

ISRP 1999 abstract

Presenter/author	Title	Abstract
Myojo, Toshihiko Sugimoto, M. <i>National Institute of Industrial Health Nago 6-21-1, Tama-ku Kawasaki 214- 8585 Japan</i>	Present and Future Challenge Aerosols for Dust Respirator Certification in Japan	<p>A comparative study of challenge aerosols was conducted to review a performance test of dust respirators. The national approval test for dust respirator certification in Japan requires that air containing quartz particles of smaller than 2 um in diameter be used as the test aerosol. Therefore, aerosols, with broad size distributions may be used as the test aerosols. In view of the international harmonization of respirator certification standards, it will be necessary to use alternative test aerosols, like sodium chloride aerosol and/or any oil mist, for the approval test for dust respirators in near future.</p> <p>The present study was undertaken to measure that collection efficiency of dust respirators using three kind of test aerosols, i.e., quartz dust, sodium chloride aerosol and dioctyl sebacate (DOS) mist. We used the cartridges of dust respirators and filtering face pieces from eight Japanese and foreign manufacturers, all of which have been certified by present approval test. Good correlation among the measured collection efficiencies was found for the three test aerosols, but penetration with sodium chloride aerosol and DOS mist was more than 10 times that of present test aerosol.</p>