AS 3853.2—2006
ISO 10882-2:2000

AS 3853.2—2006

Australian Standard®

Health and safety in welding and allied processes—Sampling of airborne particles and gases in the operator's breathing zone

Part 2: Sampling of gases

This Australian Standard® was prepared by Committee CH-031, Methods for Examination of Workplace Atmosphere. It was approved on behalf of the Council of Standards Australia on 19 September 2006.
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The following are represented on Committee CH-031:

- Australian Aluminium Council
- Australian Chamber of Commerce and Industry
- Australian Institute of Occupational Hygienists
- Australian Mines and Metals Associations (Incorporated)
- Bureau of Steel Manufacturers of Australia
- Clean Air Society of Australia & New Zealand
- Coal Services
- Commonwealth Department of Health and Ageing
- Department of Administrative and Information Services, SA
- Department of Consumer and Employments Protection Worksafe Division, WA
- Department of Mineral Resources, NSW
- National Association of Testing Authorities Australia
- WorkCover New South Wales

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through public comment period.

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Health and safety in welding and allied processes—Sampling of airborne particles and gases in the operator's breathing zone

Part 2: Sampling of gases

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PREFACE

This Standard was prepared by the Standards Australia Committee CH-031, Methods for Examination of Workplace Atmospheres to supersede AS 3853.2—1991, *Fume from welding and allied processes*, Part 2: *Guide to methods for the sampling and analysis of gases*.

This Standard is identical with and has been reproduced from ISO 10882-2:2000, *Health and safety in welding and allied processes—Sampling of airborne particles and gases in the operator's breathing zone*, Part 2: *Sampling of gases*.

The objective of this Standard is to provide a method for the determination of personal exposure to welding gases as well as and provide information about the use of chemical analysis to determine personal exposure to specific gases in welding fume.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number appears on the cover and title page while the International Standard number appears only on the cover.

(b) In the source text, 'this part of EN ISO 10882' and 'this European Standard' should read 'this Australian Standard'.

(c) A full point should be substituted for a comma when referring to a decimal marker.

This Standard is Part 2 of the following series:

AS
3853 Health and safety in welding and allied processes—Sampling of airborne particles and gases in the operator's breathing zone
3853.1 Part 1: Sampling of airborne particles
3853.2 Part 2: Sampling of gases (this Standard)

References to international Standards should be replaced by Australian Standards or other publications, as follow:

Reference to International Standard		*Australian Standard*	
ISO			
3534	Statistics—Vocabulary and symbols	—	See Note 1
3534-1	Part 1: Probability and general statistical terms		
6879	Air quality—Performance characteristics and related concepts for air quality measuring method	—	See Note 2
EN ISO		AS	
4063	Welding and allied processes Nomenclature of processes and reference numbers	2812	Welding, brazing and cutting of metals—Glossary of terms
EN		AS/NZS	
175	Personal protection—Equipment for eye and face protection during welding and allied processes	1337	Eye protectors for industrial applications
		1338	Filters for eye protectors—Filters for protection against radiation generated in welding and allied operations

EN		NOHSC	
482	Workplace atmospheres—General requirements for the performance of procedures for the measurement of chemical agents	1003 (1995)	Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment and subsequent updates (See Note 3)
689	Workplace atmospheres—Guidance for the assessment of exposure by inhalation to chemical agents or comparison with limit values and measurement strategy	3008 (1995)	Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment and subsequent updates (See Note 3)
1540	Workplace atmospheres Terminology	1003 (1995)	Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment and subsequent updates (See Note 3)
838	Workplace atmospheres—Requirements and test methods for diffusive samplers for the determination of gases and vapours.	—	See Note 4
1231	Workplace atmospheres—Short term detector tube measurement systems—Requirements and test methods.	—	See Note 5
1232	Workplace atmospheres—Pumps for personal sampling of chemical agents Requirements and methods	—	See Note 6

NOTES:

1 ISO 3534 contains the definition of ‘true value’ that is reproduced as definition 3.24 in this Standard.

2 ISO 6879 contains terms and definitions of performance characteristics related to air quality measuring methods. It does not include specific methods for determining air quality or obtaining representative samples.

3 Subsequent updates to NOHSC 1003(1995), NOHSC 3008 and all NOHSC exposure standards can be found in the Hazardous Substances Information System (HSIS) at http://www.nohsc.gov.au/applications/hsis/

4 Practical guidance on sampling is given in the Health and Safety Executive (UK), *Monitoring Strategies for Toxic Substances, Environmental Hygiene 42,* HMSO, January 1989 and National Institute for Occupational Safety and Health, (USA), *Occupational Exposure and Sampling Strategy Manual*, DHEW (NIOSH), pub.no.77-173, 1977. A method for using diffusive samplers is given in AS 2986.2—2003, *Workplace air quality—Sampling and analysis of volatile organic compounds by solvent desorption/gas chromatography*, Part 2: *Diffusive Sampling method* which is identical to ISO 16200-2:2000, *Workplace air quality—Sampling and analysis of volatile organic compounds by solvent desorption/gas chromatography*, Part 2: *Diffusive sampling method.*

5 Detector tubes sold in Australia may claim compliance with this EN Standard.

6 Pumps sold in Australian may claim compliance with this EN Standard.

The term ‘informative’ has been used in this Standard to define the application of the annex to which is applies. An ‘informative’ annex is only for information and guidance.