PSE Consulting Engineers Inc.

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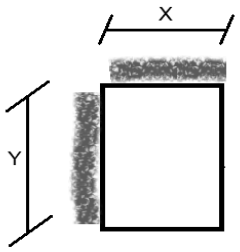
Project Name	Milner	Designed by	MRD	Date	7/16/2024
Subject	Weld Design	Checked by		Date	

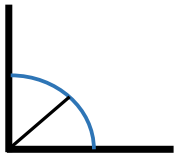
Corner Casting to Baseplate

Shear = 19,400 lbs
Column Uplift = 2,500 lbs

Corner Casting Dimensions:

X = 6.0 in
Y = 7.0 in





Weld Thickness (t) = 1 inch
α = 45˚

Weld Design

Fy = 70 ksi
Ω = 2.0

Fexx = Fy * sin (α) = 49.497 ksi

Allowabled Force (Fa) = 0.6 Fexx / Ω per 1" of weld thickness

1" Fa = 14.85 kips per 1" of weld thickness

Use 1/4" thick E70 Fillet Weld

1/4" Fa = 3.71 kips per 1/4" of weld thickness

Shear Check

Min Weld Length = 5.226 inches of weld

Uplift Check

Min Weld Length = 0.673 inches of weld

*For uplift only half of the side length of X and Y may be used. If weld exceeds more than half of X or Y additional weld is required

USE **1/4" E70 Fillet Weld on Two sides of Corner Casting**

REVIEWED
FOR CODE
COMPLIANCE

10/10/2024

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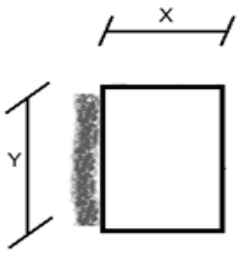
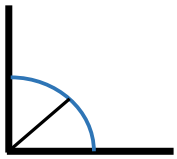
Shim or Continuous Plate to Baseplate

Shear = 2,900 lbs





Weld Thickness (t) = 1 inch

α = 45˚

Bottom rail Dimensions:

X = 2.0 in

Y = 8.0 in

Weld Design

Fy = 70 ksi

Ω = 2.0

Fexx = Fy * sin (α) = 49.497 ksi

Allowabled Force (Fa) = 0.6 Fexx / Ω per 1" of weld thickness

1" Fa = 14.85 kips per 1" of weld thickness

Use 1/4" thick E70 Fillet Weld

1/4" Fa = 3.71 kips per 1/4" of weld thickness

Shear Check

Min Weld Length = 0.781 inches of weld

*For uplift only half of the side length of Y may be used. If weld exceeds more than half of Y additional weld is required

USE **1/4" E70 Fillet Weld along one side of shim to baseplate**

REVIEWED FOR CODE COMPLIANCE

10/10/2024