



AMERICAN WELDING SOCIETY

Founded in 1919 to Advance the Science and Technology of Welding

December 15, 1987

Mr. John Moran, Director
Division of Safety Research
NIOSH
944 Chestnut Ridge Road
Morgantown, WV 26505

Reference: NPR for Testing & Certification
of Respirators

Dear Mr. Moran: At the December 9, 1987 meeting of the AWS Safety and Health Committee, it was decided to send the enclosed comments to NIOSH for consideration in the proposed rulemaking.

These comments were sent to the Committee by a concerned member, and the Committee recommends against adoption of 42 CFR 84 in its present form for the reasons listed.

Sincerely yours,

Marvin E. Kennebeck, Jr.
Secretary, AWS Safety and
Health Committee

Encl.

copy: K. L. Brown
A. F. Manz
W. Cheney

File: SHC-30

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TECHNICAL DEPT.

Mr. Marvin E. Kennebeck, Jr.
American Welding Society
550 N.W. LeJeune Road
P.O. Box 351040
Miami, Florida 33135

Dear Marv,

Regarding the 3M/ISEA letters urging comment on the NIOSH NPR for Testing and Certification of Respirators, the specifics they cite could be reiterated. In particular, the following are probably worth stressing:

- 1) Limiting the proposed certification program solely to respirators for use in mines & mining significantly impacts occupational health and safety in general industry and construction by discontinuing an established approval system and excluding from consideration under the proposed replacement program the majority of respirator users. [If available AWS could cite comparative numbers of welders in mines and mining vs. all others.]
- 2) Even if the proposed certification program is eventually accepted by OSHA and others, those respiratory protection programs already in place would have to be modified, probably quite extensively, to deal with those respirators which did gain 42 CFR 84 approval.
- 3) As a representative of industrial respirator users AWS is [appropriately] concerned that in its emphasis on assuring a very high degree of functional reliability the proposed revision will result in either new devices substantially less acceptable to wearers in terms of comfort and convenience, more expensive for industry on the basis of product costs and program modifications or in severely limiting user choice among certified equipment.
- 4) By requiring as a condition of final certification demonstration of highly reliable effectiveness in the field, the proposed 42 CFR 84 creates the impression that even when respirators, especially air-purifying types, meet much more stringent bench test criteria, the performance of these

devices in actual use will be so much in doubt that extensive use trials may be necessary.

- 5) NIOSH offers no evidence that respirators meeting the proposed 42 CFR 84 requirements will be the only devices capable of providing adequate levels of protection in actual use or even that they will provide better protection than do currently certified respirators.
- 6) Without established protocols for workplace testing of respirators no intelligent comment can be made on the feasibility expense or validity or procedural requirements. With such protocols all interested parties could evaluate the performance of 30 CFR 11-certified devices in field studies, identify actual - as opposed to anticipated - shortcomings, improve existing devices or develop new ones.
- 7) No provision appears to have been included which would allow future refinement or revision of 42 CFR 84 in the event that its requirements prove to be overly conservative, unnecessarily complicated or technologically out-of-date.
- 8) Surely it is premature to provide for simulated workplace testing of respirators in a certification program until sound workplace test protocols are available and being used. Only then could simulations be designed and results correlated.
- 9) Assigned protection factors are presented in 42 CFR 84 without any supporting documentation. [As noted by ISEA] some differ significantly from APFs previously accorded certain types of respiratory protection.
- 10) In proposing bench tests for rating particulate filter efficiency 42 CFR 84 calls for a given type of filter to withstand both liquid and solid aerosol challenges independently. Use conditions typically involve either one type of aerosol contaminant or the other, not both at the same time or even sequentially - exposure conditions under which 42 CFR 84 does not examine filter efficiencies.
- 11) If the dimensions of air-purifying elements were to be increased to meet 42 CFR 84 performance requirements welders could be at a unique disadvantage because of the incompatibility of the bulkier respirators with face shields and eye protection they frequently must wear.
- 12) The proposed new certification program does not suggest how WPFs would be determined when respirators are used against multiple welding environment contaminants which could vary in particle size and density sufficiently to exhibit differing levels of filter penetration and/or fit leakage.

- 13) Nor does 42 CFR 84 indicate how WPFs would be determined where atmosphere-supplying respirators are being used solely as protection against possible oxygen deficiency.
- 14) The proposed size labeling of respirators by anthropometric facial characteristics has potential drawbacks:
 - a) such labeling might suggest to users that fit testing is no longer necessary or advisable
 - b) the multiplicity of mask sizes (one size per panel box) which might become available to meet statistical criteria for fit testing would complicate device selection,
 - c) a subjectively preferred and better performing respirator might not be assigned to an individual whose anthropometric characteristics did not conform to those for which the device was certified.
- 15) As hose masks, with or without blowers, are more or less obsolete, 42 CFR 84 appropriately eliminates this design type from the supplied-air respirator category. In addition the proposed revision better organizes the subclasses of air-purifying respirators.

AWS might want to suggest that adoption of 42 CFR 84 in its present form would be ill-advised for reasons 1-14, that its recall should be seriously considered and that greater reliance be placed on consensus standards and third-party certifications, at least for non-IDLH use devices.