

## OSH INFORMATION MEMORANDUM 82-X-58

TO: All OSH Directors, Supervisors, and Field Personnel

FROM: William M. Lybrand, Director of OSH

SUBJECT: Citing Under Subarticle 6, Section 1910.252(b)(4)(ix)(c) and Subarticle 7, Section 1926.351(b), Work and Electrode Lead Cables.

DATE: March 23, 1982

### PURPOSE

This memorandum provides guidance regarding the citing of exposed electrical conductors on arc-welding machines.

### BACKGROUND

In the past, inconsistencies have occurred in the citing of exposed conductors used on arc welding machines. Some compliance personnel have been citing incorrectly in regards to whether the conditions warrant a nonserious or serious violation. This memorandum covers general guidelines for citing such violations.

### GUIDELINES

Compliance Officers shall cite for exposed electrical conductors on arc welding machines according to the following criteria:

- a. Where exposed electrical conductors are present on the primary (input) side of arc welding machines operating at 115 volts or above, cite as serious. The primary side is the side where the arc welding machine receives its electrical power.
- b. The secondary (output) side of an arc-welding machine is the side to which the electrode holder and the work are connected. In general, citing for exposed electrical conductors on the secondary side shall be as follows:
  1. If the arc welding machine is a direct-current (DC) type machine only, and the maximum open-circuit voltage (normally abbreviated as OCV on the nameplate) is 100 volts or less, and the working conditions are normal, then cite as nonserious. (Two exceptions could be (1) if the welder was working inside a highly conductive confined space which was not properly grounded such as a tank or boiler; or (2) if the welder was standing or lying in water and the exposed portion of the conductor to the electrode holder was not in contact with the earth (ground).

2. If the arc welding machine is both a direct-current (DC) and an alternating-current (AC) with a selector switch to choose between the two, cite serious if the following conditions are present:
  - (a) The maximum open-circuit voltage (OCV) for the AC operation is 50 volts or above and/or if the maximum OCV for DC operation is above 100 volts.
  - (b) The arc-welding machine is being used in the AC mode or the operator states that it is used in the AC mode.
  - (c) The arc-welding machine is being used where the operator is wet from either perspiration or weather conditions, or the working area is damp or wet; or the operator states that the welding machine is used under these conditions. If 2(a), (b) or (c) cannot be established, document why on the worksheet, and cite as nonserious.
3. If the arc-welding machine is an alternating-current (AC) machine only and the maximum open-circuit voltage (OCV) is above 50 volts cite as serious. For 50 volts or less, normally cite nonserious. (If possible, document if the machine is used when the operator is perspiring and/or when the working area is damp or wet for serious violations).

EFFECTIVE

This memorandum is effective upon receipt and will remain in effect until cancelled or superseded.