

[ABS02]

Respiratory Protection Assigned Protection Factors: How did we get here? Where are we going?

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The development of Assigned Protection Factors (APFs) in the United States has taken over 40 years culminating in Occupational Safety and Health Administration (OSHA) APFs being established in 2006. OSHA APFs are based on the type of respirator with validation of the APFs based on work place protection factor studies and sometimes simulated workplace protection factor studies. In Europe, the process is strongly influenced by Total Inward Leakage results and the same type of respirator may have different APFs based on filter type. Additionally, APFs in Europe can vary quite significantly from country to country even though they are based on the same nominal protection factors. ISO respiratory protection standards are introducing a new concept called Protection Levels which do not take into account the type of respirator and are based solely on a laboratory testing. Clearly, APFs vary widely across the globe and promise to become even more disconnected in the future as new regulatory standards are adopted and developing regions begin to join the APF discussion. However, in order to better understand where we are headed we should make sure we understand where we are and have been.