OSHA Directives

CPL 2-1.14B - 29 CFR 1910.184(e)(4), Alloy Steel Chain Slings Proof Testing

- **Record Type:** Instruction
- **Directive Number:** CPL 2-1.14B
- **Standard Number:** 1910.184(e)(4)
- **Subject:** 29 CFR 1910.184(e)(4), Alloy Steel Chain Slings Proof Testing
- **Information Date:** 10/01/1981

OSHA Instruction CPL 2-1.14B October 1, 1981 Office of Compliance Programming

SUBJECT: 29 CFR 1910.184(e)(4), Alloy Steel Chain Slings, Proof Testing.

A. Purpose. This instruction provides guidelines for uniform enforcement of 29 CFR 1910.184(e)(4) as it pertains to proof testing of alloy steel chain slings, fittings, coupling links, and other component parts.

B. Scope. This instruction applies OSHA-wide.

C. Cancellation. OSHA Instruction CPL 2-1.14A, November 14, 1980, is canceled.

D. Action. OSHA Regional Administrators/Area Directors shall ensure that the enforcement or 29 CFR 1910.184 (e)(4) is consistent with the guidelines in F. of this instruction

E. Federal Program Change. This instruction describes a Federal program change which affects State programs. Each Regional Administrator shall:

1. Ensure that this change is forwarded to each State designee.

2. Explain the technical content of the change to the State designee as requested.

3. Ensure that the State designees are asked to acknowledge receipt of this Federal program change in writing, within 30 days of notification, to the Regional Administrator. This acknowledgment should include a description either of the State's plan to implement the change or of the reasons why the change should not apply to that State.

4. Review policies, instructions and guidelines issued by the State to determine that this change has been communicated to State program personnel. Routine monitoring activities (accompanied inspections and case file reviews) shall also be used to determine if this change has been implemented in actual performance

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F. Guidelines.

1. When an alloy steel chain sling is assembled with components that require welding in assembly, the completed sling must be proof tested by the sling manufacturer or equivalent entity, before the sling is used.

2. When an alloy steel chain sling is made up of welded components which were individually proof tested, and no further welding is required to assemble the sling, the assembled chain sling does not have to be proof tested. The sling manufacturer or equal entity assembling the sling shall attach a tag identification with appropriate information, and furnish an appropriate certificate to the purchaser or his representative which indicates the rated capacity.

3. Proof testing is not required when the sling is made up of components not requiring welding to assemble. The capacity of the sling shall be no greater than the rated capacity of the weakest component.

G. Background OSHA has received letters from manufacturers of alloy steel chain and components requesting that a clarification of 29 CFR 1910.184(e)(4) be issued to the field pertaining to proof testing. Manufacturers of forged components comply with the following criteria:

1. The quality of forged components is confirmed by tensile and hardness tests that will verify material and heat treatment. A check analysis made from the drillings of the material will verify the chemical composition of the material.

2. Production quantities of the forging component are subjected to a rigid Visual inspection and additional quality control procedures include magnetic particle and hardness testing.

3. Ultimate strength of material tests are made with the destructive testing performed on the basis of a statistical sampling procedure proven over the years.

4. The nondestructive testing such as magnetic particle inspection and hardness tests may be performed on the basis of 100-percent of the lot, or again, may be performed on the basis of a sampling technique.

5. The forged components used in alloy steel chain slings are similar and in most instances identical to, if not the same as the forged components used on wire rope slings, which do not require proof testing. The rated capacity for wire slings, like alloy steel chain slings, is limited to the rated capacity of its weakest component.

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