

Personal Bolter Screen (PBS)

Surface Control to Protect Underground Workers in Coal Mines

by Greg Molinda, Susan Robertson, Chris Mark, and Dennis Dolinar, NIOSH

Introduction

Small pieces of rock falling between roof bolts injure 500-600 coal miners each year.

Installation of welded wire screen can be very effective in reducing roof fall injuries. When installed on cycle, screen provides immediate protection to roof bolters.



98% of roof fall injuries are due to small rock falls between supports.

After Full Screening, Injuries Dropped Dramatically in a Maryland Coal Mine



Screening can significantly reduce injury rates.

Personal Bolter Screen (PBS)

A **PBS** is a smaller sheet of wire screen (5x5 ft, with 4x4 inch openings, 8 gage wire) that weighs 11 lbs and can easily be handled by one person. It is easy to install with twin-boom (non walk-thru) bolters in mid-lower height coal seams.



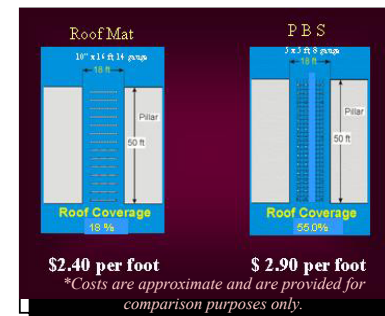
Continuous operator protection can be supplied by overlapping screens on cycle.



NIOSH trial installations indicate that the **PBS** can be installed much faster than a full screen, and it is easier to handle and store.

Summary

Roof rocks can fall at any time. The **PBS** will improve roof surface coverage and protect miners on both the working section and outby.



For little difference in material cost the **PBS** provides 3 times the roof coverage.



The **PBS** protects not just roof bolters but also continuous miner operators and others who will subsequently work or travel in the area.



For more information contact:
Chris Mark at: 412 386-6522

