

Rigging Hardware

Suspended scaffolds are often the best way to access work that must be done at elevation. Designers and users of suspended scaffold systems must consider a number of items to ensure the proper system is used for a specific application: rigging devices, hoist ratings, supplier capabilities and qualifications, tiebacks, personal fall arrest systems, wire rope ratings, platform types and ratings, etc. While it is essential that these "large" issues be evaluated thoroughly, it is equally important that sufficient attention be devoted to the "little" things, such as rigging hardware. Eye hooks, thimbles, shackles, fist grips, and similar items may seem small in relation to other parts of a suspended scaffold system, but they perform critical functions and require proper consideration.

The federal OSHA regulations in CFR 1926.451 that govern suspended scaffold systems provide some requirements for rigging hardware. The regulations primarily provide information about safety factors for wire rope "and connecting hardware"; however, the regulations do not generally specify rigging hardware requirements. The following guidelines will assist designers and users in evaluating the many options available:

- First and foremost, for all rigging hardware, ensure that the supplier / manufacturer of the hardware is reputable and has conducted the necessary design and testing.
 - Rating and use information should be readily available, and the standards to which the device has been manufactured to comply should be identified clearly. Rigging hardware items should comply with the ASME B30.26 rigging hardware standard.
 - One indication of a supplier's / manufacturer's suitability is traceability. Reputable suppliers / manufacturers will be able to associate a device with test results that verify the device's ratings and materials of construction.
- Different work environments and applications will lead to the selection of different hardware items. For example:
 - Hardware that will be used in corrosive environments, such as coastal locations, should be galvanized or otherwise protected from corrosion.
 - Items to be used in extremely cold environments (for example, temperatures below 0°C/32°F) should be designed and manufactured to provide sufficient performance in such environments.
 - When welding is performed on suspended scaffolds, insulated thimbles must be used.

These are only a few examples. Be aware of the demands placed on rigging hardware by the environments and applications for which they will be used.

This Technical Bulletin was prepared by members of the Scaffold & Access Industry Association SSFI Committee.

SSFI is a committee comprising manufacturers of shoring, scaffolding, forming, and suspended scaffolding. The committee focuses on engineering and safety aspects of scope products.

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- Different terminology may be used in reference to a specific item in various locales. Make sure there are no misunderstandings that may be attributable to differences in language or terminology. Know the expectations regarding hardware that exist on specific jobsites.
- U-bolts are not permitted on suspension lines. SSFI recommends U-bolts not be used in suspended scaffold systems to avoid confusion on the part of users.
- You must use properly sized thimbles and ensure that all hardware exceeds the load requirements, including safety factors, imposed on the system.
- Inspect all rigging hardware for damage or wear and replace items that show any damage or excessive wear.
- Do not substitute or switch parts among different manufacturers.
- Use the proper grade 5 imperial or 8.8 metric minimum hardware
- Ensure loads are applied as intended. For example, a load imposed sideways (not in line) on a device such as an eye bolt or shackle will reduce the device's load capability.

Rigging hardware devices are not inconsequential commodity items that can be selected and installed without care. Rigging hardware is not available at the corner hardware store. Follow the guidelines above to take into consideration some of the matters that affect selection of the proper size and grade hardware.

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