

Static and Dynamic Tailings Dam Monitoring with Accelerometers

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Abstract : In the wake of Samarco Fundão's failure in 2015 followed by Vale's Brumadinho disaster in 2019, the Brazilian National Mining Agency started a comprehensive dam safety program to rank dam safety risks and establish monitoring and analysis procedures. This paper focuses on the use of accelerometers for static and dynamic applications. Static applications may employ tiltmeters, as an example shown later in this paper. Dynamic monitoring of a structure with accelerometers yields its dynamic signature and this technique has also been successfully used in Brazil and this paper gives an example of tailings dam.

Keywords : instrumentation, dynamic, monitoring, tailings, dams, tiltmeters, automation

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