Finite Element Analysis of Rom Silo Subjected to 5000 Tons Monotic Loads at an Anonymous Mine in Zimbabwe

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Abstract : This paper introduces finite element analysis of Run off Mine (ROM) silo subjected to dynamic loading. The proposed procedure is based on the use of theoretical equations to come up with pressure and forces exerted by Platinum Group Metals (PGMs) ore to the silo wall. Finite Element Analysis of the silo involves the use of CAD software (AutoCAD) for3D creation and CAE software (T-FLEX) for the simulation work with an optimization routine to minimize the mass and also ensure structural stiffness and stability. In this research an efficient way to design and analysis of a silo in 3D T-FLEX (CAD) program was created the silo to stay within the constrains and so as to know the points of failure due dynamic loading.

Keywords : reinforced concrete silo, finite element analysis, T-FLEX software, AutoCAD
Conference Title : ICIEAIS 2014 : International Conference on Industrial, Engineering and Applied Intelligent Systems
Conference Location : Cape Town, South Africa
Conference Dates : November 06-07, 2014