

Pipe Clamps are Not Sway Brace Components

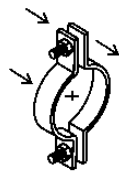
Read and Follow Listings Very Carefully

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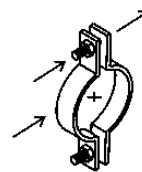
NFPA 13 identifies a pipe clamp as a hanger component per section A.9.1.1. Using a pipe clamp as a sway brace fitting violates NFPA 13. Chapter 9 specifies the use of listed sway brace fittings in sway brace assemblies. Accordingly, lateral and longitudinal sway brace assemblies are composed of listed components whose geometry and ability is unique to their orientation and function. Any indication to apply pipe clamps in sway brace assemblies is improper and in violation of NFPA 13.

Pipe clamps are listed per UL 203 to support hanger loads in tension in conformance to NFPA 13. Sway brace fittings are listed per UL Sub 203A to resist seismic loads in tension and compression in conformance to NFPA 13. This article will explain the importance of the structural ability of the fastener flange of a listed clamp type sway brace fitting, henceforth called ears.

Longitudinal sway brace fittings may look similar to pipe clamps. In spite of some basic similarities, longitudinal sway brace fittings are structurally and functionally different. Their UL Sub 203A listing specifies assembly as part of a longitudinal sway brace in conformance to NFPA 13. Further, UL Sub 203A requires alignment of the fitting to resist seismic force parallel through the fittings ears when oriented on edge, as shown in drawing A. The ears are structurally stronger and more able to resist force applied against their edge than against their flat, as shown in drawing B.



Drawing A



Drawing B

In my opinion, lateral sway brace fittings should not look similar to pipe clamps for two reasons. Practically, it is very problematic to achieve the required structural rigidity of the pipe clamp ears when seismic force is applied against them on the flat, as shown in drawing B. In this orientation the ears are much weaker and therefore more susceptible to bending. Further an extra listed fitting is required to transition the attachment of the ear to the pipe component of the sway brace assembly. Current listed attachment fittings also lack required structural rigidity in this orientation. At this time, the one and only product that looks similar to a pipe clamp is being reevaluated by UL to determine if its listing will be retained or rescinded.

In closing, ignore anyone who advises using pipe clamps as components in sway brace assemblies. NFPA 13 Chapter 9 is very specific about the use, features and characteristics necessary of listed fittings used in sway brace assemblies. Read listings, watch out for misinformation, and be very careful to avoid misapplication of both pipe clamps and longitudinal sway brace fittings as outlined in the above text.