

# MERCURY METALS

## SPECIFICATION FOR ROOF DECK

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### PART 1 – GENERAL

#### 1.1 – GENERAL REQUIREMENTS

1. Division 1, General Requirements, Supplementary General Requirements and Instruction to bidders are part of this specification and shall apply as if repeated here.
2. The requirements for Goods and Services Tax and Provincial Sales Tax are outlined in the General Requirements.

#### 1.2 – SCOPE OF WORK

1. Furnish all materials, labor, equipment and services, necessary for the detailed design erection drawings, shop drawings, fabrication and erection of the complete wall and/or roof cladding as shown or called for in the tender documents.
2. Supply and install accessories where shown or called for by the tender documents.
3. Cut and reinforce penetrations through the roof deck, between 6 inch to 18 inch diameter or maximum dimension across the flutes, as shown on the architectural or structural drawings.

#### 1.3 – SHOP DRAWINGS

1. Submit erection drawings in accordance with General Conditions.
2. Erection drawings shall show clearly the location of various deck units, section designations, finishes, quantities, fastener specifics, shear diaphragm capacities (if required) and any other information required for erection purposes.
3. Shop drawings shall be signed and sealed by a Specialty Engineer, a Registered Engineer familiar with sheet metal panels components and systems.
4. The Specialty Engineer shall submit the required documentation covering the specified work and conduct field inspections as he deems to be required to assure work is performed in accordance with the shop drawings.

#### 1.4 – WORK NOT INCLUDED

1. Structural steel beams, joists or purlins, or other supports, for roof deck.
2. Structural framing, or reinforcement, for roof openings larger than 18 inches across flutes or areas of concentrated point loads.
3. Perimeter roof angles.
4. Gutters, downspouts, coping trim, cant or parapet flashing, unless shown or called for on the tender documents as being supplied by this division.
5. Vapor barriers, insulation or roof membranes.
6. Shear loading or deflection calculations for steel deck diaphragms. (To be provided by Primary Structural Engineer)

#### 1.5 – STANDARDS

1. Design roof deck in accordance with the latest edition of:
  - i. CAN/C.S.A. – S 136 for the Design of Cold Formed Steel Structural Members.
  - ii. Specified loads, load factors and load distributions shall be in accordance with the National Building code of Canada unless otherwise stated.

#### 1.6 – DESIGN CRITERIA

1. Design the roof deck using Limit States Design.

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2. Design the roof deck to resist:
  - i. Live and dead loads as specified and shown on tender drawings.
  - ii. Net uplift and suction loads as specified and shown on tender drawings.
3. Deflection of the roof deck is not to exceed 1/240 of the span for the specified live loading.
4. Where possible, span deck over four or more structural supports (3 continuous spans).
5. If shear diaphragm is required, ensure adequate shear capacity using CSSBI B13-91 Design of Steel Deck Diaphragms.
6. The supporting structure shall provide the roof deck a minimum bearing width equal to the cladding profile depth, but not less than 1.5”.

### **PART 2 – PRODUCTS**

#### **2.1 MATERIALS**

1. Manufacturer shall be a member of Good Standing with the Canadian Sheet Steel Building Institute (C.S.S.B.I.).
2. Fabrication from ASTM A 653M SQ (structural quality) grade 230 galvanized steel with a zinc coating of Z275 galvanized as designated by ASTM A653M.
3. Profile designation shall be Mercury \_\_\_\_\_ complete with Metallic Coating Classification \_\_\_\_\_.
4. Minimum design thickness shall be \_\_\_\_\_mm (\_\_\_\_\_in).
5. Trim shall be fabricated from the same material, thickness and finish as the respective wall or roof cladding.
6. E.P.T. or fire rated closures shall be provided, where indicated on the tender documents, to close off the flutes of the roof decking wall locations.
7. For pre-painted roof decks mechanical fasteners for attaching roof deck to structural framing of other structural supports, and for joining roof deck components together shall be as recommended by the Specialty Engineer.

### **PART 3 – EXECUTION**

#### **3.1 STORAGE OF MATERIAL ON SITE**

1. Steel sheet cladding shall normally be delivered to the jobsite as required for erection, but if site storage becomes necessary, suitable storage areas shall be provided by the general contractor as close to the building site as is practicable. Preferably this storage shall be under cover.
2. When outdoor storage is unavoidable:
  - a. Use good quality covers, other than plastic, loosely shrouded over stacks and firmly anchored to prevent wind blow-off;
  - b. Tilt bundles for drainage;
  - c. Ventilate bundles but do not allow the entry of wind driven precipitation;
  - d. Block bundles off ground for effective ventilation;
  - e. Block bundles to prevent sagging;
  - f. Store away from chemically aggressive substances (e.g. salt, cement, fertilizer) away from materials that could contaminate the surface (e.g. diesel oil, paint, grease) and away from traffic.
3. Moisture can cause wet storage staining of metallic coated and pre-finished material and usually occurs as a result of:
  - a. Condensation from high humidity air and/or temperature cycling;
  - b. Wet shipping conditions;
  - c. Wind driven rain penetration (outdoor storage).

The usual progression is from water staining to unsightly white staining (dark grey to dull lack on aluminum-zinc alloy coated sheet) to red rust. On material where wet storage staining has occurred, it should be noted that, except for aesthetic considerations, a nominal amount of staining is not detrimental to the functioning of the product.

### **3.2 INSTALLATION**

1. All erection work shall be carried out by trained erection crews all in accordance with the fabricator's and these specifications.
2. Examine and obtain all necessary measurements of previously executed work which may effect the work of this Division.
3. Report any discovered discrepancies to the Architect/Engineer so that instructions may be given for the necessary remedial work.
4. Exercise care in unpacking, moving, storing, handling and placing panels to prevent damage likely to impair the adequacy or appearance of the material in the finished structure.
5. Roof decking shall be adjusted to final position before being permanently fastened to structural supports.
6. End laps shall be located over supports. Minimum end laps shall be a minimum 50mm (2 inch).
7. All Metallic Coated roof deck products will be secured to the structural steel by 20mm (3/4 inch) diameter arc spot welds at not more than 410mm (16 inch) centers or as specified in the shop drawings.
8. All welding shall be mechanically clinched together at not more than 500mm (24 inch) centers or welding as specified in the shop drawings.
9. All welds to be touched up, on the upper side only, with zinc rich primer.
10. all side laps shall be mechanically clinched together at not more than 600mm (24 inch) centers or welded as specified in the shop drawings.
11. Openings, and any necessary flashing, shall be provided as called for by the tender documents.
12. If additional openings not shown or called for by the tender documents are required, such openings shall be cut and reinforced (to 45mm (18 inch) maximum) by the erector, but the cost of such extra work shall be charged to the buyer.

### **3.3 TOUCH-UP AND CLEANING**

1. At completion of the work of this Division, remove any excess materials, debris and equipment pertaining to the work of this Division, from the site.

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## GENERAL NOTES for ROOF DECK

IMPERIAL - L. S. D.

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### DESIGN CRITERIA:

The properties listed in the following tables are based on one foot panel width. The properties of the steel profiles have been computed in accordance with CSA - S136-94 for limit states design.

### Cs COEFFICIENT OF STRESS:

To determine the maximum uniform factored load, governed by design stress, and not covered by the load tables, proceed as follows;

a) Simple Span:

$$\frac{C_s (\text{mid-span})}{(\text{span in feet})^2} \quad \text{psf}$$

b) Double Span: use the lessor of the following;

i)  $\frac{C_s (\text{support})}{(\text{span in feet})^2}$  psf

ii)  $\frac{C_s (\text{mid-span})}{(\text{span in feet})^2} \times 1.77$  psf

c) Triple Span: use the lessor of the following;

i)  $\frac{C_s (\text{support})}{(\text{span in feet})^2} \times 1.25$  psf

ii)  $\frac{C_s (\text{mid-span})}{(\text{span in feet})^2} \times 1.56$  psf

**To determine the maximum specified uniform loads, as listed in the load tables, divide the results of the equations by 1.5.**

The loads determined by these formulas are for positive exterior loading on the exterior sheet in the normal position. For negative exterior loading on the exterior sheet in the normal position, or positive exterior loading on the inverted position; interchange the mid-span properties with the support properties.

### COEFFICIENT OF DEFLECTION:

To determine the maximum load governed by deflection limitations, and not covered by the load tables, proceed as follows:

a) Simple Span:

$$\frac{C_d}{(\text{span in feet})^3} \quad \text{psf}$$

b) Double Span:

$$\frac{C_d}{(\text{span in feet})^3} \times 2.4 \quad \text{psf}$$

c) Triple Span:

$$\frac{C_d}{(\text{span in feet})^3} \times 1.89 \quad \text{psf}$$

# MERCURY METALS

## GENERAL NOTES for ROOF DECK

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The normal allowable deflections are as follows:

Roof Decks: L / 240 normally or L / 360 In special cases

### WEB CRIPPLING:

Reactions at exterior and/or interior supports shall be equal or less than the factored bearing resistance shown on each load table. To determine the maximum uniform factored load, governed by web crippling, and not covered by the load tables, proceed as follows;

Exterior bearing:  $2 \times \frac{\text{EXT Bearing Resistance}}{(\text{span in feet})}$

Interior bearing:  $\frac{\text{INT Bearing Resistance}}{(\text{span in feet})}$

**To determine the maximum specified uniform loads, as listed in the load tables, divide the results of the equations by 1.5.**

### SPAN TABLE UNITS AND USE:

- The allowable spans shown in the load tables are in feet.
- The "A" column provides the allowable specified load capacity based on strength.
- The " B " column provides the allowable specified load capacity based on serviceability based on deflection requirements shown on each load table sheet.
- The table lists the lower value of bending capacity or web bearing resistance. The load is expressed in *italics* when bearing capacity governs.
- The loads shown in the tables are specified loads and have not been factored. Strength capacity in column "A" should be checked against the following formula:

$$\text{Specified Load in Table} > / = [\text{Specified Live Load}] + [0.833 \times \text{Specified Dead Load}]$$

- The load tables are based on the material grades and strengths shown on each load table.
- It is not recommended that concentrated loads be hung directly from the roof deck. The attachments for this type of load should be to supports designed to spread the load over a suitable area. It is considered good practice to support hung concentrated loads on the supporting steel.
- The deck profiles are available as "AD" acoustic deck. Acoustic deck has the deck webs perforated with 1/8 inch diameter holes on 3/8 inch staggered centers. The glass fiber inserts are supplied separately for installation by the roofing contractor at the same time as the installation of insulation and roofing. For allowable Specified loads on acoustic deck, multiply the Specific load shown on the tables by 0.9.

# MERCURY METALS

## GENERAL NOTES for ROOF DECK

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### DESIGN CRITERIA:

The properties listed in the following tables are based on one meter panel width. The properties of the steel profiles have been computed in accordance with CSA - S136-94 for limit states design.

### Cs COEFFICIENT OF STRESS:

To determine the maximum uniform factored load, governed by design stress, and not covered by the load tables, proceed as follows;

a) Simple Span:

$$\frac{C_s (\text{mid-span})}{(\text{span in meters})^2} \quad \text{kPa}$$

b) Double Span: use the lessor of the following;

i)  $\frac{C_s (\text{support})}{(\text{span in meters})^2} \quad \text{kPa}$

ii)  $\frac{C_s (\text{mid-span})}{(\text{span in meters})^2} \times 1.77 \quad \text{kPa}$

c) Triple Span: use the lessor of the following;

i)  $\frac{C_s (\text{support})}{(\text{span in meters})^2} \times 1.25 \quad \text{kPa}$

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**To determine the maximum specified uniform loads, as listed in the load tables, divide the results of the equations by 1.5.**

The loads determined by these formulas are for positive exterior loading on the exterior sheet in the normal position. For negative exterior loading on the exterior sheet in the normal position, or positive exterior loading on the inverted position; interchange the mid-span properties with the support properties.

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a) Simple Span:

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b) Double Span:

$$\frac{C_d}{(\text{span in meters})^3} \times 2.4 \quad \text{kPa}$$

c) Triple Span:

$$\frac{C_d}{(\text{span in meters})^3} \times 1.89 \quad \text{kPa}$$

# MERCURY METALS

## GENERAL NOTES for ROOF DECK

METRIC - L S. D.

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The normal allowable deflections are as follows:

Roof Decks:      L / 240 normally or L / 360 In special cases

### WEB CRIPPLING:

Reactions at exterior and/or interior supports shall be equal or less than the factored bearing resistance shown on each load table. To determine the maximum uniform factored load, governed by web crippling, and not covered by the load tables, proceed as follows;

Exterior bearing:       $2 \times \frac{\text{EXT Bearing Resistance}}{(\text{span in meters})}$

Interior bearing:       $\frac{\text{INT Bearing Resistance}}{(\text{span in meters})}$

**To determine the maximum specified uniform loads, as listed in the load tables, divide the results of the equations by 1.5.**

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- c) The " B " column provides the allowable specified load capacity based on serviceability based on deflection requirements shown on each load table sheet.
- d) The table lists the lower value of bending capacity or web bearing resistance. The load is expressed in *Italics* when bearing capacity governs.
- e) The loads shown in the tables are specified loads and have not been factored. Strength capacity in column "A" should be checked against the following formula:

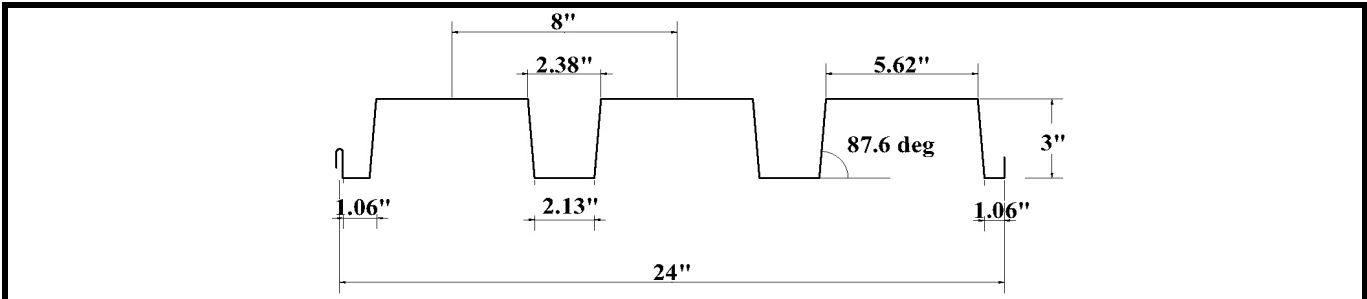
$$\text{Specified Load in Table} > / = [\text{Specified Live Load}] + [0.833 \times \text{Specified Dead Load}]$$

- f) The load tables are based on the material grades and strengths shown on each load table.
- g) It is not recommended that concentrated loads be hung directly from the roof deck. The attachments for this type of load should be to supports designed to spread the load over a suitable area. It is considered good practice to support hung concentrated loads on the supporting steel.
- h) The deck profiles are available as "AD" acoustic deck. Acoustic deck has the deck webs perforated with 3.18 mm diameter holes on 9.53 mm staggered centers. The glass fiber inserts are supplied separately for installation by the roofing contractor at the same time as the installation of insulation and roofing. For allowable Specified loads on acoustic deck, multiply the Specific load shown on the tables by 0.9.

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Imperial - L.S.D. S136-94

Mercury RD BOLD-RIB



## Properties for Mercury RD BOLD-RIB ( Per meter width )

Gauge Number	Base Steel Nominal Thickness Inches	Weight PSF	Overall Depth Inches	MID - SPAN					SUPPORT					Coeff. of Deflect.		Bearing Resist. 3" K / FT.	
				Section Modulus		Coeff. of Stress	Moment of Inertia		Section Modulus		Coeff. of Stress	Moment of Inertia		L / 240	EXT	INT	
				Sm	In3	Csm	Im	In4	Ss	In3	Css	Is	In4				
22	0.030	2.160	3	0.3660	7247	0.6620	0.4627	9162	0.9281	43302	0.74	1.18					
20	0.036	2.590	3	0.4763	9431	0.8392	0.5649	11185	1.0679	54893	1.01	1.77					
18	0.048	3.440	3	0.7282	14418	1.2166	0.7785	15414	1.4164	79579	1.68	3.32					
16	0.060	4.320	3	1.0168	20133	1.6103	0.9658	19123	1.7590	105332	2.49	5.36					

## Specified Load Tables - Kpa ( Kn/m<sup>2</sup> )

Span Ft.	ONE SPAN								TWO EQUAL SPANS								THREE EQUAL SPANS							
	0.030		0.036		0.048		0.060		0.030		0.036		0.048		0.060		0.030		0.036		0.048		0.060	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
7.0	99	*	128	*	196	*	274	*	112	*	152	*	210	*	260	*	112	*	169	*	262	*	325	*
7.5	86	*	112	*	171	*	239	*	105	*	133	*	183	*	227	*	105	*	157	*	228	*	283	*
8.0	75	*	98	*	150	*	210	206	95	*	117	*	161	*	199	*	98	*	146	*	201	*	249	*
8.5	67	*	87	*	133	130	186	172	85	*	103	*	142	*	176	*	92	*	129	*	178	*	221	*
9.0	60	59	78	75	119	109	166	144	75	*	92	*	127	*	157	*	87	*	115	*	159	*	197	*
9.5	54	51	70	64	107	93	149	123	68	*	83	*	114	*	141	*	83	*	103	*	142	*	177	*
10.0	48	43	63	55	96	80	134	105	61	*	75	*	103	*	127	*	75	*	93	*	128	*	159	*
10.5	44	37	57	47	87	69	122	91	55	*	68	*	93	*	116	*	68	*	85	*	117	*	145	*
11.0	40	33	52	41	79	60	111	79	50	*	62	*	85	*	105	*	62	61	77	*	106	*	132	*
11.5	37	28	48	36	73	52	101	69	46	*	56	*	78	*	96	*	57	54	70	68	97	*	120	*
12.0	34	25	44	32	67	46	93	61	42	*	52	*	71	*	89	*	52	47	65	60	89	87	111	*
12.5	31	22	40	28	62	41	86	54	39	*	48	*	66	*	82	*	48	42	60	53	82	77	102	*

### Mercury RD BOLD-RIB Load Table Notes

- 1) Column 'A' - Loads based on stress. Column 'B' - Loads based on L / 240 deflection. ( \* ) denotes stress governs.
- 2) Table lists lower value of bending or bearing resistance. *italic* denotes web crippling governs.
- 3) For deflection loads other than L / 240 multiply column 'B' by the following factors:

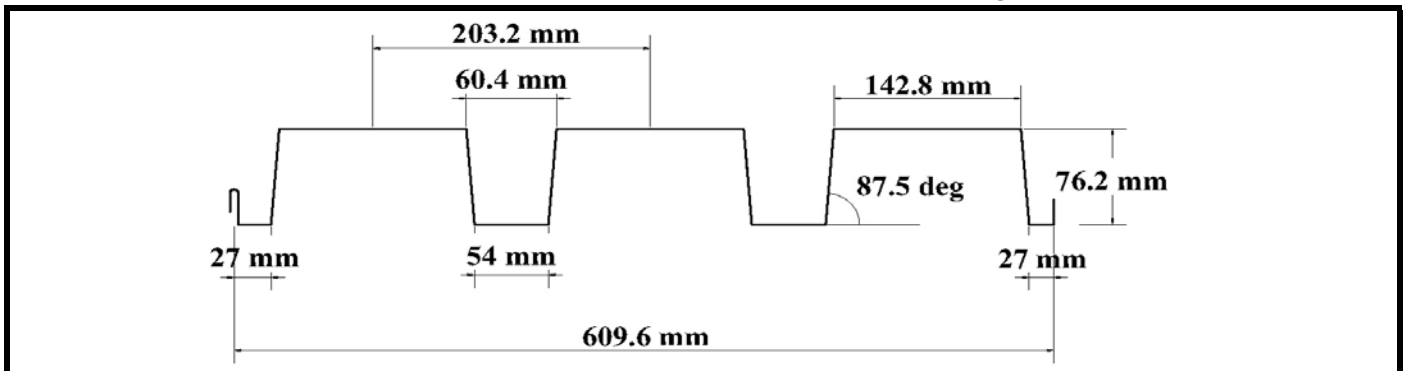
DEFLECTION	MULTIPLIER
L / 180	1.33
L / 360	0.5

- 4) Load tables based on use of A653 Structural Quality Steel Sheet Grade 33 ( maximum stress 29.7 Ksi ).
- 5) Also available in 0.075 inch thickness. Contact your Mercury Metals representative.

# MERCURY METALS

Metric - L.S.D. S136-94

Mercury RD BOLD-RIB



## Properties for Mercury RD BOLD-RIB

( Per meter width )

Gauge Number	Base Steel Nominal Thickness mm	Weight Kpa	Overall Depth mm	MID - SPAN			SUPPORT			Coeff. of Deflect. L/240	Bearing Resist. for 76mm	
				Section Modulus Sm	Coeff. of Stress Csm	Moment of Inertia Im	Section Modulus Ss	Coeff. of Stress Css	Moment of Inertia Is		EXT	INT
				mm <sup>3</sup> x10 <sup>3</sup>		mm <sup>4</sup> x10 <sup>3</sup>	mm <sup>3</sup> x10 <sup>3</sup>		mm <sup>4</sup> x10 <sup>3</sup>			
22	0.76	0.1033	76.2	19.676	32.5835	904.1	24.875	41.1930	1267.3	58.73	10.7	17.2
20	0.91	0.1239	76.2	25.605	42.0190	1146.0	30.371	50.2944	1458.3	74.44	14.8	25.8
18	1.22	0.1646	76.2	39.148	64.8291	1661.4	41.856	69.3135	1934.3	107.92	24.5	48.5
16	1.52	0.2067	76.2	54.667	90.5286	2199.0	51.923	85.9845	2402.1	142.85	36.3	78.2

## Specified Load Tables - Kpa ( Kn/m<sup>2</sup> )

Span M.	ONE SPAN								TWO EQUAL SPANS								THREE EQUAL SPANS							
	0.76		0.91		1.22		1.52		0.76		0.91		1.22		1.52		0.76		0.91		1.22		1.52	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
2.0	5.4	*	7.0	*	10.8	*	15.1	*	5.7	*	8.4	*	11.6	*	14.3	*	5.7	*	8.6	*	14.4	*	17.9	*
2.2	4.5	*	5.8	*	8.9	*	12.5	*	5.2	*	6.9	*	9.5	*	11.8	*	5.2	*	7.8	*	11.9	*	14.8	*
2.4	3.8	*	4.9	*	7.5	*	10.5	10.3	4.8	*	5.8	*	8.0	*	10.0	*	4.8	*	7.2	*	10.0	*	12.4	*
2.6	3.2	*	4.1	*	6.4	6.1	8.9	8.1	4.1	*	5.0	*	6.8	*	8.5	*	4.4	*	6.2	*	8.5	*	10.6	*
2.8	2.8	2.7	3.6	3.4	5.5	4.9	7.7	6.5	3.5	*	4.3	*	5.9	*	7.3	*	4.1	*	5.3	*	7.4	*	9.1	*
3.0	2.4	2.2	3.1	2.8	4.8	4.0	6.7	5.3	3.1	*	3.7	*	5.1	*	6.4	*	3.8	*	4.7	*	6.4	*	8.0	*
3.2	2.1	1.8	2.7	2.3	4.2	3.3	5.9	4.4	2.7	*	3.3	*	4.5	*	5.6	*	3.3	*	4.1	*	5.6	*	7.0	*
3.4	1.9	1.5	2.4	1.9	3.7	2.7	5.2	3.6	2.4	*	2.9	*	4.0	*	5.0	*	2.9	2.8	3.6	*	5.0	*	6.2	*
3.6	1.7	1.3	2.2	1.6	3.3	2.3	4.7	3.1	2.1	*	2.6	*	3.6	*	4.4	*	2.6	2.4	3.2	3.0	4.5	4.4	5.5	*
3.8	1.5	1.1	1.9	1.4	3.0	2.0	4.2	2.6	1.9	*	2.3	*	3.2	*	4.0	*	2.3	2.0	2.9	2.6	4.0	3.7	5.0	4.9
4.0	1.4	0.9	1.8	1.2	2.7	1.7	3.8	2.2	1.7	*	2.1	*	2.9	*	3.6	*	2.1	1.7	2.6	2.2	3.6	3.2	4.5	4.2
4.2	1.2	0.8	1.6	1.0	2.5	1.5	3.4	1.9	1.6	*	1.9	*	2.6	*	3.2	*	1.9	1.5	2.4	1.9	3.3	2.8	4.1	3.6

### Mercury RD BOLD-RIB Load Table Notes

- 1) Column 'A' - Loads based on stress. Column 'B' - Loads based on L / 240 deflection. ( \* ) denotes stress govns.
- 2) Table lists lower value of bending or bearing resistance. *Italic* denotes web crippling govns.
- 3) For deflection loads other than L / 240 multiply column 'B' by the following factors:

DEFLECTION	MULTIPLIER
L / 180	1.33
L / 360	0.5

- 4) Load tables based on use of A653M Structural Quality Steel Sheet Grade 230 ( maximum stress 207 Mpa ).
- 5) Also available in 1.91 mm thickness. Contact your Mercury Metals representative.

**IMPERIAL - "Q" SHEAR VALUES & "F" FLEXIBILITY FACTORS for**

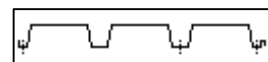
**MERCURY BOLD - RIB**

Coverage - 24 inches

**3 TRANSVERSE WELDS/UNIT/SUPPORT**

Q IN LBS./FT (ALLOWABLE SHEAR)  
F IN X x 10^-6 IN/LB

$R = L_v / L_o$

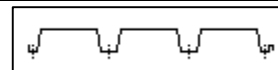


		SIDE LAPS BUTTON PUNCHED @ 2.00 FT CENTERS				SIDE LAPS BUTTON PUNCHED @ 1.50 FT CENTERS				SIDE LAPS BUTTON PUNCHED @ 1.00 FT CENTERS				SIDE LAPS BUTTON PUNCHED @ 0.50 FT CENTERS			
DECK	THK	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598
SPAN	GA	22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
8.0	Q	153	227	402	579	170	246	426	607	203	286	476	662	303	404	623	830
	F	30+	24+	16+	11+	27+	22+	15+	11+	23+	19+	14+	10+	16+	14+	11+	8+
		278R	161R	68R	35R	278R	161R	68R	35R	278R	161R	68R	35R	278R	161R	68R	35R
9.0	Q	142	209	366	525	159	229	391	554	1921	269	441	610	293	388	591	780
	F	33+	26+	18+	13+	29+	24+	17+	12+	25+	21+	15+	11+	17+	15+	12+	9+
		247R	143R	60R	31R	247R	143R	60R	31R	247R	143R	60R	31R	247R	143R	60R	31R
10.0	Q	133	195	338	483	150	215	364	512	184	255	414	569	286	376	566	742
	F	35+	28+	20+	14+	32+	26+	18+	14+	26+	22+	16+	12+	18+	16+	12+	10+
		222R	129R	54R	28R	222R	129R	54R	28R	222R	129R	54R	28R	222R	129R	54R	28R
11.0	Q	126	183	316	448	143	203	341	477	178	244	393	536	281	367	547	712
	F	38+	31+	21+	16+	33+	28+	20+	15+	28+	24+	17+	13+	18+	16+	13+	10+
		202R	117R	49R	25R	202R	117R	49R	25R	202R	117R	49R	25R	202R	117R	49R	25R
12.0	Q	121	174	297	420	138	194	323	449	172	235	375	509	276	359	531	687
	F	40+	33+	23+	17+	35+	30+	21+	16+	29+	25+	19+	14+	19+	17+	14+	11+
		185R	107R	45R	23R	185R	107R	45R	23R	185R	107R	45R	23R	185R	107R	45R	23R
13.0	Q	116	166	281	395	133	187	307	426	168	228	360	486	273	353	519	667
	F	42+	35+	25+	19+	37+	31+	23+	17+	30+	26+	20+	15+	20+	18+	14+	12+
		171R	99R	42R	21R	171R	99R	42R	21R	171R	99R	42R	21R	171R	99R	42R	21R
14.0	Q	112	159	268	375	129	180	294	406	165	222	348	467	270	349	508	651
	F	45+	37+	27+	20+	39+	33+	24+	19+	31+	27+	21+	16+	20+	18+	15+	12+
		159R	92R	39R	20R	159R	92R	39R	20R	159R	92R	39R	20R	159R	92R	39R	20R

**4 TRANSVERSE WELDS/UNIT/SUPPORT**

Q IN LBS./FT (ALLOWABLE SHEAR)  
F IN X x 10^-6 IN/LB

$R = L_v / L_o$



		SIDE LAPS BUTTON PUNCHED @ 2.00 FT CENTERS				SIDE LAPS BUTTON PUNCHED @ 1.50 FT CENTERS				SIDE LAPS BUTTON PUNCHED @ 1.00 FT CENTERS				SIDE LAPS BUTTON PUNCHED @ 0.50 FT CENTERS			
DECK	THK	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598
SPAN	GA	22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
8.0	Q	191	285	501	712	209	305	526	742	244	347	578	800	350	473	734	975
	F	27+	22+	14+	10+	25+	20+	14+	10+	22+	18+	13+	9+	16+	14+	10+	8+
		123R	71R	30R	15R	123R	71R	30R	15R	123R	71R	30R	15R	123R	71R	30R	15R
9.0	Q	176	261	455	645	194	282	481	675	230	324	534	734	337	452	692	912
	F	30+	24+	16+	12+	28+	22+	15+	11+	24+	20+	14+	10+	17+	15+	11+	9+
		110R	64R	27R	14R	110R	64R	27R	14R	110R	64R	27R	14R	110R	64R	27R	14R
10.0	Q	163	242	419	591	181	263	445	621	217	306	499	682	325	435	660	864
	F	33+	26+	18+	13+	30+	24+	17+	12+	25+	21+	15+	11+	18+	16+	12+	9+
		99R	57R	24R	12R	99R	57R	24R	12R	99R	57R	24R	12R	99R	57R	24R	12R
11.0	Q	152	225	389	547	170	246	416	578	206	290	471	640	314	419	634	825
	F	35+	28+	20+	14+	32+	26+	18+	14+	27+	23+	17+	13+	19+	16+	13+	10+
		90R	52R	22R	11R	90R	52R	22R	11R	90R	52R	22R	11R	90R	52R	22R	11R
12.0	Q	143	210	365	511	161	231	393	542	197	274	448	605	305	404	614	794
	F	38+	31+	21+	16+	34+	28+	20+	15+	28+	24+	18+	14+	19+	17+	13+	11+
		82R	48R	20R	10R	82R	48R	20R	10R	82R	48R	20R	10R	82R	48R	20R	10R
13.0	Q	135	197	344	481	153	218	373	513	189	262	429	577	297	391	597	769
	F	40+	33+	23+	17+	36+	30+	22+	16+	30+	25+	19+	15+	20+	18+	14+	11+
		76R	44R	19R	9R	76R	44R	19R	9R	76R	44R	19R	9R	76R	44R	19R	9R
14.0	Q	129	186	327	455	147	208	356	487	183	251	413	552	291	380	584	748
	F	43+	35+	25+	19+	38+	32+	23+	18+	31+	27+	20+	16+	20+	18+	15+	12+
		71R	41R	17R	9R	71R	41R	17R	9R	71R	41R	17R	9R	71R	41R	17R	9R

**IMPERIAL - "Q" SHEAR VALUES & "F" FLEXIBILITY FACTORS for**

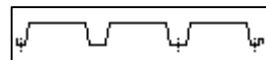
**MERCURY BOLD - RIB**

Coverage - 24 inches

**3 TRANSVERSE WELDS/UNIT/SUPPORT**

Q IN LBS./FT (ALLOWABLE SHEAR)  
F IN X x 10<sup>-6</sup> IN/LB

$R = L_v / L_o$

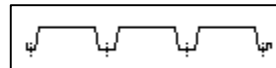


		SIDE LAPS 1.50 in SEAM WELDS @ 2.00 FT CENTERS				SIDE LAPS 1.50 in SEAM WELDS @ 1.50 FT CENTERS				SIDE LAPS 1.50 in SEAM WELDS @ 1.00 FT CENTERS				SIDE LAPS 1.50 in SEAM WELDS @ 0.50 FT CENTERS			
DECK	THK	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598
SPAN	GA	22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
8.0	Q		288	595	864		341	689	986		446	875	1232		761	1435	1968
	F		12+	9+	6+		11+	8+	6+		9+	6+	5+		6+	5+	4+
			161R	68R	35R		161R	68R	35R		161R	68R	35R		161R	68R	35R
9.0	Q		272	556	815		325	650	554		430	836	1190		745	1396	1939
	F		12+	8+	6+		10+	7+	6+		8+	6+	5+		6+	4+	3+
			143R	60R	31R		143R	60R	31R		143R	60R	31R		143R	60R	31R
10.0	Q		260	525	777		312	618	904		417	805	1159		732	1365	1921
	F		11+	8+	6+		10+	7+	6+		8+	6+	5+		5+	4+	3+
			129R	54R	28R		129R	54R	28R		129R	54R	28R		129R	54R	28R
11.0	Q		249	500	748		302	593	877		407	780	1135		722	1339	1910
	F		11+	8+	6+		9+	7+	5+		8+	6+	4+		5+	4+	3+
			117R	49R	25R		117R	49R	25R		117R	49R	25R		117R	49R	25R
12.0	Q		241	479	724		293	572	855		398	759	1117		713	1318	1904
	F		11+	8+	6+		9+	7+	5+		7+	6+	4+		5+	4+	3+
			107R	45R	23R		107R	45R	23R		107R	45R	23R		107R	45R	23R
13.0	Q		234	461	704		286	554	838		391	741	1104		706	1301	1903
	F		10+	8+	6+		9+	7+	5+		7+	5+	4+		5+	4+	3+
			99R	42R	21R		99R	42R	21R		99R	42R	21R		99R	42R	21R
14.0	Q		227	446	689		280	539	824		385	726	1094		700	1286	1906
	F		10+	7+	6+		9+	6+	5+		7+	5+	4+		5+	4+	3+
			92R	39R	20R		92R	39R	20R		92R	39R	20R		92R	39R	20R

**4 TRANSVERSE WELDS/UNIT/SUPPORT**

Q IN LBS./FT (ALLOWABLE SHEAR)  
F IN X x 10<sup>-6</sup> IN/LB

$R = L_v / L_o$

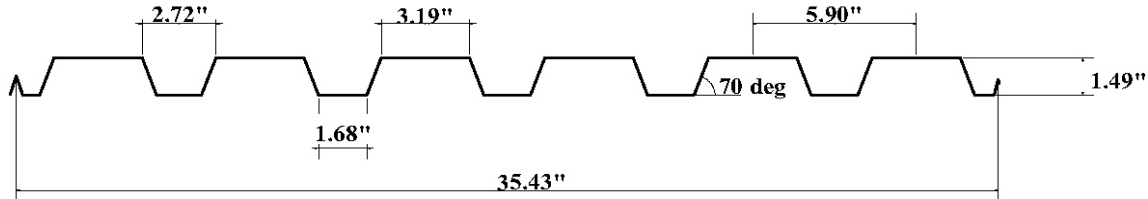


		SIDE LAPS 1.50 in SEAM WELDS @ 2.00 FT CENTERS				SIDE LAPS 1.50 in SEAM WELDS @ 1.50 FT CENTERS				SIDE LAPS 1.50 in SEAM WELDS @ 1.00 FT CENTERS				SIDE LAPS 1.50 in SEAM WELDS @ 0.50 FT CENTERS			
DECK	THK	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598
SPAN	GA	22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
8.0	Q		321	666	1011		373	759	1139		478	946	1396		793	1506	2167
	F		12+	8+	6+		10+	7+	6+		9+	6+	5+		6+	5+	4+
			71R	30R	15R		71R	30R	15R		71R	30R	15R		71R	30R	15R
9.0	Q		300	617	949		353	711	1080		458	897	1342		773	1457	2129
	F		11+	8+	6+		10+	7+	5+		8+	6+	5+		6+	4+	3+
			64R	27R	14R		64R	27R	14R		64R	27R	14R		64R	27R	14R
10.0	Q		284	579	901		337	672	1035		442	858	1302		757	1418	2104
	F		11+	8+	6+		10+	7+	5+		8+	6+	5+		6+	4+	3+
			57R	24R	12R		57R	24R	12R		57R	24R	12R		57R	24R	12R
11.0	Q		271	547	863		324	640	999		429	827	1272		744	1387	2089
	F		11+	8+	6+		9+	7+	5+		8+	6+	4+		5+	4+	3+
			52R	22R	11R		52R	22R	11R		52R	22R	11R		52R	22R	11R
12.0	Q		261	521	833		313	614	971		418	801	1249		733	1361	2080
	F		10+	8+	6+		9+	7+	5+		7+	6+	4+		5+	4+	3+
			48R	20R	10R		48R	20R	10R		48R	20R	10R		48R	20R	10R
13.0	Q		251	499	808		304	592	949		409	779	1231		724	1339	2077
	F		10+	7+	6+		9+	7+	5+		7+	5+	4+		5+	4+	3+
			44R	19R	9R		44R	19R	9R		44R	19R	9R		44R	19R	9R
14.0	Q		244	480	787		296	574	931		401	760	1218		716	1320	2078
	F		10+	7+	6+		9+	6+	5+		7+	5+	4+		5+	4+	3+
			41R	17R	9R		41R	17R	9R		41R	17R	9R		41R	17R	9R

# MERCURY METALS

Imperial - L.S.D. S136-94

Mercury RD 900



## Properties for Mercury RD 900

( Per foot width )

Gauge Number	Base Steel Nominal Thickness Inches	Weight PSF	Overall Depth Dd Inches	MID - SPAN					SUPPORT					Coeff. of Deflect. L / 240	Bearing Resis.1.5" K / FT.	
				Section Modulus		Coeff. of Stress Csm	Moment of Inertia		Section Modulus		Coeff. of Stress Css	Moment of Inertia			EXT	INT
				Sm	In3		Im	In4	Ss	In3		Is	In4			
22	0.030	1.65	1.46	0.1832		3627	0.1594		0.1801		3566	0.1695	10425	0.75	1.42	
20	0.036	1.99	1.47	0.2231		4417	0.1982		0.2292		4538	0.2031	12965	1.08	2.03	
18	0.048	2.65	1.48	0.3029		5997	0.2696		0.3088		6114	0.2696	17636	1.93	3.59	
16	0.060	3.31	1.49	0.3810		7544	0.3356		0.3815		7554	0.3360	21950	3.02	5.59	

## Specified Load Tables - psf

Spar Ft.	ONE SPAN								TWO EQUAL SPANS								THREE EQUAL SPANS							
	0.030		0.036		0.048		0.060		0.030		0.036		0.048		0.060		0.030		0.036		0.048		0.060	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
4.0	151	*	184	*	250	*	314	*	149	*	189	*	255	*	315	*	186	*	236	*	318	*	393	*
4.5	119	114	145	142	197	194	248	241	117	*	149	*	201	*	249	*	147	*	187	*	252	*	311	*
5.0	97	83	118	104	160	141	201	176	95	*	121	*	163	*	201	*	119	*	151	*	204	*	252	*
5.5	80	63	97	78	132	106	166	132	79	*	100	*	135	*	166	*	98	*	125	*	168	*	208	*
6.0	67	48	82	60	111	82	140	102	66	*	84	*	113	*	140	*	83	*	105	*	142	*	175	*
6.5	57	38	70	47	95	64	119	80	56	*	72	*	96	*	119	*	70	*	90	89	121	121	149	*
7.0	49	30	60	38	82	51	103	64	49	*	62	*	83	*	103	*	61	57	77	71	104	97	128	121
7.5	43	25	52	31	71	42	89	52	42	*	54	*	72	*	90	*	53	47	67	58	91	79	112	98
8.0	38	20	46	25	62	34	79	43	37	*	47	*	64	*	79	*	46	38	59	48	80	65	98	81
8.5	33	17	41	21	55	29	70	36	33	*	42	*	56	*	70	*	41	32	52	40	71	54	87	68
9.0	30	14	36	18	49	24	62	30	29	*	37	*	50	*	62	*	37	27	47	34	63	46	78	57
9.5	27	12	33	15	44	21	56	26	26	*	34	36	45	49	56	*	33	23	42	29	56	39	70	48

### Mercury RD 900 Load Table Notes

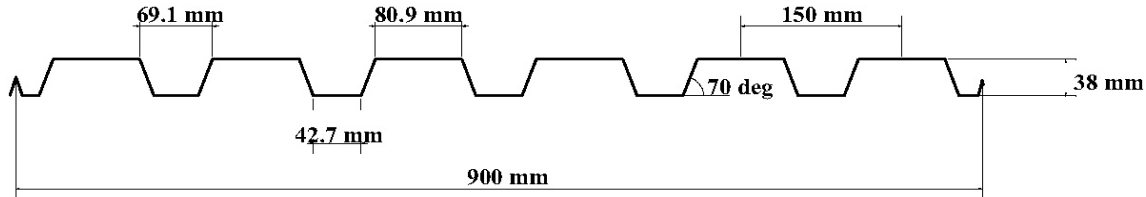
- 1) Column 'A' - Loads based on stress. Column 'B' - Loads based on L / 240 deflection. ( \* ) denotes stress governs.
- 2) Table lists lower value of bending or bearing resistance *italic* denotes web crippling governs.
- 3) For deflection loads other than L / 240 multiply column 'B' by the following factors:

<u>DEFLECTION</u>	<u>MULTIPLIER</u>
L / 180	1.33
L / 360	0.5
- 4) Load tables based on use of A653 Structural Quality Steel Sheet Grade 33 ( maximum stress 29.7 Ksi ).

# MERCURY METALS

Metric - L.S.D. S136-94

Mercury RD 900



## Properties for Mercury RD 900

( Per meter width )

Gauge Number	Base Steel Nominal Thickness	Weight	Overall Depth Dd	MID - SPAN				SUPPORT				Coeff. of Deflect. L/240	Bearing Resist. for 38 mm	
				Section Modulus		Coeff. of Stress	Moment of Inertia		Section Modulus		Coeff. of Stress		Moment of Inertia	
	mm	Kpa	mm	Sm	mm <sup>3</sup>	Csm	Im	mm <sup>4</sup>	Ss	mm <sup>3</sup>	Css	Is	mm <sup>4</sup>	
22	0.76	0.0789	37.1	9.841	16.2967	217.3	9.6600	15.9970	231.1	14.12	11.1	21.1		
20	0.91	0.0952	37.2	11.987	19.8505	270.5	12.296	20.3622	277.3	17.57	16.1	30.2		
18	1.22	0.1267	37.5	16.275	26.9514	368.2	16.598	27.4863	368.2	23.92	28.6	53.3		
16	1.52	0.1584	37.8	20.475	33.9066	458.2	20.509	33.9629	458.2	29.76	44.8	82.9		

## Specified Load Tables - Kpa ( Kn/m<sup>2</sup> )

Span M.	ONE SPAN								TWO EQUAL SPANS								THREE EQUAL SPANS							
	0.76		0.91		1.22		1.52		0.76		0.91		1.22		1.52		0.76		0.91		1.22		1.52	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
1.2	7.5	*	9.2	*	12.5	*	15.7	*	7.4	*	9.4	*	12.7	*	15.7	*	9.3	*	11.8	*	15.9	*	19.7	*
1.4	5.5	5.1	6.8	6.4	9.2	8.7	11.5	10.8	5.4	*	6.9	*	9.3	*	11.6	*	6.8	*	8.7	*	11.7	*	14.4	*
1.6	4.2	3.4	5.2	4.3	7.0	5.8	8.8	7.3	4.2	*	5.3	*	7.2	*	8.8	*	5.2	*	6.6	*	8.9	*	11.1	*
1.8	3.4	2.4	4.1	3.0	5.5	4.1	7.0	5.1	3.3	*	4.2	*	5.7	*	7.0	*	4.1	*	5.2	*	7.1	*	8.7	*
2.0	2.7	1.8	3.3	2.2	4.5	3.0	5.7	3.7	2.7	*	3.4	*	4.6	*	5.7	*	3.3	3.3	4.2	4.2	5.7	5.7	7.1	7.0
2.2	2.2	1.3	2.7	1.7	3.7	2.2	4.7	2.8	2.2	*	2.8	*	3.8	*	4.7	*	2.8	2.5	3.5	3.1	4.7	4.2	5.8	5.3
2.4	1.9	1.0	2.3	1.3	3.1	1.7	3.9	2.2	1.9	*	2.4	*	3.2	*	3.9	*	2.3	1.9	2.9	2.4	4.0	3.3	4.9	4.1
2.6	1.6	0.8	2.0	1.0	2.7	1.4	3.3	1.7	1.6	*	2.0	*	2.7	*	3.3	*	2.0	1.5	2.5	1.9	3.4	2.6	4.2	3.2
2.8	1.4	0.6	1.7	0.8	2.3	1.1	2.9	1.4	1.4	*	1.7	*	2.3	*	2.9	*	1.7	1.2	2.2	1.5	2.9	2.1	3.6	2.6
3.0	1.2	0.5	1.5	0.7	2.0	0.9	2.5	1.1	1.2	*	1.5	*	2.0	*	2.5	*	1.5	1.0	1.9	1.2	2.5	1.7	3.1	2.1
3.2	1.1	0.4	1.3	0.5	1.8	0.7	2.2	0.9	1.0	1.0	1.3	1.3	1.8	1.8	2.2	2.2	1.3	0.8	1.7	1.0	2.2	1.4	2.8	1.7
3.4	0.9	0.4	1.1	0.4	1.6	0.6	2.0	0.8	0.9	0.9	1.2	1.1	1.6	1.5	2.0	1.8	1.2	0.7	1.5	0.8	2.0	1.2	2.4	1.4

### Mercury RD 900 Load Table Notes

- 1) Column 'A' - Loads based on stress. Column 'B' - Loads based on L / 240 deflection. ( \* ) denotes stress govens.
- 2) Table lists lower value of bending or bearing resistance. *Italic* denotes web crippling govens.
- 3) For deflection loads other than L / 240 multiply column 'B' by the following factors:

DEFLECTION	MULTIPLIER
L / 180	1.33
L / 360	0.5

- 4) Load tables based on use of A653M Structural Quality Steel Sheet Grade 230 ( maximum stress 207 Mpa ).

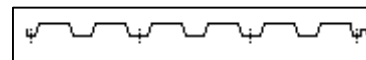
**IMPERIAL - "Q" SHEAR VALUES & "F" FLEXIBILITY FACTORS for**

**MERCURY RD 900**

Coverage - 35.43 inches

**4 TRANSVERSE WELDS/UNIT/SUPPORT**

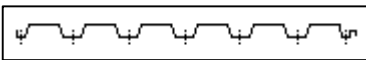
Q IN LBS./FT (ALLOWABLE SHEAR)       $R = L_v / L_o$   
 F IN X x 10^-6 IN/LB



		SIDE LAPS BUTTON PUNCHED @ 2.00 FT CENTERS				SIDE LAPS BUTTON PUNCHED @ 1.50 FT CENTERS				SIDE LAPS BUTTON PUNCHED @ 1.00 FT CENTERS				SIDE LAPS BUTTON PUNCHED @ 0.50 FT CENTERS			
DECK	THK	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598
SPAN	GA	22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
4.0	Q	324	502	925	1350	340	521	949	1376	373	560	995	1429	471	675	1136	1585
	F	11+	9+	6+	4+	11+	8+	5+	4+	10+	8+	5+	4+	9+	7+	5+	4+
		257R	149R	63R	32R	257R	149R	63R	32R	257R	149R	63R	32R	257R	149R	63R	32R
5.0	Q	270	414	755	1098	286	434	779	1124	319	472	827	1178	419	589	971	1338
	F	13+	10+	7+	5+	13+	10+	6+	5+	12+	9+	6+	4+	9+	8+	5+	4+
		206R	119R	50R	26R	206R	119R	50R	26R	206R	119R	50R	26R	206R	119R	50R	26R
6.0	Q	234	356	643	930	250	375	667	957	284	415	716	1012	385	533	862	1175
	F	15+	12+	8+	5+	14+	11+	7+	5+	13+	10+	7+	5+	10+	8+	6+	5+
		171R	99R	42R	21R	171R	99R	42R	21R	171R	99R	42R	21R	171R	99R	42R	21R
7.0	Q	208	314	563	810	225	334	587	838	259	374	637	894	361	494	785	1061
	F	17+	13+	9+	6+	16+	12+	8+	6+	14+	11+	8+	6+	11+	9+	7+	5+
		147R	85R	36R	18R	147R	85R	36R	18R	147R	85R	36R	18R	147R	85R	36R	18R
8.0	Q	189	283	503	721	206	303	528	749	240	344	578	806	343	466	729	976
	F	19+	15+	10+	7+	17+	14+	9+	7+	15+	12+	9+	6+	11+	10+	7+	6+
		129R	74R	31R	16R	129R	74R	31R	16R	129R	74R	31R	16R	129R	74R	31R	16R
9.0	Q	174	259	457	652	192	280	482	681	226	321	533	739	330	444	687	912
	F	20+	16+	11+	8+	19+	15+	10+	8+	16+	13+	10+	7+	12+	10+	8+	6+
		114R	66R	28R	14R	114R	66R	28R	14R	114R	66R	28R	14R	114R	66R	28R	14R
10.0	Q	163	240	420	597	180	261	446	626	215	303	498	685	320	427	654	862
	F	22+	18+	12+	9+	20+	16+	11+	8+	17+	14+	10+	8+	13+	11+	8+	6+
		103R	60R	25R	13R	103R	60R	25R	13R	103R	60R	25R	13R	103R	60R	25R	13R

**7 TRANSVERSE WELDS/UNIT/SUPPORT**

Q IN LBS./FT (ALLOWABLE SHEAR)       $R = L_v / L_o$   
 F IN X x 10^-6 IN/LB



		SIDE LAPS BUTTON PUNCHED @ 2.00 FT CENTERS				SIDE LAPS BUTTON PUNCHED @ 1.50 FT CENTERS				SIDE LAPS BUTTON PUNCHED @ 1.00 FT CENTERS				SIDE LAPS BUTTON PUNCHED @ 0.50 FT CENTERS			
DECK	THK	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598
SPAN	GA	22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
4.0	Q	503	773	1376	1950	521	793	1401	1978	557	835	1451	2033	664	961	1602	2199
	F	9+	7+	5+	3+	9+	7+	5+	3+	9+	7+	5+	3+	8+	6+	4+	3+
		64R	37R	16R	8R	64R	37R	16R	8R	64R	37R	16R	8R	64R	37R	16R	8R
5.0	Q	407	632	1117	1579	425	653	1143	1608	461	696	1195	1664	569	824	1350	1855
	F	11+	8+	6+	4+	11+	8+	5+	4+	10+	8+	5+	4+	9+	7+	5+	4+
		51R	30R	12R	6R	51R	30R	12R	6R	51R	30R	12R	6R	51R	30R	12R	6R
6.0	Q	344	535	946	1333	362	556	972	1362	398	600	1025	1420	506	729	1183	1596
	F	13+	10+	6+	5+	12+	9+	6+	5+	11+	9+	6+	4+	10+	8+	5+	4+
		43R	25R	10R	5R	43R	25R	10R	5R	43R	25R	10R	5R	43R	25R	10R	5R
7.0	Q	298	461	824	1157	316	482	851	1187	352	525	905	1247	460	655	1067	1427
	F	14+	11+	7+	5+	14+	11+	7+	5+	13+	10+	7+	5+	10+	8+	6+	5+
		37R	21R	9R	5R	37R	21R	9R	5R	37R	21R	9R	5R	37R	21R	9R	5R
8.0	Q	265	405	733	1026	283	427	760	1057	319	470	815	1118	427	600	981	1302
	F	16+	12+	8+	6+	15+	12+	8+	6+	14+	11+	8+	6+	11+	9+	7+	5+
		32R	19R	8R	4R	32R	19R	8R	4R	32R	19R	8R	4R	32R	19R	8R	4R
9.0	Q	239	362	662	924	257	384	690	956	293	427	747	1019	401	557	915	1207
	F	18+	14+	9+	7+	17+	13+	9+	7+	15+	12+	8+	6+	12+	10+	7+	6+
		28R	16R	7R	4R	28R	16R	7R	4R	28R	16R	7R	4R	28R	16R	7R	4R
10.0	Q	218	328	606	843	236	350	635	876	272	393	692	940	380	523	864	1133
	F	19+	15+	10+	8+	18+	14+	10+	7+	16+	13+	9+	7+	12+	10+	8+	6+
		26R	15R	6R	3R	26R	15R	6R	3R	26R	15R	6R	3R	26R	15R	6R	3R

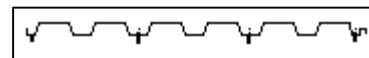
**IMPERIAL - "Q" SHEAR VALUES & "F" FLEXIBILITY FACTORS for**

**MERCURY RD 900**

Coverage - 35.43 inches

**4 TRANSVERSE WELDS/UNIT/SUPPORT**

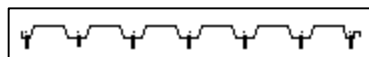
Q IN LBS./FT (ALLOWABLE SHEAR)      R = Lv / Lo  
 F IN X x 10^-6 IN/LB



		SIDE LAPS 1.50 in SEAM WELDS @ 2.00 FT CENTERS				SIDE LAPS 1.50 in SEAM WELDS @ 1.50 FT CENTERS				SIDE LAPS 1.50 in SEAM WELDS @ 1.00 FT CENTERS				SIDE LAPS 1.50 in SEAM WELDS @ 0.50 FT CENTERS			
DECK	THK	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598
SPAN	GA	22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
4.0	Q		514	1132	1617		566	1225	1732		671	1410	1962		986	1966	2653
	F		10+	6+	5+		9+	6+	4+		8+	5+	4+		6+	4+	3+
			149R	63R	32R		149R	63R	32R		149R	63R	32R		149R	63R	32R
5.0	Q		438	957	1370		491	1050	1488		596	1236	1723		911	1796	2429
	F		9+	6+	5+		9+	6+	4+		7+	5+	4+		6+	4+	3+
			119R	50R	26R		119R	50R	26R		119R	50R	26R		119R	50R	26R
6.0	Q		388	834	1208		441	927	1329		546	1114	1569		861	1674	2290
	F		9+	6+	5+		8+	6+	4+		7+	5+	4+		5+	4+	3+
			99R	42R	21R		99R	42R	21R		99R	42R	21R		99R	42R	21R
7.0	Q		353	747	1095		405	840	1217		510	1027	1462		825	1586	2198
	F		9+	6+	4+		8+	6+	4+		7+	5+	4+		5+	4+	3+
			85R	36R	18R		85R	36R	18R		85R	36R	18R		85R	36R	18R
8.0	Q		326	682	1011		378	775	1136		483	962	1386		798	1521	2136
	F		8+	6+	4+		8+	5+	4+		6+	5+	4+		5+	4+	3+
			74R	31R	16R		74R	31R	16R		74R	31R	16R		74R	31R	16R
9.0	Q		305	631	947		358	725	1075		463	911	1330		778	1471	2060
	F		8+	6+	4+		7+	5+	4+		6+	5+	4+		5+	3+	3+
			66R	42R	21R		66R	42R	21R		66R	42R	21R		66R	42R	21R
10.0	Q		289	591	898		341	685	1028		446	871	1287		761	1342	1669
	F		8+	6+	4+		7+	5+	4+		6+	4+	3+		4+	3+	3+
			60R	25R	13R		60R	25R	13R		60R	25R	13R		60R	25R	13R

**7 TRANSVERSE WELDS/UNIT/SUPPORT**

Q IN LBS./FT (ALLOWABLE SHEAR)      R = Lv / Lo  
 F IN X x 10^-6 IN/LB



		SIDE LAPS 1.50 in SEAM WELDS @ 2.00 FT CENTERS				SIDE LAPS 1.50 in SEAM WELDS @ 1.50 FT CENTERS				SIDE LAPS 1.50 in SEAM WELDS @ 1.00 FT CENTERS				SIDE LAPS 1.50 in SEAM WELDS @ 0.50 FT CENTERS			
DECK	THK	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598	.0295	.0358	.0474	.0598
SPAN	GA	22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
4.0	Q		678	1502	2233		731	1595	2355		836	1782	2599		1151	2342	3330
	F		8+	6+	4+		8+	5+	4+		7+	5+	4+		6+	4+	3+
			37R	16R	8R		37R	16R	8R		37R	16R	8R		37R	16R	8R
5.0	Q		566	1234	1870		619	1327	1996		724	1514	2246		1039	2074	2999
	F		8+	6+	4+		8+	5+	4+		7+	5+	4+		6+	4+	3+
			30R	12R	6R		30R	12R	6R		30R	12R	6R		30R	12R	6R
6.0	Q		492	1057	1632		544	1150	1760		649	1337	2018		964	1897	2792
	F		8+	5+	4+		8+	5+	4+		7+	5+	4+		5+	4+	3+
			25R	10R	5R		25R	10R	5R		25R	10R	5R		25R	10R	5R
7.0	Q		439	931	1464		492	1025	1596		597	1211	1861		911	1771	2654
	F		8+	5+	4+		7+	5+	4+		6+	5+	3+		5+	4+	3+
			21R	9R	5R		21R	9R	5R		21R	9R	5R		21R	9R	5R
8.0	Q		400	838	1340		452	931	1476		557	1118	1747		872	1678	2560
	F		8+	8+	6+		7+	5+	4+		6+	5+	3+		5+	4+	3+
			19R	8R	4R		19R	8R	4R		19R	8R	4R		19R	8R	4R
9.0	Q		369	766	1246		422	859	1385		527	1046	1662		842	1606	2060
	F		8+	5+	4+		7+	5+	4+		6+	4+	3+		5+	3+	3+
			16R	7R	4R		16R	7R	4R		16R	7R	4R		16R	7R	4R
10.0	Q		345	709	1172		397	802	1314		502	989	1598		817	1342	1669
	F		8+	5+	4+		7+	5+	4+		6+	4+	3+		5+	3+	3+
			15R	6R	3R		15R	6R	3R		15R	6R	3R		15R	6R	3R