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Welding Safety and Health: Occupational Hazards and Risk Mitigation

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Abstract: *This research delves into the safety and well-being of professionals engaged in welding activities, investigating the associated risks and effective mitigation strategies. Through an extensive analysis involving 40 welding experts, this study explores prevalent hazards like toxic fume exposure, intense light radiation, and noise-induced hearing concerns. The study highlights the pivotal role of engineering controls, personal protective equipment (PPE), and comprehensive training in curtailing health risks. Moreover, it underscores the importance of cultivating a culture of safety and collaborative efforts among stakeholders to establish secure working environments. The outcomes underline the necessity of proactive safety measures and provide valuable insights for enhancing welding safety practices. These findings resonate with employers, safety specialists, and welding professionals, prompting joint endeavors to prioritize safety measures and foster healthier workplaces. This study advances the comprehension of welding safety and health, while advocating for further research to address enduring health implications and embrace evolving technological safety advancements.*

Keywords: Welding Safety, Occupational Hazards, Risk Mitigation

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