

ISRP 2002 abstract

Presenter/author	Title	Abstract
Kravitz, Jeffery <i>Special Projects and Mine Emergency Operations, MSHA, US Department of Labor, Pittsburgh, Philadelphia, USA</i>	Non-Destructive Testing of Self- Contained Self- Rescuers Used in the United States and the Program to Develop a Universal Breathing and Metabolic Simulator	<p>By law, each coal miner in the United States must be trained and equipped with a one-hour Self-Contained Self-Rescuer (SCSR). Each SCSR manufacturer must determine the service life, which is the useful life of the device. Previous papers by the authors have addressed problems discovered with SCSRs involving chemical degradation of SCSRs due to the shocks and vibrations experienced by these devices during daily activities in the underground mining industry.</p> <p>This paper discusses the ways three SCSR manufacturers have addressed the chemical bed degradation problem. Two manufacturers have developed different non-destructive acoustic tests to determine the degree of chemical bed degradation in their field deployed SCSRs. The third manufacturer determined that a non-destructive test would not be feasible and addressed the problem through a clarification of their service life, which now requires mine operators to determine the amount of hours each SCSR has been used in the mine.</p> <p>Two years ago, at the Sydney ISRP Conference, the authors were assigned the responsibility to investigate the feasibility for the development of a Universal Breathing and Metabolic Simulator that can be used in all countries. The second part of this paper deals with a new program that addresses this issue.</p>