



National Electrical Safety Code®

Interpretation

Section 26. Strength requirements

Rule 261C Grades B and C construction—Strength of guys and guy insulators (2007 Edition, page 202) (29 October 2008) IR556

1. An expert witness representing a telecom company at a recent hearing claimed that telecom steel messengers have the same function as guys mentioned in Rule 261C. The expert witness explained that telecom messengers strengthened the structure similar to storm guying. This strengthening effect is called the “guying effect.” The expert witness claimed that the telecom messenger was functioning similar to storm guys to meet the strength requirements of the structure. If the expert witness’ interpretation of Rule 261C is correct then the telecom messengers shall be considered as an integral part of the steel and pre-stressed concrete structures and shall be considered as taking the entire load in the direction in which they act for wood, reinforced concrete, and polymer structures.
2. A particular electric utility's interpretation of Rule 261C is that telecom messengers cannot be considered as guys used to meet the strength requirements of the structure. When performing pole loading analysis, telecom messengers contributed tension load and transverse loads (not strength) to the structure and therefore the appropriate load factors are applied.
3. What is the official interpretation of Rule 261C as related to the telecom messengers being interpreted as guys to meet the strength requirements of the structure?

Discussion: Joint-use cables such as CATV and phone lines are attached on the electric utility poles. However, joint-use cables often turn or “pull off” the electric utility pole at locations where the power lines do not turn. This pull off must be guyed unless it pulls off in two opposite directions at some street crossings. It was testified by an expert witness during the hearing that the pull off telecommunication lines with the steel messenger wires provided substantial increase in the strength to the affected structures. This increase in strength is called the “guying effect” because it has the same effect as storm guying.

Interpretation

The Interpretations Subcommittee has considered the subject Interpretation Request for Rule 261C and has developed a consensus report as follows:

“The understanding above of Rule 261C is correct. Communication messengers cannot be treated as guys and used to meet the strength requirements of a structure. The same rationale applies to electric supply messengers as well.

Messengers supporting either communication or electric supply cables add both vertical and transverse loading to a structure. Additionally, messengers add horizontal loading at angle structures.”

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