

Analysis of an Accident in the Mining Sector Using the Feyer & Williamson Method

Lluís Sanmiquel¹, Marc Bascompta¹, Nor Sidki¹, Jordi Vives¹, Joan López¹

¹Department of Mining Engineering, Industrial and ICT.

Polytechnic University of Catalonia (UPC), Avenue Bases de Manresa, 61-73, 08242-Manresa Spain
lluis.sanmiquel@upc.edu; marc.bascompta@upc.edu; nor.sidki@upc.edu; jordi.vives@upc.edu;
joan.antonio.lopez@upc.edu

Extended Abstract

This research presents the case of the analysis of an accident in an aggregate processing plant through the Feyer & Williamson method [1,2]. This method was designed to allow the coding of a time sequence of up to 3 events that have preceded a given accident. These events are called Preceding Events and are characterised as determining factors for the genesis of the accident. In addition, causal factors can also be identified, which are considered to have influenced the accident but not in such a decisive way as the events. The method makes it possible to identify 4 types of events and 8 types of causal factors, as well as different types of human error that have directly influenced the origin of the accident.

Results: Once all the causes and factors that directly or indirectly influence the origin of the accident analysed according to the method indicated have been identified and classified, all of them are organised graphically, which allows a quick and simple understanding of the circumstances of the accident.

References

- [1] A.-M. Feyer, A. Williamson, “The involvement of human behavior in occupational accidents: Errors in context,” *Safety Science*, vol. 25(1–3), pp. 55–66, 1997.
- [2] A.-M. Feyer, A. Williamson, “A classification system for causes of occupational accidents for use in preventive strategies,” *Scandinavian Journal of Work and Environmental Health*, vol. 17, pp. 302–311, 1991.