

Chain for Theatrical Use

What Kind Of Chain Should Be Used?

For many years dead hung sets and trim chains have used Grade 30 Proof Coil chain. Typically there is a note in the manufacturer's catalog or packaging that says "Not to be used for overhead lifting". This has resulted in a great deal of contention, based on a lack of complete information.

Lifting vs. Dead Hanging

Our chain is manufactured by Turner & Seymour. They define lifting as "lengthening or shortening the chain itself by mechanical means, e.g. a chain hoist." Dead hanging includes raising or lowering an object attached to a length of chain, as long as this isn't accomplished "by the mechanical lengthening or shortening of the chain itself". They also state "When used within the appropriate workload limits, proof coil chain may be used for dead hanging . . ."

OSHA Interpretation

OSHA published an interpretation in May 1983, saying that Proof Coil chain may be used in chain slings if "used in accordance with the manufacturer's recommendations".

Based on this information, we use Turner & Seymour Grade 30 Proof Coil chain for both dead hanging and trim chains.

Safety Bolts in Trim Chains

After many years of putting safety bolts in trim chains, there's now a move to discontinue use of the bolt. The bolt was originally intended to act as a backup if the snap hook failed. There are two problems with this idea: First, bolts are designed and rated to hold two pieces of metal together in close contact, not to carry an undefined load between chain links. OSHA actually prohibits the use of bolts as fasteners in chain. Second, users frequently installed the safety bolts incorrectly, reducing the effectiveness of the trim chain and reducing its working load.

The ANSI / ESTA task groups working with rigging hardware have recommended that bolts not be used in trim chains. We no longer supply bolts with our trim chains.

What about Grade 80 Chain?

The links of Grade 80 chain have such a large diameter that you can't put a load rated fitting into an intermediate link – only the end link. This means you can't change the length of the chain, so it's impossible to trim the batten height. We've tried Crosby Lok-a-loy links, "missing links" and forged shackles. It simply is not a workable alternative.

Shackles

On all trim chains, it is essential that the pin in the shackle is properly secured. For round pins the cotter pin must be installed properly; for screw pins the pin must be moused with baling wire or a wire tie.

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