



PDHonline Course S241 (2 PDH)

Pin Connections for Cold-Formed Steel with Spreadsheet

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PDH Online | PDH Center

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NOTES

d_h	head diameter		0.250 inch	shank dia. head diameter (inch)		
d	pin shank diameter		0.144 inch	0.100	0.250	0.312
t_1	steel thickness at pin head		0.0329 inch	0.120	0.375	
t_2	steel thickness away from pin head		0.0538 inch	0.145	0.312	
F_{u1}	steel tensile strength at pin head		45000 psi	0.165	0.312	0.375
F_{u2}	steel tensile strength away from pin head		65000 psi	0.190	0.312	0.375
Ω	factor of safety		1	steel gage thickness (inch)		
N	number of pins		1	25	0.018	
t_2/t_1		1.64		22	0.027	
P_{ns}	nominal shear per pin	984	pounds	20	0.033	
	allowable shear force per pin		984 pounds	18	0.043	
	total allowable shear force		984 pounds	16	0.054	
P_{not}	nominal pull-out per pin	428	pounds	14	0.068	
P_{nov}	nominal pull-over per pin	555	pounds	12	0.097	
	allowable tension force per pin		428 pounds	10	0.118	
	allowable total tension force		428 pounds			

Every reasonable effort has been made to assure the accuracy of this spreadsheet, but the ultimate responsibility for its use and application lies with the person who uses it.