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SAFETY MANAGEMENT MODEL BASED ON LEAN CONSTRUCTION AND BEHAVIOUR- BASED SAFETY TO REDUCE ACCIDENTS IN SMES IN THE CONSTRUCTION SECTOR

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Abstract: The construction industry has experienced a worrisome problem, increasing work accidents over the years. These have caused many workers to have an organic injury, functional or psychiatric disturbance, a disability, or, in the worst case, death. In Peru, more than 20,000 occupational accidents occur every year. These accidents generate monetary losses and inefficiencies in the final delivery of the work, affecting the profitability of the companies. Based on the problem posed, a safety model based on Lean Construction and Behaviour-Based Safety was developed to reduce the number of accidents and implement a safety culture within a Peruvian company in the construction sector through the analysis of indicators. The implementation was set through a pilot test, which reduced the accident rate by 35.37% per 200 thousand person-hours worked. Furthermore, this innovative model demonstrates that it can considerably reduce the number of casualties after its application.

Keywords: applied improvement, lean tools, pilot test, training management, occupational safety and health.

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