Recommended Procedures for Visual Inspection of Welded Tubular Frame Scaffolding & Accessories

This document provides recommended procedures for visual inspection of steel and aluminum frame scaffolding equipment and is not intended for other materials such as wood products. The following are general guidelines. Contact the manufacturer for specific guidelines.

Visual Inspection

Inspection teams must be thoroughly trained to recognize the following possible defects or unsafe conditions present in scaffold frames and accessories regardless of age or source:

Frames
1. Cracked or broken welds
2. Missing members, legs or crossmembers
3. Split or cracked tube
4. Holes in legs or crossmembers due to cutting or cutting torch activity
5. Evidence of extreme heat
6. Extra or deformed holes
7. Missing or inoperable cross brace lock devices
8. Tubular members out of round or deviations from normal cross section
9. Bent crossmembers or legs, including dents and dimples
10. Squareness or warp of frames, ledger frames and major components
11. Excessive corrosion such as pitting or flaking – Corrosion can affect the overall strength of the product due to loss of cross sectional area
12. Discoloration due to possible exposure to caustic chemicals
13. Evidence of field welding or modification

Crossbraces
1. Bends or kinks in braces
2. Damaged or excessively loose pivot
3. Splits or cracks in braces
4. Holes in braces due to cutting or cutting torch activity
5. Evidence of extreme heat
6. Excessive corrosion such as pitting or flaking
7. Missing connecting hardware
8. Discoloration due to possible exposure to caustic chemicals
9. Evidence of field welding or modification

This Technical Bulletin was prepared by members of the SSFI Scaffolding Section. SSFI is a trade association comprising manufacturers of scaffolding, shoring, forming, and suspended scaffolding. The institute focuses on engineering and safety aspects of scope products.

This bulletin does not purport to be all-inclusive nor to supplant or replace other additional safety and precautionary measures to cover usual or unusual conditions. If this bulletin conflicts in any way with a state, local, federal or other government statute or regulation, said statute or regulation shall supersede this bulletin and it shall be the responsibility of each user to comply therewith. This bulletin has been developed as an aid to users of scaffolding equipment.
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Sidewall Brackets
1. Cracked or broken welds
2. Missing members
3. Missing fasteners (rivets, bolts)
4. Holes in members due to cutting or cutting torch activity
5. Evidence of extreme heat
6. Extra or deformed holes
7. Missing or damaged hooks or connecting devices
8. Bends or kinks in members
9. Squareness or warp of brackets
10. Excessive corrosion such as pitting or flaking
11. Discoloration due to possible exposure to caustic chemicals
12. Evidence of field welding or modification

Screw Jacks / Base Plates
1. Splits or cracks in leg material
2. Damaged threads
3. Excessively loose adjusting nuts
4. Cracked or damaged adjusting nuts
5. Cracked or broken welds at attached base plates
6. Evidence of extreme heat
7. Straightness of legs
8. Excessive corrosion such as pitting or flaking
9. Discoloration due to possible exposure to caustic chemicals
10. Evidence of field welding or modification

Various jigs and fixtures can be assembled to inspect and check the frames and accessories.

If you have any questions regarding the safety of a scaffold frame or accessory, contact the manufacturer.