The use of simulations to identify operational improvements on deep level mine compressed air systems

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Abstract

Increased energy tariff from Eskom has factored into larger operational costs of deep level mines. This increase has made mining profitability more difficult. Compressed air systems utilise a large portion of a mine's total energy usage. It has been shown that many large compressed air networks are inefficient and often can not meet demand requirements. Therefore improving their efficiency could result in a reduction of operational costs and an improvement in service delivered.
Simulation has been used to identify and quantify improvement to system. Literature...
A simulation methodology was developed to identify system inefficiencies and quantify interventions. Two case studies were performed. In each case study several scenarios were implemented in simulation. The results showed improvements in compressed air system efficiency and performance delivered service could be achieved. Application of simulated scenarios verified the results of simulation.

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Bibliography

[1] Test. This is a test. *The test journal*, 2017.