

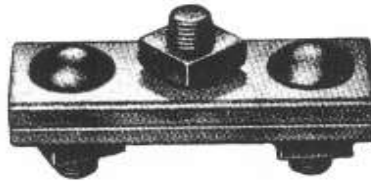


Electrical Distribution Safety

TECHNICAL AWARENESS – GUY INSTALLATIONS:

This Bulletin supplies information that LDCs can use to determine if they are calculating their guy leads correctly. Many LDCs use the guy steel's "Minimum Breaking Load" and "Minimum Load Factor" (resulting in "Maximum allowed Design Load") to calculate lead distances, however the weak link may be at your guy clamp.

CSA Standard C83-96 (Communications and Power Line Hardware), Item Standard C83.52-96 defines the holding strength of a Guy Clamp (3-Bolt Guy Clamp) by the Slip Strength Test. The Slip Strength Test states: "The clamp shall have a minimum slip strength of 26 kN (5824 lbf) for 3mm of slip when tested with an 8mm (5/16") galvanized steel strand." Testing on 9mm (3/8"), galvanized steel strand has shown that slip occurs at a similar tensile force.



TECHNICAL DATA – WHERE IS THE WEAK LINK?

8mm (5/16") steel strand, with 1 guy clamp

- Minimum - Single Clamp Slip Test (no safety factor applied): 5824 lbf or 26 kN
- Grade 1300, Maximum allowed Design Load, grade 2 construction: 9500 lbf or 42.4 kN
- Grade 1100, Maximum allowed Design Load, grade 2 construction: 8100 lbf or 36 kN
- Grade 1300, Maximum allowed Design Load, grade 3 construction: 11900 lbf or 53 kN
- Grade 1100, Maximum allowed Design Load, grade 3 construction: 10100 lbf or 45 kN

9mm (3/8") steel strand, with 1 guy clamp

- ~ Minimum - Single Clamp Slip Test (no safety factor applied): 5824 lbf or 26 kN
- Grade 1300, Maximum allowed Design Load, grade 2 construction: 10900 lbf or 48 kN
- Grade 1100, Maximum allowed Design Load, grade 2 construction: 9350 lbf or 41.5 kN
- Grade 1300, Maximum allowed Design Load, grade 3 construction: 13500 lbf or 60 kN
- Grade 1100, Maximum allowed Design Load, grade 3 construction: 11650 lbf or 52 kN

ESA RECOMMENDS:

ESA recommends Local Distribution Companies investigate their practice where they are using 1 guy clamp for installations. Installation of two guy clamps is recommended by ESA.

ADDITIONAL INFORMATION:

If you can provide additional information on this Bulletin or any other Utility issue, please contact ESA to share your experiences. Additional information requests, including report(s) and follow-up information, may be directed to ESA. Please be prepared to quote Bulletin "DTB-02/06".