

1. PURPOSE AND OBJECTIVES

This Group Technical Standard defines the minimum requirements to eliminate or minimise the risk of fatalities, injuries and incidents arising from uncontrolled exposure to moving parts of plant and equipment.

2. SCOPE

This Standard defines the minimum requirements for safeguarding and applies to all Anglo American Group managed businesses and operations, including contractors and visitors when involved in controlled activities.

This standard is applicable, but not limited to, the safeguarding of people from moving parts of all plant and equipment, sources of energy with the potential to cause movement and objects falling from or being projected by moving parts of plant and equipment.

This Technical Standard and associated Guideline shall be applied in conjunction with local legislation or applicable national standards of specific countries, regions and/or districts. Where the requirements of such legislation conflict with information in this standard (including the guideline) or exceed provisions of this standard, such regulations or standards shall apply.

3. PLANNING AND DESIGN

- 3.1 A risk based process shall be used to identify where safeguarding, interlocks and emergency stops are required on all plant and equipment, whether purchased or constructed, and including hired and contracted equipment.
- 3.2 Safeguarding shall be designed and constructed to comply with relevant legislation, standards, codes of practice and relevant leading industry practices.
- 3.3 Safeguarding design will comply with the following basic principles:
 - Prevent contact: provide a physical barrier that prevents entry into the danger zone during a machines operating cycle,
 - Secure & tamper-proof: barriers will be secured in place, and resistant to tampering,
 - Create no new hazard: defeats its own purpose if it creates a hazard,
 - Not interfere with the machine operation.
- 3.4 A formal system shall be in place to ensure the integrity of plant and equipment safeguarding.
- 3.5 Where safeguarding and interlock systems are insufficient to protect people from uncontrolled exposure to energy or moving parts, access to equipment shall be controlled and monitored.
- 3.6 Plant and equipment shall be isolated, locked out and tested for zero energy prior to the removal of any safeguarding or interlock for maintenance, repair, cleaning, clearing, etc. Safeguarding and interlocks shall be replaced before energising plant and equipment.
- 3.7 Where the temporary removal of safeguards is necessary on operating plant and equipment for the purposes of fault-finding, testing and commissioning, a risk-based procedure shall be in place.
- 3.8 Fail-to-safe switches or devices shall be installed on all manually-operated rotating plant and equipment and power tools (e.g. saws, lathes, drill presses, grinders etc.).

4. IMPLEMENTATION AND MANAGEMENT

- 4.1 A competency based training system shall be in place for all relevant personnel to ensure awareness and competence in applying safeguarding requirements in the design, purchase, construction, introduction, operation and maintenance of plant and equipment.
- 4.2 All tasks involving the removal of safeguarding for maintenance, operation or clean-up shall include a Job Risk Assessment (JRA).

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- 4.3 A risk based change management system shall be used to ensure that the integrity of safeguarding is maintained when modifying or altering any safeguarding and that such changes are documented.
- 4.4 A system will be in place to regularly verify the functionality of guarding related safety devices/circuits (e.g. interlock devices, emergency stops, lanyards)
- 4.5 All documentation related to the risk based process for the selection and modification of safeguarding shall be retained and controlled.

5. PERFORMANCE MONITORING

- 5.1 A workplace inspection program shall be in place, with guarding integrity and personnel compliance with requirements of this standard identified in the inspection checklist.
- 5.2 An external audit of guarding integrity and compliance shall be undertaken at a frequency of no more than 3 years. Documentation related to the design, modification and maintenance of safeguarding systems shall be an element of this audit.
- 5.3 All incidents related to this standard, including High Potential Incidents (HPIs), shall be reported, investigated and analysed as per the Safety Health and Environmental Way (SHE Way).

APPENDIX A: REFERENCED DOCUMENTS

Document Number	Previous Number(s)	Title
AA TS 109 002	AA GTG 05	Safeguarding Guideline
AA TS 109 003	AA RP 0154	Conveyor Guarding
AA TS 109 004	AA RP 0156	Safeguarding of Machinery

APPENDIX B: RECORD OF AMENDMENTS

- Version 1 : New document based on revised standard criteria and consolidating the Safeguarding Standards (AA GTS 05). (Henk Coetzee, Werner Combrinck, Lenelle Thomsen, Jaco Visser, Christo Oliver, Mark Peters, Janna Kapp, December 2016). Document not published
- Entanglement bowties completed. Revised Safeguarding Standard following amalgamation of 2016 version (not published), inclusion of bowtie outcomes & separation with AA GTS 06 following M. Freitag review. (May 2019)