

TITLE: USE OF A POSTURE CODING SYSTEM TO ANALYZE POSTURES AND DETERMINE BACK INJURY RISK

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ABSTRACT:

This paper will discuss the background for the Ovako Working posture Analysis System, how it is used, and how the results are analyzed and used. People often need to assume awkward postures in order to do their jobs. Whether the work involves computers, assembly lines or large equipment, there may be a risk for back injury depending on the postures your job puts you in. The Ovako Working posture Analysis System (OWAS) is a method that does not require a great deal of background and is easy to use. In OWAS, a worker is observed doing his/her normal tasks. The worker's posture is coded at given intervals using a number which correspond to the position of one of the body and the amount of load handled. The worker's tasks are also recorded. The posture codes are then assigned to one of four categories based on degree of injury risk. Tasks that include postures falling into the high risk categories are given highest priority in job redesign efforts.

TITLE: CLOSED-CIRCUIT BREATHING APPARATUS TESTING LABORATORY

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ABSTRACT:

The Life Support group at the Pittsburgh Research Center has developed a testing laboratory for closed-circuit breathing apparatus used for both escape from and entry into areas with irrespirable atmospheres. These apparatus are used after a mine fire or explosion. Outside of mining, they are used for shipboard and land-based firefighting, and hazardous materials clean-up. The apparatus are tested either on a treadmill using human subjects or on a breathing and metabolic simulator. Apparatus tested are compared with each other and evaluated with respect to human compatibility. We have tested apparatus for the Navy, Air Force, National Fire Protection Association, and apparatus manufacturers. A performance comparison of entry apparatus used in mine rescue, fire service, and hazmat will be presented including information on carbon dioxide levels, breathing resistance and temperature.

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