

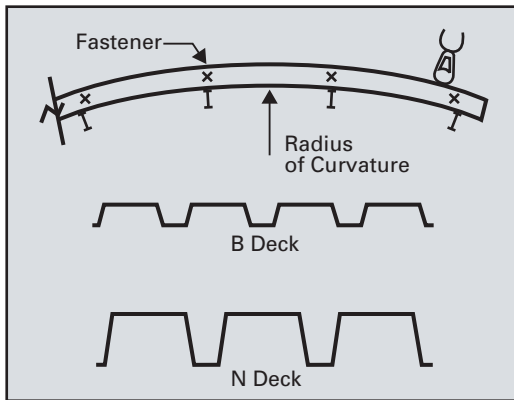
# Throw me a **CURVE.**

## QUESTION:

When field bending of deck is required in the strong direction, what is the minimum radius of curvature?

## ANSWER:

A rule of thumb has been successfully used. If a 75lb/ft concentrated load applied over the beam can conform the deck to the required curvature, then the deck can be field curved.



### B DECK

Gage	Beam Spacing				
	4'0"	5'0"	6'0"	7'0"	8'0"
22	185/12.6	148/15.7	123/18.9		
20	237/10.0	189/12.5	158/15.0	135/17.5	
18	308/7.5	246/9.4	206/11.2	176/13.1	154/15.0
16	389/5.8	313/7.3	260/8.8	223/10.2	195/11.7

Minimum Radius of Curvature (ft.) / Residual Stress (ksi)

### N DECK

Gage	Beam Spacing				
	9'0"	10'0"	11'0"	12'0"	13'0"
22	373/13.5	336/15.0	306/16.5	280/18.0	259/19.5
20	464/10.6	418/11.8	380/12.9	348/14.1	322/15.3
18	615/7.7	553/8.6	503/9.4	461/10.3	426/11.1
16	775/6.0	697/6.7	633/7.3	581/8.0	536/8.7

Minimum Radius of Curvature (ft.) / Residual Stress (ksi)

Spans that exceed the recommended maximum are left blank.

When field curving deck, fasten every corrugation at the ends of the sheets to resist spring back.

Detail butt end conditions to ease installation (no ends laps).

The tables limit the maximum instantaneous stress in the deck to 0.8F, and the maximum residual stress to 0.6F. Residual moment is defined as:  $M = EI/R$ .

For quick selection of gravity load capacity, treat as a flat roof. Residuals will be additive over supports and offset load stresses at midspan. A recommended sum is 26 ksi.

B deck can be shop curved when field bending is not practical. Crimp curving of B and NS deck is also available.



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