

## B3 - Manual handling and vibration

### 1 Scope

This standard is applicable to all Rio Tinto business units and managed operations, including new acquisitions, administration/corporate offices and research facilities located off site; during exploration, through all development phases and construction, operation to closure and, where applicable, for post closure management. It focuses on musculo-skeletal damage that can result from manual handling and from vibration. This standard covers musculo-skeletal hazard evaluation, control programme design and control programme evaluation, to ensure that employees and contractors will not suffer adverse health effects from poor task and equipment design, or from inappropriate behavioural practices.

### 2 Programme design

- 2.1 Deleted in part and moved to clauses 2.5, 2.6 and 2.7
- 2.2 The workplace must be assessed by a competent person for compliance with good design, layout and practice, to avoid or minimise adverse health consequences due to manual handling and vibration issues.

- 2.3 The quantitative evaluation of vibration produced by specific equipment must include the following measurement parameters: direction of movement, frequency, intensity, and variation with time and duration, as per documented methods.
- 2.4 Employees and contractors must be informed of the results of assessments and instructed in appropriate manual handling techniques, where the risk assessment indicates a need.
- 2.5 Workplace vibration sources that could contribute to the exceedance of OELs (hence potential for impact on worker musculo-skeletal fitness) must be identified and adequately characterised.
- 2.6 Manual handling tasks assessed as having potential to cause an LTI (ie with potential for impact on worker musculo-skeletal fitness) must be identified and adequately characterised.
- 2.7 Workplace manual / materials handling tasks risk rated as “significant” must be assessed and recorded to include biomechanical factors (eg posture, bending, twisting, repetitive motions, working overhead, exerting force away from the body).

## **3 Exposure controls**

- 3.1 Design criteria that address ergonomic requirements, and the minimisation of vibration where appropriate, must be available for the purchase or fabrication of all new fixed and mobile workplace equipment, and furniture. This also applies to retrofits to existing equipment.

- 3.2 The operation must ensure that its management of change mechanisms eliminate or minimise ergonomic risks when designing workplaces, processes, facilities, machines and operational procedures.
- 3.3 Control measures must be in place to minimise exposures and protect employees and contractors from adverse exposure. Where possible, machines or equipment, or alternative systems of work, must be employed to conduct heavy, awkward or repetitive tasks.
- 3.4 Deleted.
- 3.5 Where risk assessment indicates the need, businesses must have within the periodic medical assessment a programme that includes:
- a) encouragement of workers to recognise and report the early symptoms of musculo-skeletal disorders;
  - b) encouragement of workers to recognise unsafe manual handling and vibration conditions;
  - c) the identification of modifiable risk factors that may impact fitness for work;
  - d) education and support to address any identified fitness for work risk factors; and
  - e) education and support to assist workers regain their fitness for work.

- 3.6 Machines, working equipment and tasks risk rated as “significant” must be evaluated for possible modification or replacement where necessary.

## Revision history

Version no.	Effective date	Prepared by	Authorised by	
1	Feb 2003	Richard Gaunt & Ian Firth	ExCo	
Version no.	Revision date	Revised by	Authorised by	Reason for change
4	December 2008	Ian Firth; Adrian van Tonder	Manoel Arruda	Incorporation of suggested changes from operations and alignment with HSEQ management system.