

ISRP 2002 abstract

Presenter/author	Title	Abstract
Howie, Robin Robin Howie Associates, UK	Relevance of Simulated WPF Studies	The ideal basis for setting Assigned Protection Factors (APF) for RPE selection is results from Workplace Protection Factor (WPF) studies. However, such studies are expensive, conditions may be uncontrollable and suitable sites are difficult to find, particularly for high performance devices. Consequently, a number of Simulated WPF studies have been carried out, e.g. HSE has funded three recent UK studies. Given the cost and possible interpretation of such studies, it is considered essential to assess whether the results from real and simulated studies are usefully correlated.

Results from real and simulated studies for the same, or same classes of devices are summarised below:

Device	Real WPF	Simul. WPF	Ratio Simul./Real
Full-mask PAPR R2*	55 ⁽¹⁾	11,000 ⁽²⁾	200
R3*	49 ⁽¹⁾	22,500 ⁽²⁾	459
R4*	8.4 ⁽¹⁾	998 ⁽²⁾	119
MSA PAPR	geo mean 35 ⁽³⁾	>1,700 ⁽⁴⁾	>49
Air-fed Blasting Helmet	2,870 ⁽⁵⁾	>40,000 ⁽⁵⁾	>14

Notes: * Respirators as identified in Howie et al (1996)

(1) Howie et al (1996), (2) Johnston et al (2000), (3) Myers & Peach (1983), (4) Ayer (1981), (5) Parker et al (1997)

From the above it is concluded that current simulated WPF results are not a suitable basis for assigning APF.