

# A325/A490 CONNECTION REPORT

AISC 360-22 §J3 (Bolt Shear/Bearing) · §J2 (Welds E70XX) · §B3.1 (LRFD)

Crane Runway Beam — 25-Ton Bridge Crane

## Bolt Design Summary

Grade	Diameter	Fnt (ksi)	Ab (in <sup>2</sup> )	$\phi R_{nt}$ (kips)	$\phi R_{nv}$ (kips)	Code
A325-N	3/4"	90	0.4418	29.8	17.9	AISC 360-22 §J3.6
A325-N	7/8"	90	0.6013	40.6	24.4	AISC 360-22 §J3.6
A325-N	1"	90	0.7854	53.1	31.9	AISC 360-22 §J3.6
A490-N	7/8"	113	0.6013	51.1	30.7	AISC 360-22 §J3.6
A490-N	1"	113	0.7854	66.8	40.1	AISC 360-22 §J3.6
A490-N	1-1/8"	113	0.9940	84.5	50.8	AISC 360-22 §J3.6

## E70XX Fillet Weld Capacity

Weld Size (in)	Throat (in)	$\phi R_{n/in}$ (k/in) 0°	$\phi R_{n/in}$ (k/in) 90°	Code
3/16"	0.1326	5.57	8.35	AISC 360-22 §J2.4
1/4"	0.1768	7.42	11.13	AISC 360-22 §J2.4
5/16"	0.2209	9.28	13.92	AISC 360-22 §J2.4
3/8"	0.2651	11.13	16.70	AISC 360-22 §J2.4
1/2"	0.3536	14.84	22.26	AISC 360-22 §J2.4

## Connection Verification — Crane Runway Beam — 25-Ton Bridge Crane

### J1: Runway splice — bolted cover plates

Bolt: A490-N 1" | Weld: E70XX

Utilisation: 79% (OK — PASSES AISC 360-22 §B3.1 LRFD)