

METHODOLOGY FOR STRUCTURAL CONDITION ASSESSMENTS

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Structural integrity is the key to the continued reliability of production in an industrial facility. New techniques in process recoveries have resulted in existing infrastructure operating beyond its anticipated life. Furthermore, the OSH Act 1993, Construction Regulation, 2003 clause 9.4 states "Any owner of a structure shall ensure that inspections of that structure upon completion are carried out periodically by competent persons in order to render the structure safe for continued use: Provided that the inspection is carried out every six months for the first two years and there after yearly and records of such inspections are kept and made available to an inspector on request".

This means that structural inspections not only make good business sense but are a legal requirement. It should also be noted that a structural collapse could result in an injury and / or a fatality and a significant consequential loss of production. This was highlighted back in 2000 by the then AngloGold head of South Africa Operations, Alan Smith, in the May 2000 issue of Mining Weekly. He stated that one of the reasons leading to under-performance was old and badly maintained infrastructure, and went on to say "We recognise now that you have to treat infrastructure at these operations with respect".

This paper will attempt to present:

- A methodology for structural inspections.
- Highlight challenges during inspections.
- Discuss challenges during the execution of repairs.
 - Structures for Mining and Materials Handling Conference, November 2009 ~ Sun City, South Africa