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CSIR Center for Mining Innovation And The Simulated Test Stope

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Abstract

The South African mining industry is plagued by accidents ranging from vehicle incidents to roof/rock falls. In the attempt to carry out its mandate of improving the quality of life of South African citizens, the Council for Scientific and Industrial Research (CSIR) has undertaken research into how these accidents can be mitigated. One such means is the use of robotic platforms and sensors. For the purposes of verification and validation, these sensors and robotic platform have to be tested in underground environments that are similar to the ones in which they would be operating. However, conditions underground and accessibility issues have necessitated the development of a test facility for testing and validation of various sensors. The Centre for Mining Innovation (CMI), a division of the CSIR, has developed a reconfigurable stope test facility that will enable the testing of mine equipment and machinery in a variety of simulated mine environments. This is conducted without the necessity of arranging arduous and costly trips underground at multiple mines.