

Clevis Pin Component Generator (Version: 2017 (Build 210142000, 142))

02.07.2025

Project Info

Guide

Type of Strength Calculation - Strength check for the specified load, dimensions and joint properties

Loads

Force	F	3500,000 N
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Dimensions

Pin Diameter	d	30,000 mm
Pin Length	l	45,000 mm
Clevis Width	a	12,000 mm
Row Width	b	12,000 mm

Joint Properties

Service Factor (Loading and Mounting Types)	k _s	1,000 ul
Desired Safety	S _v	1,000 ul

Material

Clevis Pin

Material	User material	
Allowable Stress in Shear	T _A	246,000 MPa
Allowable Bending Stress	σ _{BA}	80,000 MPa

Clevis

Material	User material	
Allowable Pressure	p _A	246,000 MPa

Rod

Material	User material	
Allowable Pressure	p _A	246,000 MPa

Results

Min Pin Diameter	d _{min}	12,610 mm
Pin Active Length	l _f	45,000 mm
Strength Check	Positive	

Clevis Pin

Calculated Stress in Shear	T _c	2,476 MPa
Reduced Pin Shear Stress by Service Factor	T _{Ared}	246,000 MPa
Calculated Bending Stress	σ _{Bc}	5,942 MPa

Reduced Pin Bending Stress by Service Factor	σ_{BAred}	80,000 MPa
Safety	S	13,464 ul

☐ Clevis

Calculated Pressure	p_c	4,861 MPa
Reduced Pressure by Service Factor in Part	p_{Ared}	246,000 MPa
Safety	S	50,606 ul

☐ Rod

Calculated Pressure	p_c	9,722 MPa
Reduced Pressure by Service Factor in Part	p_{Ared}	246,000 MPa
Safety	S	25,303 ul

☐ Summary of Messages

06:56:05 Calculation: Calculation indicates design compliance!