

Critical Decision Method for the improvement of Health and Safety in construction activities of concrete structures

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Abstract Work in the construction industry are known for their high levels of risk, especially in the construction of structures. The critical decision method (CDM) is a semi-structured interview technique that uses cognitive tests to identify the different disturbances that workers have to deal with in their work activity. This study focused on describing variability in formwork work on concrete structures, and from there to find out the resilient attitude of workers to unexpected events. For this purpose, a series of semi-structured interviews were carried out with construction employees with extensive experience in formwork work in Spain using the Critical Decision Method. The results obtained show that situations classified as unthought-of situations are identified to a greater extent than those that are potential situations unexpected. This study suggests that improving knowledge in decision-making after experienced events can improve the decision-making process and enable proactive accident prevention.

Keywords: Resilience Engineering; Construction industry; Unthought-of situations; Critical decision method
