Walking/Working Surface 'System Integrity' Considerations during Maintenance

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Abstract

Having 'solid ground' to walk and stand upon is among the most fundamental workplace expectations in most environments. With certain notable exceptions, workers do not consciously assess each step to ensure that the surface they are walking upon is stable enough to support them. Rather, there is a subconscious assurance that workers experience when leaving 'solid ground' to walk on stairs, ladders, ramps, elevated structures, catwalks, grating, and covers, that the surface is designed and constructed in accordance with industry standards. This presentation discusses the removal and reinstallation of a section in a grated elevated catwalk, and what can happen when organizations do not recognize and adhere to the concept of System Integrity (SI) during routine and unplanned maintenance operations. It is paramount for supervisors and managers to have situational awareness during evolutions causing any system to be in other than a configuration it was initially designed for. Particular care must be taken to ensure new hazards are not introduced into the system inadvertently. These concepts are presented in a case study involving a workplace fatality.

Keywords
System Integrity, Maintenance Planning, Latent Hazards, Control of Work, Walking/Working Surfaces

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Biography
Gerard 'Jerry' A. Davis is the Daniel and Josephine Breeden Professor, and the Director of the Center for Occupational Safety, Ergonomics, and Injury Prevention, within the Industrial and System Engineering Department, Samuel Ginn College of Engineering, Auburn University, AL, USA. Jerry is a certified safety professional (CSP) and a certified professional ergonomist (CPE). He earned his PhD in Industrial and Systems Engineering from Auburn University in 2001. Jerry served on five (5) nuclear powered ballistic missile submarines during his twenty year career in the United States Navy. Dr. Davis' research focuses on human evacuation, risk assessment, and human performance in occupational settings.