

## **A safe design strategy fosters innovative solutions for managing workplace risk in industrial design**

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### **Abstract**

The industrial designer plays an essential role in influencing aspects of safety, health, and risk management in workplace, in addition to achieving the safe design of products and structures that he develops before building and implementing them in workplaces. Designers must participate from the beginning of the project to obtain the desired benefit & influence the design increases and the cost of integrating health and safety solutions decreases with the development of the design project life cycle. The theoretical framework of the research included the study of workplaces and occupational safety and health to determine the types of those environments and classification of risks in them, the concept of safe design and how to achieve safety in design, and to clarify the role of occupational safety and health in design. The research analytical framework, resulted in a strategy for safe design, and the risk management process, tools, and methods used in that process, was integrated within that strategy to assist the industrial designer in analyzing and identifying those risks, and providing innovative design solutions to reduce the risks that the worker faces in workplace & ensures that the achievement of occupational safety and health standards while executing the responsibilities entrusted to him. This strategy has been applied to one of the risks of the workplace to which the worker is exposed, which is the risk of falling from heights or slipping through the development of innovative design solutions for mobile ladders used in performing tasks in the work environments.

### **Keywords**

Safe Design , Risk Management ,Occupational Health & Safety, Workplace