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Comparison of Accidents at Work between Open Pit and Underground Mining in Spain Using Data Mining Techniques

Lluís Sanmiquel[1], Marc Bascompta[1], Josep Mª Rossell[2], Josep Oliva[3], Hernán F. Anticoi[3], Eduard Guasch[3]

[1]Iberpotash Chair in Sustainable Mining. [2]Department of Mathematics. [3]Department of Mining Engineering, Industrial and ICT. All the authors are from the Polytechnic University of Catalonia (UPC), Avenue Bases de Manresa, 61-73, 08242-Manresa (Barcelona).

lluis.sanmiquel@upc.edu; marc.bascompta@upc.edu; josep.maria.rossell@upc.edu; josep.oliva@upc.edu; hernan.anticoi@upc.edu; eduard.guasch@upc.edu

Extended Abstract

Workplace health and safety is an essential element to take into account by companies, the administration responsible for it and employees themselves. According to stats from the Spanish Ministry of Employment and Social Security, the mining sector shows an accident rate, per 100.000 employees, 4.8 times higher than in other economic sectors. In addition, this rate is even higher when it is compared to the mining sector from USA or Australia, where it reaches 7 and 6.5 times respectively [1**]**.

This study is focused on variables and behavioural patterns from the Spanish mining sector, either open pit or underground mining. Over-exertion is also discriminated from other types of accidents, because it represents around 20% of all accidents and an important time off work cause, which could cover results from other types of accident.

Data used was obtained from the Spanish Ministry of Employment and Social Security database. In itinere accidents have not been taken into account in the study, using only accidents during working time with at least one day lost.

The main goal of the investigation is to extract the underlying information from the database by means of data mining techniques [2**]** using the WEKA software, with the idea to determine better hazard prevention policies and reduce accidents at work in the mining sector.

References

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