	1-7/16	2¾	1-13/16	1¾	W-5 ¼
15	1-9/16		P	2	2-7/8	2-7/16	1-15/16	1-11/16	3-3/16	2-1/16	1-9/16	X-7 ¼

Aluminum Bushing identifications are the same as Tubes.

CRMC-Motley1000-Subj-001861

TLPA

MIN. DIA. 92.5% MAX.

Cap. Amps.	Size C.M.	Max. Dia.	Tube	Pipe Size	Clearance Holes: XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill	Clamp Size	Pack. Size	C
15	4	.36	E*	¾	1-11/16	1¼	47/64	13/16	1¾	1-3/16	27/32	K-1	3/16	.113
20	9	63/64	J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2¾	1½	1-5/64	P-11	¼	.126
40	14	1-3/64	K	1¼	2-5/16	1-11/16	1-17/64	1½	2¾	1-9/16	1-9/64	Q-11	¼	.135
53	23	1-9/64	L	1¼	2¾	1-11/16	1-17/64	1¼	2¾	1-11/16	1-11/64	W-2	⅜	.146
61	30	1-7/32	L	1¼	2¾	1-11/16	1-17/64	1-5/16	2¾	1-11/16	1¼	W-3	½	.157
73	40	1-9/32	M	1½	2-9/16	1-15/16	1½	1⅜	2¾	1-13/16	1-19/64	W-4	5/16	.165
85	60	1-23/64	M	1½	2-9/16	1-15/16	1½	1-7/16	2¾	1-13/16	1⅜	W-5	¼	.175
96	60	1-7/16	N	1½	2¾	1-15/16	1¼	1-9/16	2¾	1-15/16	1-7/16	W-6	¼	.185
111	75	1-17/32	P	2	2-7/8	2-7/16	1-15/16	1¾	3-3/16	2-1/16	1-9/16	X-7	5/16	.199
133	100	1-41/64	R	2	3	2-7/16	1-15/16	1¾	3-3/16	2¼	1-41/64	X-8	5/16	.217
153	125	1-25/32	S	2	3¼	2-7/16	1-15/16	1-7/8	3-3/16	2⅜	1-55/64	Y-10	7/16	.235
179	150	1-57/64	T	2½	3-9/16	2-15/16	2-5/16	2	3-11/16	2-9/16	1-59/64	Y-10	7/16	.258
206	200	2-1/32	V	2½	3-11/16	2-15/16	2-5/16	2⅛	3-11/16	2-11/16	2-3/64	Y-11	7/16	.282
238	250	2-7/32	W	3	3-13/16	3-9/16	2-7/8	2-5/16	4-5/16	2-13/16	2¼	Y-13	⅝	.314
265	300	2⅜	X	3	3-16/16	3-9/16	2-7/8	2½	4-5/16	3	2-25/64	Z-14	7/16	.344
329	400	2-43/64	Z	3	4¼	3-9/16	2-7/8	2¾	4-5/16	3⅛	2-11/16	Z-16	⅝	.390

* D & E Riser Heads are furnished in ⅝" or 1" Pipe Size.
Aluminum Bushing identifications are the same as Tubes.

—21—

CRMC-Motley1000-Subj-001862

THFA

MIN. DIA. 92.5% MAX.

No. Pairs	Max. Dia.	Appr.	Tube	Pipe Size	Clearance Holes						Clamp Size	Packing
					XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill		
1	7/16		B	½	1-7/16	7/8	35/64	9/16	1-7/16	7/8	37/64	CII	3/16
3	9/16		C	¾	1-9/16	1⅛	47/64	⅝	1⅝	1	41/64	E	3/16
5	⅝		C	¾		1⅛	47/64	11/16	1⅝	1	11/16	F	3/16
10	¾		D*	¾	1-11/16	1⅛	47/64	13/16	1⅝	1⅛	49/64	H	3/16
15	47/64		E*	1	1-11/16	1⅜	61/64	⅞	1⅝	1-13/16	27/32	K1	¼
20	25/32		F	1		1⅜	61/64	⅞	2	1¼	29/32	L	3/16
25	27/32		G	1	2-1/16	1⅜	61/64	15/16	2	1⅜	15/16	M	¼
30	⅞		G	1	2-1/16	1⅜	61/64	1	2	1⅜	31/32	N	¼
40	15/16		J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2½	1½	1-3/64	P1	¼
50	1-1/64		J	1¼	2-3/16	1-11/16	1-17/64	1⅛	2½	1½	1-7/64	Q1	¼
60	1-5/32		L	1¼	2¾	1-11/16	1-17/64	1¼	2½	1-9/16	1-11/64	W2	¼

*D & E Riser Heads are furnished in ¾" or 1" Pipe Size.
Aluminum Bushing identifications are the same as Tubes.

CRMC-Motley1000-Subj-001863

TPTA

MIN. DIA. 92.5% MAX.

No. Pairs	Diam.		Tube	Pipe Size	Clearance Holes						Clamp Size	Pack
					XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX-I Deck	Alum. Bush.	Clamp Drill	
1	¾		B	½	1-7/16	7/8	35/64	7/16	1-7/16	7/8	½	¼
3	15/32		B	½	1-7/16	7/8	35/64	9/16	1-7/16	7/8	37/64	¼
5	43/64		D*	¾	1-11/16	1¼	47/64	¾	1¾	1¼	49/64	¼
10	¾		E*	¾	1-11/16	1¼	47/64	13/16	1¾	1-3/16	7/8	3/16
15	13/16		F	1	1¾	1¼	61/64	7/8	2	1¼	29/32	3/16
20	27/32		G	1	2-1/16	1¼	61/64	15/16	2	1¼	31/32	¼
25	29/32		G	1	2-1/16	1¼	61/64	1	2	1¼	1	¼
30	15/16		J	1¼	2-3/16	1-11/16	1-17/64	1	2½	1½	1-3/64	5/16
40	1		J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2½	1-9/16	1-7/64	¼
50	1-5/64		K	1½	2-5/16	1-11/16	1-17/64	1-3/16	2½	1-9/16	1-7/64	5/16
60	1¼		K	1½	2-5/16	1-11/16	1-17/64	1-3/16	2½	1-9/16	1-9/64	5/16

Clamp Size	Pack
B	¼
C11	¼
H	¼
K11	3/16
L	3/16
N	¼
O	¼
P1	5/16
Q1	¼
W1	5/16
W1	5/16

* D & E Riser Heads are furnished in ¾" or 1" Pipe Size.
Aluminum Bushing identifications are the same as Tubes.

—23—

CRMC-Motley1000-Subj-001864

TPTP

MIN. DIA. 92.5% MAX.

No. Pairs	Max. Dia.		Tube	Pipe Size	Clearance Holes							Clamp Size	Pack.
					XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill		
3	7/16		B	½	1-7/16	7/8	35/64	¼	1-7/16	7/8	17/32	C1	3/16
5	41/64		D*	¾	1-11/16	1¼	47/64	¾	1¼	1¼	47/64	G	¼
10	¾		E*	¾	1-11/16	1¼	47/64	13/16	1¼	1-3/16	27/32	K1	3/16
15	51/64		G	1	2-1/16	1½	61/64	7/8	2	1½	29/32	L	3/16
20	27/32		G	1	2-1/16	1½	61/64	15/16	2	1½	31/32	N	¼
25	57/64		G	1	2-1/16	1½	61/64	15/16	2	1½	1	O	¼
30	69/64		G	1	2-1/16	1½	61/64	15/16	2	1½	1-3/64	P1	¼
40	1		J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2½	1½	1-7/64	Q1	¼
50	1-5/64		K	1¼	2-5/16	1-11/16	1-17/64	1-3/16	2½	1-9/16	1-7/64	W1	5/16
60	1¼		K	1¼	2-5/16	1-11/16	1-17/64	1-3/16	2½	1-9/16	1-9/64	W1	¼

*D & E Riser Heads are furnished in ¾" or 1" Pipe Size.
Aluminum Bushing identifications are the same as Tubes.

—24—

CRMC-Motley1000-Subj-001865

MIN. DIA. 92.5% MAX.

TPTF

No. Pairs	Mfr. Dia.		Tube	Pack Size	Clearance Holes							Clamp Size	Pack Size
					XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill		
1	29/64		B	¼	1-7/16	7/8	35/64	¼	1-7/16	7/8	17-32	C-1	3/16
3	13/16		G	1	2-1/16	1-3/8	61/64	7/8	2	1¼	29/32	L	15/16
5	15/16		J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2¼	1¼	1-3/64	P-1	15/16
10	1-23/64		M	1½	2-9/16	1-15/16	1½	1-7/16	2¾	1-13/16	1¾	W-5	¼
15	1-9/16		P	2	2-7/8	2-7/16	1-15/16	1-11/16	3-3/16	2-1/16	1-9/16	X-7	¼

Aluminum Bushing identifications are the same as Tubes.

—25—

CRMC-Motley1000-Subj-001866

CRMC-Motley1000-Subj-001867

MIN. DIA. 92.5% MAX.

GICA

No. Wires	Max. Dia.		Tube	Pipe Size	Clearance Holes						Clamp Size	Pack.
					XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill	
2	17/32		C	¾	1-9/16	1¾	47/64	¾	1¾	1	41/64	E ⅝
4	¾		FG	1	1¾	1¾	61/64	61/64	2	1¼	7/8	K11 ⅝
7	55/64		G	1	2-1/16	1¾	61/64	61/64	2	1¼	7/8	K11 ⅝
10	1-1/32		J	1¼	2-3/16	1-11/16	1-17/64	1¾	2¾	1¾	1-9/64	Q11 ¾
14	1-5/64		K	1¼	2-5/16	1-11/16	1-17/64	1-3/16	2¾	1¾	1-9/64	Q11 ¾
19	1-11/64		L	1¼	2¾	1-11/16	1-17/64	1¾	2¾	1-9/16	1-11-64	W1 5/16
22	1-9/32		M	1¼	2-9/16	1-16/16	1¾	1¾	2¾	1-11/16	1-13/64	W2 ¾
26	1-21/64		MN	1¼	2-9/16	1-16/16	1¾	1¾	2¾	1-13/16	1-19/64	W4 5/16
30	1-13/32		P	1¼	2¾	1-16/16	1¾	1-7/16	2¾	1-13/16	1-11/32	W4 5/16
37	1-31/64		P	1¼	2¾	1-16/16	1¾	1¾	2¾	1-15/16	1-13/32	W5 5/16
44	1-19/32		P	2	2-7/8	2-7/16	1-15/16	1-9/16	3-3/16	2-1/16	1-17/32	X6 ¾
					2-7/8	2-7/16	1-15/16	1-11/16	3-3/16	2-1/16	1-39/64	X7 ¾

Aluminum Bushing Identifications are the same as Tubes.

Published by AsbestosClaims.Law

asbestosclaims.law/library/24118/33

GICF

MIN. DIA. 92.5% MAX.

No. of Wires	Max. Dia.		Tube	Stripe Size	Clearance Holes						Clamp Size	Pack
					XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXXI Deck	Alum. Bush.	Clamp Drill	
2	.29/64		B	½	1-7/16	7/8	.35/64	½	1-7/16	7/8	37/64	¼
7	.39/64		C	¾	1-9/16	1½	.47/64	11/16	1½	1	11/16	3/16
10	.25/32		F	1	1¾	1¾	.61/64	7/8	2	1¼	1	¼
14	.15/16		J	1¼	2-3/16	1-11/16	1-17/64	1-1/16	2½	1½	1-3/64	5/16
19	1¼		L	1½	2½	1-11/16	1-17/64	1-5/16	2½	1-11/16	1-19/64	¼
22	1-13/32		N	1½	2¾	1-15/16	1¾	1½	2½	1-15/16	1-13/32	5/16
26	1-31/64		P	2	2-7/8	2-7/16	1-15/16	1-9/16	3-3/16	2-1/16	1-31/64	5/16
30	1½		P	2	2-7/8	2-7/16	1-15/16	1¾	3-3/16	2-1/16	1-17/32	5/16
37	1½		P	2	2-7/8	2-7/16	1-15/16	1½	3-3/16	2-1/16	1-17/32	5/16
44	1-21/32		R	2	3	2-7/16	1-15/16	1-11/16	3-3/16	2¼	1-45/64	3/16

Clamp Size	Pack
C1L	¼
F	3/16
O	¼
P-1	5/16
W4	¼
W6	5/16
X6	5/16
X6	5/16
X6	5/16
X8	3/16

Aluminum Bushing identifications are the same as Tubes.

—27—

CC

CRMC-Motley1000-Subj-001868

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/34

MIN. DIA. 92.5% MAX.

D.C.P. & D.C.O.P.

Size	Max. Dia.		Tube	Pipe	Clearance Holes							Clamp Size	Pack.
					XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill		
½ (t1)	¼		A	⅜	1-5/16	11/16	27/64	⅜	1¼	⅝	⅝	AA	⅜
½ (t2)	3/16		A	⅜	1-5/16	11/16	27/64	⅜	1¼	⅝	⅝	AA	½
1	¼		A	½	1-5/16	11/16	27/64	⅜	1¼	⅝	⅝	AA	½
1¼	5/16		A	¾	1-5/16	11/16	27/64	⅜	1½	⅝	27/64	A	½
2	9/32		A	¾	1-5/16	11/16	27/64	7/16	1¾	⅝	27/64	A	½
2½	11/32		B	½	1-7/16	⅞	35/64	7/16	1-7/16	17/32	17/32	C1	5/16
3	7/16		B	½	1-7/16	⅞	35/64	½	1-7/16	⅞	17/32	C1	½
4	29/64		B	½	1-7/16	⅞	35/64	½	1-7/16	⅞	37/64	C11	½
6	33/64		C	¾	1-9/16	1⅛	47/64	½	1⅝	1	39/64	D	½
9	17/32		C	¾	1-9/16	1⅛	47/64	½	1⅝	1	39/64	D	½
14	59/64		G	1	2-1/16	1⅝	61/64	1	2	1⅜	1-3/64	P1	½
23	1-1/16		J	1¼	2-3/16	1-11/16	1-17/64	1⅛	2⅜	1⅜	1-7/64	W-1	½
30	1-3/16		L	1¼	2⅜	1-11/16	1-17/64	1¼	2⅜	1-11/16	1-13/64	W-2	5/16
672	3		Z	3	4¼	3-9/16	2-57/64	3-1/16	4-5/16	3⅛			½

Aluminum Bushing identifications are the same as Tubes.

—28—

CRMC-Motley1000-Subj-001869

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/35

MIN. DIA. 92.5% MAX. T.C.P. & T.C.O.P.

Size C.M.	Max. Dia.		Tube	Pipe	Clearance Holes					Clamp Size	Pack
					XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXXI Deck	Alum. Bush.	Clamp Drill		
⅛ (1)	¼		A	⅜	1-5/16	11/16	27/64	⅜	1¼	⅜	⅜	AA	¼
⅛ (2)	3/16		A	⅜	1-5/16	11/16	27/64	⅜	1¼	⅜	⅜	AA	¼
1	¼		A	⅜	1-5/16	11/16	27/64	⅜	1¼	⅜	⅜	AA	¼
2	21/64		B	½	1-7/16	7/8	35/64	⅜	1-7/16	7/8	27/32	A	5/16
3	⅜		B	½	1-7/16	7/8	35/64	7/16	1-7/16	7/8	½	B	5/16
4	29/64		B	½	1-7/16	7/8	35/64	½	1-7/16	7/8	37/64	C11	¼
6	33/64		C	¾	1-9/16	1¼	41/64	½	1¾	1	39/64	D	¼
9	35/64		C	¾	1-9/16	1¼	47/64	½	1¾	1	41/64	E	8/16
40	1¼		L	1¼	2¾	1-11/16	1-17/64	1-5/16	2¾	1-11/16	1-19/64	W4	¼
150	1-53/64		S	2	3¾	2-7/16	1-15/16	1-15/16	3-3/16	2¾	1-55/64	Y10	¾
250	2¼		W	2½	3-13/16	2-15/16	2-5/16	2-5/16	3-11/16	2-13/16	2¼	Y18	¾
400	2¾		Z	3	4¼	3-9/16	2-57/64	2-7/8	4-5/16				½

Aluminum Bushing identifications are the same as Tubes.

CRMC-Motley1000-Subj-001870

M. C. P.

MIN. DIA. 92.5% MAX.

No. of Wires	Dia. Max.		Tube	Pipe Size	Clearance Holes						Clamp Size	Pack.
					XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Drill	
4	½		C	¾	1-9/16	1¼	47/64	¾	1¾	1	37/64	¼
6	35/64		C	¾	1-9/16	1¼	47/64	¾	1¾	1	4-/64	3/16
7	37/64		D*	¾	1-11/16	1¼	47/64	11/16	1¾	1¼	11/16	5/16
10	43/64		D*	¾	1-11/16	1¼	47/64	¾	1¾	1¼	49/64	¼
12	45/64		E*	¾	1-11/16	1¼	47/64	¾	1¾	1-3/16	51/64	¼

M.C.S. & M.C.O.S.

2	15/32		B	½	1-7/16	7/8	35/64	9/16	1-7/16	7/8	37/64	¼
4	33/64		C	¾	1-9/16	1¼	47/64	¾	1¾	1	39/64	¼
7	19/32		F	1	1¾	1¾	61/64	¾	2	1-3/16	11/16	½

* D & E Riser Heads are furnished in ¾" or 1" Pipe Size.
Aluminum Bushing identifications are the same as Tubes.

—30—

CRMC-Motley1000-Subj-001871

B.C.

SHFL

Clearance Holes

Size	Dia.	Tube	Pipe Size	XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill	Pipe Clamp Size	Pack
1	5/32	A	¾	1-5/16	11/16	27/64	5/16	1¼	¾	¾	AA	7/16
2	21/64	B	¾	1-7/16	7/8	35/64	¾	1-7/16	13/16	27/64	A	¾
3	23/64	B	½	1-7/16	7/8	35/64	7/16	1-7/16	13/16	27/64	A	5/16

C.M. Size	Dia.	Tube	Pipe Size	XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill	Pipe Clamp Size	Pack
400	1-29/64	N	1¼	2¾	1-15/16	1¼	1-9/16	2¾	1-15/16	1-7/16	W6	¼
500	1-35/64	P	2	2-7/8	2-7/16	1-15/16	1¾	3-3/16	2-1/16	1-17/32	X6	¼
650	1-21/32	R	2	3	2-7/16	1-15/16	1¾	3-3/16	2¼	1-39/64	X7	5/16
800	1-49/64	S	2	3¾	2-7/16	1-15/16	1-7/8	3-3/16	2¾	1-47/64	Y9	¾
1000	1-29/32	T	2½	3-9/16	2-15/16	2-5/16	2	3-11/16	2-9/16	1-51/64	Y9	7/16

Aluminum Bushing identifications are the same as Tubes.

—31—

CRMC-Motley1000-Subj-001872

FHFA

MIN. DIA. 92.5% MAX.

Size C.M.	Max. Dia.		Tube	Pipe Size	Clearance Holes							Pack.
					XXX Bkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp. Drill	
3	⅝		D*	⅜	1-11/16	1¼	47/64	⅝	1¼	1¼	11/16	F ¼
4	7/8		G	1	2-1/16	1¼	61/64	1	2	1¼	31/32	N ¼
F.C.O.P. & F. C. P.												
4	17/32		C	⅜	1-9/16	1¼	47/64	⅝	1¼	1	39/64	D ¼
9	41/64		D*	½	1-11/16	1¼	47/64	⅝	1¼	1¼	47/64	G ¼
S.C.P.												
1	7/64		A	⅜	1-5/16	11/16	27/64	5/16	1¼	⅝		5/16
800	2		T	2½	8-9/16	2-15/16	2-5/16	2½	3-11/16	2-9/32	2-3/64	Y11

* D & E Riser Heads are furnished in ⅜" or 1" Pipe Size.
Aluminum Bushing identifications are the same as Tubes.

—32—

CRMC-Motley1000-Subj-001873

Cable	Max. Dia.	Tube	Size Pipe	Clearance Holes: XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Clamp Drill	Clamp Size	Pack
CB-1	½	A	¾	1-5/16	11/16	27/64	¼	1¼	¾	¾	AA	5/16
FHLA-1	19/64	A	¾	1-5/16	11/16	27/64	¾	1¼	¾	¾	AA	¼
DB-1	1-7/64	K	1¼	2-5/16	1-11/16	1-17/64	1¼	2¾	1-9/16	1-7/64	W-1	¼
DHLA-1	½	C	¾	1-9/16	1¼	47/64	¾	1¾	1	37/64	C11	¼
FHLA-1	17/32	C	¾	1-9/16	1¼	47/64	¾	1¾	1	37/64	C11	¼
LA-1	2-7/64	V	2½	3-11/16	2-15/16	2-5/16	2-3/16	3-11/16	2-11/16	2-7/64	Y12	¾
LA-2	39/64	C	¾	1-9/16	1¼	47/64	11/16	1¾	1	11/16	F	¾
LA-3	29/32	G	1	2-1/16	1¾	61/64	1	2	1	1	O	3/16
DA-3	11/64	A	¾	1-5/16	11/16	27/64	¼	1¼	¾			¼
MCDB-7	7/32	A	¾	1-5/16	11/16	27/64	¾	1¼	¾		AA	5/16
	43/64	D*	¾	1-11/16	1¼	47/64	¾	1¼	¾	¾	H	5/16
	¾	D*	¾	1-11/16	1¼	47/64	11/16	1¾	1¼	49/64	F	¼
	½	C	¾	1-9/16	1¼	47/64	9/16	1¾	1¼	11/16	F	¼
	13/16	C	¾	1-3/16	1¼	47/64	9/16	1¾	1	37/64	C11	¼
AD	1-3/16	G	1	2-1/16	1¾	61/64	9/16	1¾	1¼	37/64	C11	¼
		M	½	2-9/16	1¼	1¼	7/8	2	1¼	49/64	I1	5/16
	⅝	D*	¾	1-11/16	1¼	47/64	1-5/16	2¾	1-13/16	1¼	W-3	¼
	¾	A	¾	1-5/16	11/16	27/64	11/16	1¾	1½	47/64	G	¼
	1	C	¾	1-9/16	1¼	47/64	5/16	1¼	¾	¾	AA	¼
							9/16	1¾	1	37/64	C11	¼

D & E Riser Heads are furnished in ¾" or 1" Pipe Size.
Bushing identifications are the same as Tubes.

MIN. DIA. 92.5% MAX.

—33—

CRMC-Motley1000-Subj-001874

DEGAUSSING—SDGA

MIN. DIA. 92.5% MAX.

Size G.M.	Bend. Rad.	Max. Dia.	Tube	Pipe Size	Clearance Holes: XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Pack Size	Amps.
500	10"	1⅝	P	2"	2-7/8	2-7/16	1-15/16	1¼	3-3/16	2-1/16	7/16	570
660	11"	1-15/32	R	2"	3"	2-7/16	1-15/16	1-9/16	3-3/16	2¼	½	660
800	12"	1-19/32	S	2"	3⅛"	2-7/16	1-15/16	1¾	3-3/16	2⅝	½	760
1010	12"	1¾	T	2½"	3-9/16	2-15/16	2-5/16	1-7/8	3-11/16	2-9/16	½	890
1300	13"	1-29/32	V	2½"	3-11/16	2-15/16	2-5/16	2"	3-11/16	2-11/16	½	1020
1600	13"	2-1/32	W	2½"	3-13/16	2-15/16	2-5/16	2¼	3-11/16	2-13/16	7/16	1180
2000	14"	2-7/32	X	3"	3-15/16	3-9/16	2-57/64	2¾	4-5/16	3"	½	1400

DEGAUSSING—MDGA

MIN. DIA. 92.5% MAX.

No. of Wires	Bend. Rad.	Max. Dia.	Tube	Pipe Size	Clearance Holes: XXX Blkhd.	Riser Pipe	Inside Pipe	Cable Clear	XXX1 Deck	Alum. Bush.	Pack Size
19-(6)	7½"	1-19/64	N	1½"	2¾	1-15/16	1⅝	1-7/16	2¾	1-15/16	5/16
19-(14)	9½"	1-17/32	S	2"	3⅜	2-7/16	1-15/16	1-11/16	3-3/16	2⅜	½
19-(23)	10½"	1¾	T	2½"	3-9/16	2-15/16	2-5/16	1-7/8	3-11/16	2-9/16	7/16
19-(40)	12"	2-3/32	X	3"	3-15/16	3-9/16	2-57/64	2¾	4-5/16	3	½
24-#8	18"	2¾	Z-1	3"	4⅛	3-9/16	2-57/64	2-7/8	4-5/16		7/16
37-#6	18"	2¾	Z-1	3"	4¼	3-9/16	2-57/64	2-7/8	4-5/16		7/16

—34—

CRMC-Motley1000-Subj-001875

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/41

CIRCUIT IDENTIFICATION

A.....Officers' Call Bell Cir.

A.T.....Target Angle Ind. Sys.

B.D.....Broadside Director F.T.P. Sys.

B.R.....Lifebuoy Release Sys.

B.T.....Marker Buoy Sys.

C.A.....Collision Alarm Sys.

I.C.F.....Concentration Ind. Sys. Fwd.

2 C.F.....Concentration Ind. Sys. Aft.

C.G.....Range Convertor to Gun Elevation Ind. Sys.
D.....Degaussing.
D.A.....Docking Telegraph Sys.

D.C.....Director Correction Sys.

D.S.....Dep. and Train Stop Sys.

D.W.....Prop. Shaft Dir. Warning Sys.

E.A.....Fire Room Emerg. Signal System—G.

E.B.....Boiler Feed Signal System—G.

1 E.C.....Main Eng. Lub. Oil Low Press. Alarm Sys—G.
2 E.C.....Generator Lub. Oil Low Press. Alarm Sys.—G.

E.F.....Aux. Feed Pump Signal System.

E.M.....Self Contained Cir. (Magneto).
E.P.....Protected Calls—G.
E.P.I.....Unprotected Calls off "E.P." thru C.O. Sw.—G.

E.P.S.....Unprotected Call off "E.P." thru Fuses—G.
E.R.....Echo Range Circuits.
E.S.....Echo Sound Circuits.
E.T.....Boiler Temp. Alarm System.

E.V.....Evershed System.

E.W.....Circulating Water Low Press. Alarm System.

Ex.....Exposed Calls.
1 Ex.....Cruising and Misc. Call Bells.
2 Ex.....Ship's Control Call Bells.
3 Ex.....Eng. Call Bells.
4 Ex.....Aircraft Cont. Call Bells.
5 Ex.....Fire Control Call Bells.
11 Ex.....Turret 1 Call Bells.

CRMC-Motley1000-Subj-001876

CIRCUIT IDENTIFICATION—(Cont.)

12 Ex.....Turret 2 Call Bells.
13 Ex.....Turret 4 Call Bells.
13 Ex.....Turret 4 Call Bells.
15 Ex.....Turret 5 Call Bells.

F.....Fire Alarm Sys.—G.
F4.....Fire Alarm Thermostat System—G.
F5.....Fire Alarm Thermostat System—G.

F.A.....Refrigerator Room Signal System.

F.C.....Flight Crash Signal System.

F.D.....Water Alarm System.

F.L.....Flight Deck Landing Observers Signal System.

F.S.....Speed Flag Telegraph System.

F.T.....Time of Flight System.

F.W.....Flight Deck Warning System.

G.....General and Chemical Attact Alarm Sys.—B.

G.A.....Torpedo Control System—B.

G.B.....Gas Detector System.

G.D.....Diving Alarm System.

1 G.E.....Main Battery Director Bearing System—B.
2 G.E.....Main Battery Bearing System—B.
2 G. E. ....Main Battery Target Designator System—B.
4 G.E.....Main Battery Gun Train Order System—B.
5 G.E. ....Main Battery Gun Elevate Order System—B.
6 G.E. ....Main Battery Generator—B.
7 G.E.....Main Battery own Ship's Course System—B.
8 G.E.....Main Battery Turret Train System—B
9 G.E.....Main Battery Ship's Cont. Target Bearing Sys.—B.
10 G.E.....Main Battery 20 Volt D. C. Supply—B.
11 G.E.....Turret Train Transmitter System—B.
12 G.E.....Corrected Target Bearing Transm. Sys.—B.
13 G.E.....Double Turret Indicator—B.
G.E.P.....Main Battery Remote Control System—B.
G.F.....Chemical Attact Alarm System (old)—G.

G. H.....A.A. Battery Control System—B.
G. H. L.....A.A. Battery Lighting Control System—B.
G. H. P.....A.A. Battery Remote Control System—B.

G.K.....Collision Alarm System (Now C.A.)

G.M.....Machine Gun Control System—B.

CRMC-Motley1000-Subj-001877

G.M. ..... Heavy Machine Gun Remote Control System.

G.S. ..... Secondary Battery Control Systems.
1 G.S. ..... Secondary Battery Train System.
3 G.S. ..... Secondary Battery Elevation System—B.
G.S.L. ..... Secondary Battery Lighting Control System.
G.S.P. ..... Double Purpose Battery Remote Cont. Sys.—B.

G.T. ..... Capt. Turret Designator System—B.

G.Y. ..... Light Machine Gun Control System.

G.Y.P. ..... Light Machine Gun Remote Control Sys—B.

H. ..... Boat Hour Gong System.

H.A. ..... Anchor Handling Gong System.

H.B. ..... Anchor Telegraph System.

H.C. ..... Anemometer Indicator System.

H.D. ..... Wind Direction System.

H.E. ..... Wind Intensity System.

H.F. ..... Anemomgraph and Wind Indication Indicator.

H.S. ..... Radio Station Key and Sound Signal System.

I. ..... Telephone Ringing Ships Service System.

J. ..... Ship's Service Telephone System.

J.A. to J.Z. .. Battle Telephone Systems (See Page 44-46).

K. ..... Shaft Revolution Indicator Systems.
1 K. ..... Stboard Outboard Shaft Revo. Ind. Sys.—G.
2 K. ..... Starboard Inboard Shaft Revo. Ind. Sys.—G.
3 K. ..... Port Outboard Shaft Revo. Ind. Sys.—G.
4 K. ..... Port Inboard Shaft Revo. Ind. Sys.—G.

K.A. ..... Secondary Counter System.

K.B. ..... Main Generator Shaft Revo. Indicator Sys.

K.S. ..... Inter-Radio Room Communication System.

K.T. ..... Engine Revolution Tell-Tale System.

L. ..... Steering Telegraph System—G.

L.A. ..... Course Telegraph System.

L.B. ..... Steering Emergency System.

CRMC-Motley1000-Subj-001878

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/44

CIRCUIT IDENTIFICATION—(Cont.)

L.C.....Gyro Compass System—B.
L.C. 1.....Gyro Compass System Fwd. (A.C.)—B.
L.C. 2.....Gyro Compass System Aft. (A.C.)—B.
1 L.C. 1.....Gyro Compass System Fwd. (D.C.)—B.
1 L.C. 2.....Gyro Compass System Aft. (D.C.)—B.

5 L.C.....Mark Stable Zenith System.

L.D.....Steering Clutch Indicator System.

1 L.G.....Main Battery Stabilizer System—B.
2 L.G.....Secondary Battery Stabilizer System—B.
3 L.G.....A.A. Battery Stabilizer System—B.

L.T.....Telemotor Indicator System.

M.....Engine Revolution Telegraph System—G.
1 M.....Engine Revolution Telegraph Starb. Sys.—G.
2 M.....Engine Revolution Telegraph Port System—G.

M.A.....Fire Room Order Telegraph System—G.

1 M.B.....Engine Order Telegraph Starboard System—G.
2 M.B.....Engine Order Telegraph Port System—G.
3 M.B.....Engine Order Indicator System—G.

M.C.....General Announcing Teleg. Rec. Unit Sys.
1 MC.....General Announcing System—B or G.
2 M.C.....General Announcing Sys. (Engin.)—B or G.
3 M.C.....Aviator's Announcing System—B or G.
4 M.C.....Damage Control Announcing System— B or G.
5 M.C.....Flight Deck Announcing System O.K.—B or G.
6 M.C.....Super-Power Inter-Ship System O.K.—B or G.

11MC.....
12MC.....
13MC.....
14MC.....
15MC.....
16MC.....
..Turret Announcing Systems—B. or G.

17MC.....A.A. Battery Announcing Systems—B. or G.
18MC.....Bridge Announcing Systems—B or G.
19MC.....Flight Crash Announcing System—B or G.
20MC.....Radar Announcing System—B or G.
21MC.....Captain's Battle Announcing System—B or G.

M.D.....Engine Clutch Danger Signal System.
M.E.....Oil Burner Telegraph System—G.
M.F.....Engine and Motor Signal System.
M.G.....Clutch Indicator System.
M.H.....Magazine Flood and Sprinkler Ind. Sys.—G.

CRMC-Motley1000-Subj-001879

M.L. Mine Laying Telegraph System.
M.N. Mine Track Visual Signal System.

M.P. Motion Picture (A.C. Circuit).
1 M.P. Motion Picture (D.C. Circuit).

M.T. Mine Laying Timing System.

1 N. Rudder Angle Indicator System—G.
2 N. Rudder Angle Indicator Aux. System—G.

N.B. Bow. Diving Plane Angle Indicator System—B.

N.S. Stern Diving Plane Angle Indicator System—B.

O. Range Deflector and Bat. Ord. Sys. (Old Ships).

O.P. Oil Pressure Telegraph System—G.

1 P.A. Main Battery Gun Firing System—B.
2 P.A. Secondary Battery Gun Firing System—B.
3 P.A. A.A. Battery Gun Firing System—B.

6 P.A. Torpedo Firing Above Water System—B.

P.B. Pyrometer Indicator System.

2 P.D. Torpedo Target Designator Train System.
3 P.D. Torpedo Target Designator Elev. System.
7 P.D. Own Ships Course.
31 P.D. Radar Range.
P.R. Plotting Room Ready Lights System—G.

Q. Warning Signal System.
Q.A. Air-Lock Indicator System.
Q.B. Shell-Latch Indicator System—G.
Q.C. Powder Hoist Inter-Lock Indicator System—G.
Q.D. Gas Exhaust Blower Alarm System.

1 R. Turret Ready Indicator Lights System—G.

6 R. Torpedo Ready & Battle Order System—G.

R.A. Intra-Turret Emergency Alarm System—G.
1 R.A. Intra-Turret Alarm System Turret 1—G.
2 R.A. Intra-Turret Emergency Alarm Sys.-Tur. 2—G.
3 R.A. Intra-Turret Emergency Alarm Sys.-Tur. 3—G.
4 R.A. Intra-Turret Emergency Alarm Sys.-Tur. 4—G.
R.B. Radio Broadcast Dist. (Radio & Radar).
R.C. Catapult Signal System—G.

CRMC-Motley1000-Subj-001880

CIRCUIT IDENTIFICATION—(Cont.)

R.C.——Remote Control Circuits (Sound)
R.D.——Range and Deflection System—G.
R.E.——Turret Power Elevate Indicator System—G.
R.F.——Flight Ready System—G.
R.F.——Fly Control Ready Light System—G.
R.F.——Radio Frequency Measuring Circuits—(Radio and Radar).
R.L.——Running Lights.
R.R.——Radio Receivers.
R.T.——Turret Power Train Indicator System—G.
R.T.——Radio Transmitters.
R.V.——Radio Phones.
S.——Watertight Door Indicator System.

S.A.——Smoke Telegraph System.

S.B.——Salinity Indicator System.

S.C.——Synchronous Clock System.

S.D.——Depth Charge Release System.

S.L.——Smoke Pipe Signal Lighting System.

S.R.——Sound Receiving Circuits.
S.R.——Electric Character Transmitter & Ind. Sys.
S.S.——Submarine Signal System.
S.T.——Smoke Pipe Damper Operation System.
S.T.——Sound Transmitting Circuits.
S.W.——Smoke Pipe Damper Warning System.

T.——Torpedo Firing System—B.
T.A.——Turret Danger Zone System.

T.C.——Multiple Turret Indicator System.

T.E.——Target Turret Indicator System.

T.F.——Target Bearing Indicator System.

T.K.——Battle Tracer Indicator System.

T.L.——Automatic Dead-Reckoning Tracer System.

T.M.——Rangekeeper Supply System.

T.P.——Main Ballast Tank Signal System—B.

T.R.——Hull Opening Indicator System—B.

T.S.——Trimming Tank Indicator System.

T.W.——Train Warning Inndicator System.

CRMC-Motley1000-Subj-001881

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/47

CIRCUIT IDENTIFICATION—(Cont.)

1 U.....Main Battery Cease Firing System—G.
2 U.....Secondary Battery Cease Firing System—G.
3 U.....A.A. Battery Cease Firing System—G.
4 U.....1.1 Cease Firing System—G.
5 U.....50 Cal. Cease Firing System—G.

V.A.....Change in Spot Signal System.

1 V.B.....Main Battery Salvo Systems—G.
2 V.B.....Secondary Battery Salvo System—G.
3 V.B.....A. A. Battery Salvo System—G.

V.C.....Turret Salvo Bells System.
V.D.....Turret Salvo Buzzer System—G.

W.....Whistle Operating System.
W.A.....Water Flooding System.
W.A.-W.Z....Intercommunicating Phones Sys. (Obsolete).

X.....Fuel Oil Tank Indnicator System.

X.B.....Drainage Tank Signal System.

X.D.....Lub. Oil Alarm System.

Y.....Underwater Log System—G.
1Y.....Pitometer Log Speed System—G.
2Y.....Pitometer Log Distance System—G.
3Y.....Pitometer Log D.C. Follow-up System—G.

Y.A.....Turbine Reduction Gear Ind. Sys.—G.

Y.B.....Main Feed Pump Alarm System.

Y.E.....Homing Circuit.

CRMC-Motley1000-Subj-001882

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/48

NEW BATTLE TELEPHONE CIRCUITS

All battle telephone circuits are blue.

JA.....Captain's Battle.

J.B.....Main Battery Spotters.
1 J.B.....Main Battery Spotters Group #1.
2 J.B.....Main Battery Spotters Grouup #2.
3 J.B.....Main Battery Spotters Group #3.

J.C.....Main Battery Control.

J.C.X.....Radar Information Circuit.

J.D.....Main Battery (Units).
1 J.D.....Main Battery Control Group #1.
2 J.D.....Main Battery Control Group #2.
3 J.D.....Main Battery Control Group #3.

J.E.....Main Battery Sight Setters (Units).
1 J.E.....Main Battery Sight Setters Group #1.
2 J.E.....Main Battery Sight Setters Group #2.
3 J.E.....Main Battery Sight Setters Group #3.

J.F.....Flag Circuit.
1 J.G.....Aircraft Control.
2 J.G.....Aircraft Control.
3 J.G.....Aircraft Control.
4 J.G.....Aircraft Control.

J.H.....Patch Cords and Jacks, Connecting Swbds.

J.K.....A.A. and Secondary Battery Fuse Setters.
1 J.K.....A.A. and Sec. Batt. Fuse Setters Group #1.
2 J.K.....A.A. and Sec. Batt. Fuse Setters Group #2.
3 J.K.....A.A. and Sec. Batt. Fuse Setters Group #3
4 J.K.....A.A. and Sec. Batt. Fuse Setters Group #4.

J.L.....Battle Lookout Circuit.

J.N.T.....Illumination Searchlights and Computers.
1 J.N.T.....A.A. and Sec. Batt. Illum. Control Group #1.
2 J.N.T.....A.A. and Sec. Batt. Illum. Control Group #2.
3 J.N.T.....A.A. and Sec. Batt. Illum. Control Group #3.
4 J.N.T.....A.A. and Sec. Batt. Illum. Control Group #4.
5 J.N.T.....Main Battery Illum. Control Group #1.
6 J.N.T.....Main Batt. Illum. Control Group #2.
7 J.N.T.....Main Batt. Illum. Control Group #3.

CRMC-Motley1000-Subj-001883

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/49

NEW BATTLE TELEPHONE CIRCUITS (Cont.)

J.O.....Patch Circuit All Telephone Switchboards.

J.P.....Secondary Batt. Units (Mounts & Computers).
1 J.P.....Sec. Batt. Cont. Group #1.
2 J.P.....Sec. Batt. Cont. Group #2.
3 J.P.....Sec. Batt. Cont. Group #3.
4 J.P.....Sec. Batt. Cont. Group #4.
5 J.P.....Sec. Batt. Cont.

J.Q.....A.A. and Sec. Batt. Sightsetters Units.
1 J.Q.....A.A. and Sec. Batt. Sightsetters Group #1.
2 J.Q.....A.A. and Sec. Batt. Sightsetters Group #2.
3 J.Q.....A.A. and Sec. Batt. Sightsetters Group #3.
4 J.Q.....A.A. and Sec. Batt. Sightsetters Group #4.
5 J.Q.....A.A. and Sec. Batt. Sightsetters (Stbd.)
6 J.Q.....A.A. and Sec. Batt. Sightsetters (Port).

J.S.....Radio Bearing Cir.
J.T.....Searchlight Units.

J.U.....Depth Charge Control (B.A.V.G.s).

1 J.V.....Maneuvering and Docking Cir.
2 J.V.....Engineers (Engines).
3 J.V.....Engineers (Boilers).
4 J.V.....Engineers (Fuel).
5 J.V.....Engineers (Electrical)

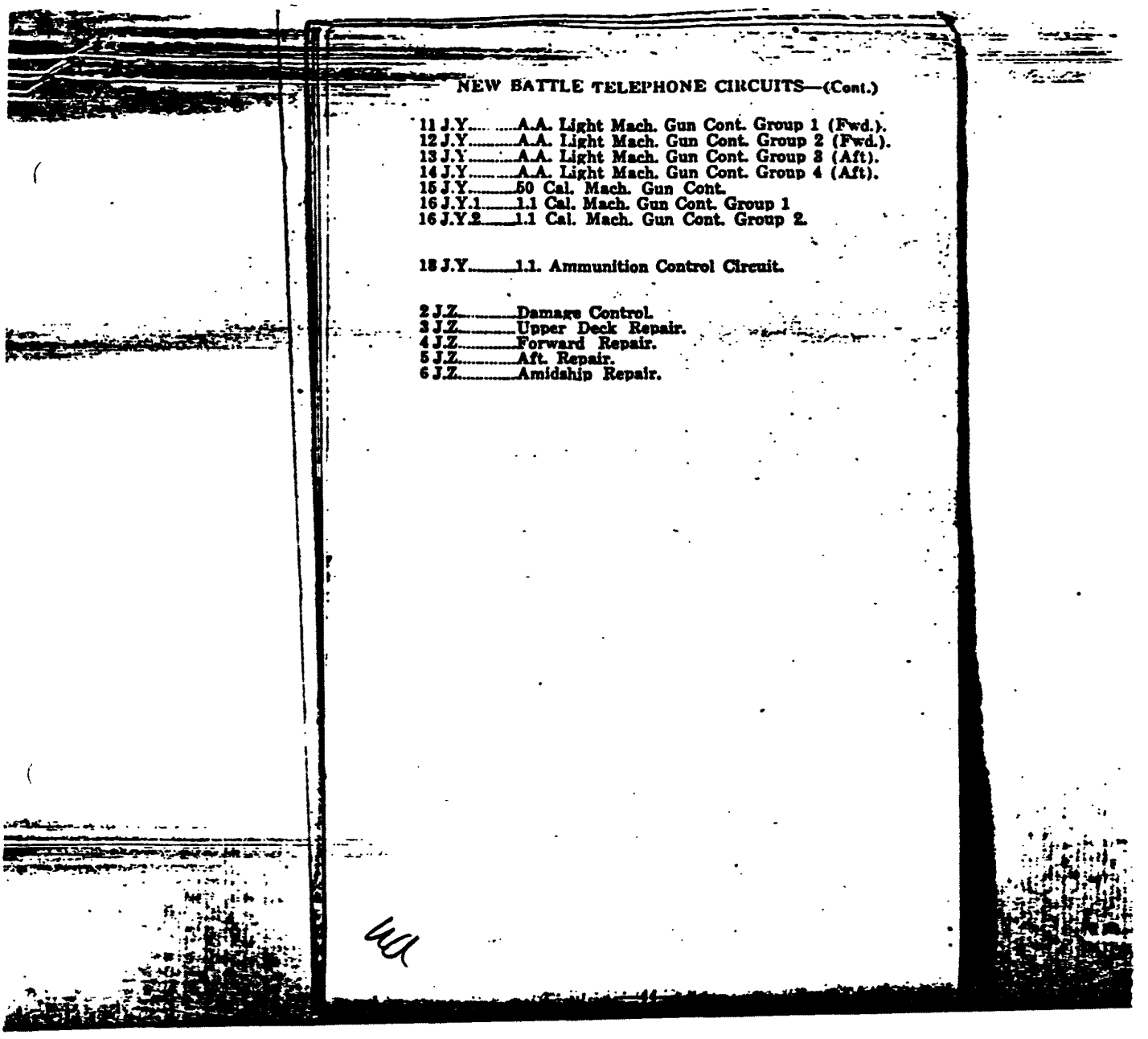
J.W.....Rangefinder Units.
1 J.W.....Main Battery Rangefinder Group #1.
2 J.W.....Main Battery Rangefinder Group #2.
3 J.W.....Main Battery Rangefinder Group #3.
4 J.W.....Ship's Cont. Range.
5 J.W.....Secondary Batt. Rangefinders & Spotters Gr. 1.
6 J.W.....Secondary Batt. Rangefinders & Spotters Gr. 2.
7 J.W.....Secondary Batt. Rangefinders & Spotters Gr. 3.
8 J.W.....Secondary Batt. Rangefinders & Spotters Gr. 4.
9 J.W.....Secondary Batt. Rangefinders & Spot. (Stbd).
10 J.W.....Secondary Batt. Rangefinders & Spot. (Port).

JX.....Radio and Signals.

J.Y.....A.A. Mounts.
1 J.Y.....A.A. H.M.G. Control Group 1 (Fwd.).
2 J.Y.....A.A. H.M.G. Control Group 2 (Fwd.).
3 J.Y.....A.A. H.M.G. Control Group 3 (Aft).
4 J.Y.....A.A. H.M.G. Control Group 4 (Aft).
5 J.Y.....A.A. Heavy Machine Gun Control.

CRMC-Motley1000-Subj-001884

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/50



NEW BATTLE TELEPHONE CIRCUITS—(Cont.)

11 J.Y.....A.A. Light Mach. Gun Cont. Group 1 (Fwd.).
12 J.Y.....A.A. Light Mach. Gun Cont. Group 2 (Fwd.).
13 J.Y.....A.A. Light Mach. Gun Cont. Group 3 (Aft).
14 J.Y.....A.A. Light Mach. Gun Cont. Group 4 (Aft).
15 J.Y.....50 Cal. Mach. Gun Cont.
16 J.Y.1.....1.1 Cal. Mach. Gun Cont. Group 1
16 J.Y.2.....1.1 Cal. Mach. Gun Cont. Group 2.

18 J.Y.....1.1. Ammunition Control Circuit.

2 J.Z.....Damage Control.
3 J.Z.....Upper Deck Repair.
4 J.Z.....Forward Repair.
5 J.Z.....Aft. Repair.
6 J.Z.....Amidship Repair.

CRMC-Motley1000-Subj-001885

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/51

SUPPLEMENTARY

SOUND POWERED TELEPHONE CIRCUITS

Use Blue cable markers on vital circuits, Green on semi-vital, and Neutral or Gray on non-vital circuits. Check blueprints for information.

X1J.....Captain's Cruising Circuit.
X2J.....Leadsmen's and Anchor Control Cir.
X3J.....Deck and Engineering Watch Officer's Cir.
X4J1.....I.C. and F.C. Service Circuit.
X4J2.....Degaussing Circuit.
X5J.....Magazine Sprinkling and Ordnance and Repair.
X6J.....Steering Gear Circuit.
X7J.....Gasoline and Diesel Oil Control Circuit.

X10J2.....“SG” Radar Control Circuit.
X10J11.....Main Battery Radar Circuit #1.
X10J12.....Main Battery Radar Circuit #2.
X10J21.....Secondary Battery Circuit #1 Radar.
X10J22.....Sec. Batt. Circuit #2 Radar.
X10J23.....Sec. Batt. Circuit #3 Radar.
Z10J24.....Sec. Batt. Circuit #4 Radar.
X10J31.....Heavy Machine Gun Circuit #1 Radar.
X10J32.....H.M.G. Circuit #2 Radar.
X10J33.....H.M.G. Circuit #3 Radar.
X10J34.....H.M.G. Circuit #4 Radar.

X12J.....Capstan Control Circuit.
X13J.....Airplane Crane Control Circuit.

X17J1.....5” Amm. Hoist Stbd.
X17J2.....5” Amm. Hoist Port.

X17J31.....40 M.M. Amm. Hoist Stbd.
X17J32.....40 M.M. Amm. Hoist Port.

X19J.....Signal Searchlights.

X21J.....Catapult Check Circuit.

X23J.....Torpedo Servicing and Hangar Conflag. Cont.

X101J.....Pointer Group Turret #1.
X102J.....Ammunition Turret #1.
X201J.....Pointer Group Turret #2.
X202J.....Ammunition Turret #2.
X301J.....Pointer Group Turret #3.
X302J.....Ammunition Turret #3.
X401J.....Pointer Group Turret #4.
X402J.....Ammunition Turret #4.

CRMC-Motley1000-Subj-001886

NOTES

— Special Requirements—Cable Marking and Identification

(Power and Light)

F. — General Power and Lighting Feeders.
FB — Battle Power and Lighting Feeders, outside of armor protection.
FE Battle Power and Lighting Feeders, within armor protection.
XFE Emergency Power and Lighting Feeders.

#2 When marking Power & Lighting cables the following terms shall be used "feeder", "main", "sub-main", "branch", and "sub-branch", a number indicating the voltage of the circuit, and a number indicating whether the circuit is connected to the forward or after distribution switchboard. Odd numbers from forward Board, even numbers from after Board.

(A) A "Feeder" is a cable connected between the distribution switchboard and the distribution panel. For example FB216 which means this a Batt'e Power or Light Circuit, 200 or 230 volts and supplied by the After Distribution Board. 1—100 V., 2—200 V., 4—400 V., etc.

(B) A "Main" is a cable emanating through fuses from A Feeder, and is identified by a prefix number, as, 1FB216, 2FB216, etc.

(C) A "Sub-Main" is a cable emanating through fuses from A "Main" and is identified by a suffix letter, as, 1FB216A, 1FB216B, etc.

(D) A "Branch" is a cable emanating through fuses from A "Sub-Main", and is identified by a suffix number, as, 1FB216A1, 1FB216A2, etc.

(E) A "Sub-Branch" is a cable emanating from a "Branch", and is identified by a suffix letter as 1FB216A1A, 1FB216A-1B, etc.

#3 All running, anchor, and signal light cables emanating from and extending beyond their supp'y panels shall have tags marked with, R.L. and the number of the cable.

#4 All interior communication cables shall be marked with a C, which shall be followed by a dash —, circuit letters, and cable numbers, as C-MB25.

#5 All fire control cables shall be marked similar to interior communication cables except they shall be preceded by the letter G, as, G-5U7.

#6 All Radio circuits shall be marked with an R, which shall be followed by a dash —, circuit letters and cable numbers, as R—RT9, R—RB20, etc.

#7 All sound circuits shall be marked with an, S, which shall be followed by a dash—, circuit letters and cable numbers, as, S—ER21, S—ES22, etc.

CRMC-Motley1000-Subj-001887

#8 All Degaussing circuits shall be marked with a D, which shall be followed with a dash —, and cable number, as, D—21, D—5, etc.

#9 All wires in each cable shall be definitely marked with both the wire number and the cable or lead number. The cable number shall be on the back side of the fibre floater or connection clip, and the wire number on the front side. Spare wires shall be separately grouped and marked in the same manner.

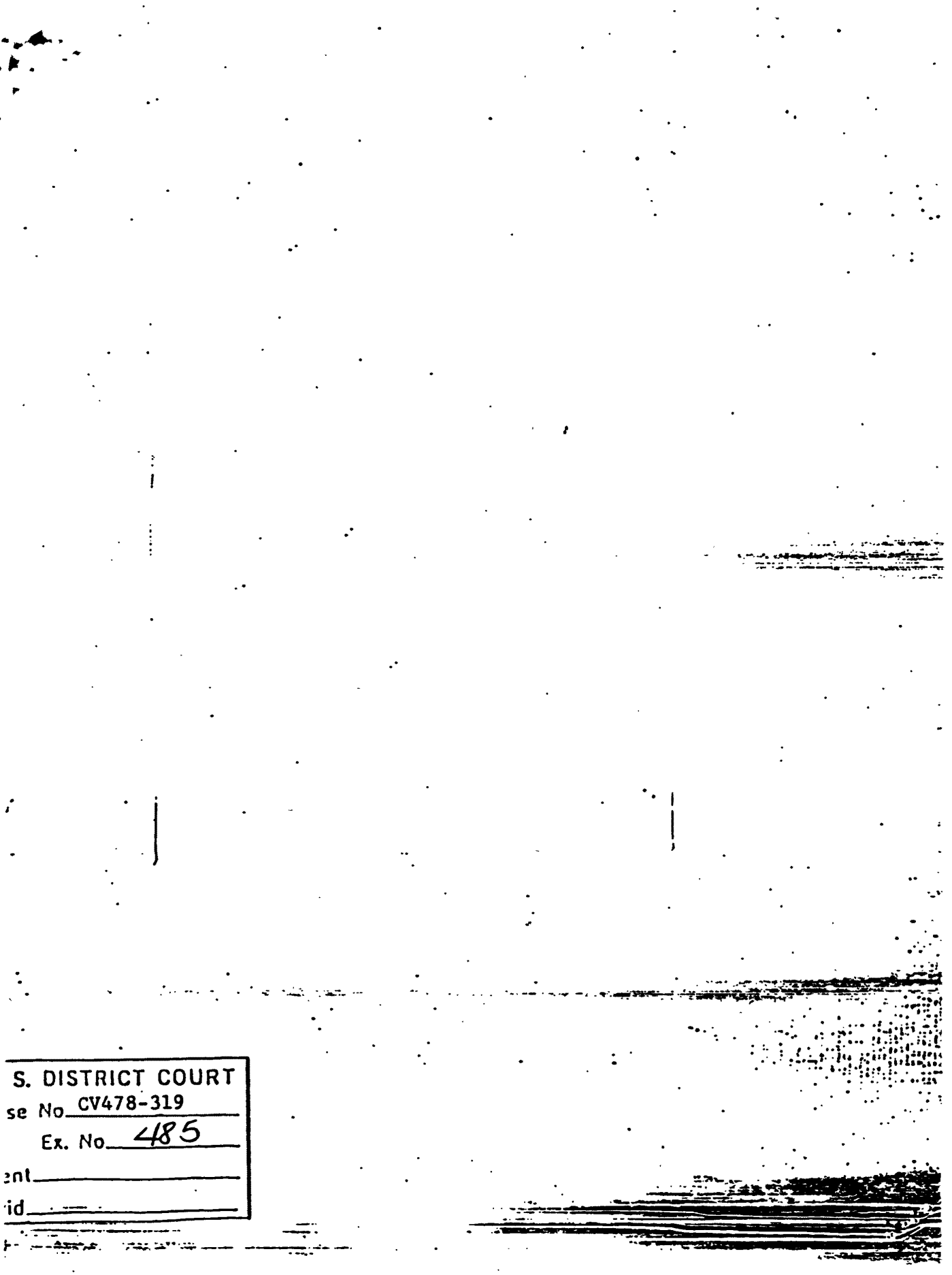
#10 Cable markers shall be of a definite color to desig nate the type of circuit and whether the circuit is vital, semi-vital, or non-vital. The colors shall be as follows:
Red — Vital Power and Light.
Yellow — Semi-Vital Power and Light.
Blue — Vital IC and FC.
Green—Semi-Vital IC and FC.
Neutral or Gray — Non-Vital.

#11 Color information for cable markers can generally be found in the general notes on the blueprints.

X4

CRMC-Motley1000-Subj-001888

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/54



CRMC-Motley1000-Subj-001889

Published by AsbestosClaims.Law
asbestosclaims.law/library/24118/55