



भारतीय मानक ब्यूरो

(उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय, भारत सरकार)

BUREAU OF INDIAN STANDARDS

(Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India)

मानक भवन, 9 बहादुरशाह जफर मार्ग नई, दिल्ली-110002

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi-110002

Phones: 23230131 / 23233375 / 23239402

Website: www.bis.org.in, www.bis.gov.in

Review Document

Basic Details

1.	Sectional Committee No. & Title:	CHD 8 - Occupational Safety and Health
2.	IS No :	IS 14166 : 1994
3.	Title :	Respiratory protective devices full - Face masks - Specification
4.	Date of Previous Review:	November, 2019

Review Analysis

5.1 Status of standard(s), if any from which assistance had been drawn in the formulation of this IS.

S.No.	Standard (No.)	Standard (Title)	Whether the standard has since been revised	Major changes	Action proposed
1	EN 136 : 1989	Respiratory protective devices: full-face masks; requirements, testing and marking	Yes	Please see attached review analysis proforma	Please see attached review analysis proforma

5.2 Status of standard referred in the IS.

5.2.1 National standard(s)

S.No.	Referred standards (No.)	Referred standards (Title)	Since revised IS no. of the corresponding IS	Changes in the referred Standards since last review of IS	If the corresponding IS is revised with reference to the referred Standards	Action proposed
1	IS 4905 : 1968	Methods for random sampling	IS 4905 : 2015	a) The revised version is harmonized with ISO 24153 : 2009. b) Includes a computer programming code for random number generation.	No	This standard need not be referred in the reference section. It is only recommended to refer to this standard for random sampling, it is not a necessary part of the product standard. Hence, this standard should be mentioned in bibliography rather than in reference section.
2	IS 14138 (Part 2) : 1994	Respiratory protective devices; threads for facepieces: Part 2 Centre thread connection	No revision	NA	NA	NA
3	IS 14138 (Part 1) : 1994	Respiratory protective devices; threads for facepieces: Part 1 Standard thread connection	No revision	NA	NA	NA
4	IS 8347 : 1977	Glossary of terms relating to respiratory protective devices	IS 8347 : 2008 A1 : 2018	New definitions related to threshold values (TLV, TLV-TWA, TLV-STEM, TLV-C), classification of respiratory protective devices, nomenclature of components and equivalent terms have been incorporated.	No	The latest international standard on terminology for RPDs is ISO 16972 : 2020. The current IS 8347 may be revised to harmonize with ISO 16972 : 2020.

5.2.2 International standard(s)

S.No.	Referred standards (No.)	Referred standards (Title)	Since revised IS no. of the corresponding IS	Changes in the referred Standards since last review of IS	If the corresponding IS is revised with reference to the referred Standards	Action proposed
No entry made in this table						

5.3 Any other standards available related to the subject & scope of the standard being reviewed (International/regional/other national/association/consortia, etc or of new or revision of existing Indian Standard).

S.No.	Standard (No.)	Standard (Title)	Provisions that could be relevant while reviewing the IS	Action proposed
1	IS 17274 : Part 7:2019/ 16900-7:2015	Respiratory Protective Devices – Methods of Test and Test Equipment - Part 7 Practical Performance Test Methods	This test method standard can be referred for practical performance test of complete equipment with full face mask.	a) Refer IS 17274 (Part 7) for the test. b) ISO 16900-7 has been revised and the latest version is ISO 16900-7 : 2020. IS 17274-7 may be revised and updated accordingly.
2	IS 17274 : Part 10:2019/ 16900-10 :2015	Respiratory Protective Devices - Methods of Test and Test Equipment - Part 10 Resistance to Ignition, Flame, Radiant Heat and Heat	This test method standard can be referred for flammability test of full face mask.	a) Refer IS 17274 (Part 10) for the test.
3	IS 17274 : Part 2:2019/ 16900-2: 2017	Respiratory Protective Devices - Methods of Test and Test Equipment - Part 2 Determination of Breathing Resistance	This test method standard can be referred for breathing resistance test of full face mask.	a) Refer IS 17274 (Part 2) for the test.
4	IS 17274 : Part 9:2019/ 16900-9 : 2015	Respiratory Protective Devices - Methods of Test and Test Equipment - Part 9 Determination of Carbon Dioxide Content of the Inhaled Gas	This test method standard can be referred for carbon dioxide content of inhalation air test of full face mask.	a) Refer IS 17274 (Part 9) for the test.
5	IS 17274 : Part 1:2019/ 16900-1 :2014	Respiratory Protective Devices - Methods of Test and Test Equipment - Part 1 Determination of Inward Leakage	This test method standard can be referred for inward leakage test of full face mask.	a) Refer IS 17274 (Part 1) for the test. b) ISO 16900-1 has been revised and the latest version is ISO 16900-1 : 2019. IS 17274-1 may be revised and updated accordingly.

5.4 Technical comments on the standard received, if any.

S.No.	Source	Clause of IS	Comment	Action proposed
No entry made in this table				

5.5 Information available on relevant technical developments

S.No.	Source	Development	Relevant clause of the IS under review that is likely to be impacted (Clause & IS No.)	Action proposed
1	BIS officer	No additional developments found from any other source, which are not already covered in the latest EN and ISO standards. The EN and ISO standards encapsulate all latest developments.	NA	NA

5.6 Issues arising out of changes in any related IS or due to formulation of new Indian Standard.

S.No.	Related IS (revised or new)	Related IS Title	Provision in the IS under review that would be impacted & the clause no. or addition of new clause/provision	Changes that may be necessary in the Standards under review	Action proposed
1	IS 17274 : Part 7-2019	Respiratory Protective Devices "Methods of Test and Test Equipment Part 7 Practical Performance Test Methods	Practical performance test	This test method standard can be referred for practical performance test of complete equipment with full face mask.	a) Refer IS 17274 (Part 7) for the test. b) ISO 16900-7 has been revised and the latest version is ISO 16900-7 : 2020. IS 17274-7 may be revised and updated accordingly.
2	IS 17274 : Part 1-2019	Respiratory Protective Devices "Methods of Test and Test Equipment Part 1 Determination of Inward Leakage	Flammability test	This test method standard can be referred for flammability test of full face mask.	a) Refer IS 17274 (Part 10) for the test.

5.7 Any consequential changes to be considered in other IS.

S.No.	Related IS to get impacted	Related IS Title	Requirements to be impacted
1	IS 9623-2008	Selection, use and maintenance of respiratory protective devices - Code of practice (First Revision)	<ul style="list-style-type: none"> Change the year of revised IS 14166 in references section
2	IS 15803-2008	Respiratory protective devices - Self contained closed circuit breathing apparatus chemical oxygen (KO2) type, self generating, self rescuers - Specification	<ul style="list-style-type: none"> Change the year of revised IS 14166 in references section Clause 5.8.4(a) – change referred clause numbers for IS 14166 after its revision accordingly Clause 5.8.4(c) – change referred clause number for IS 14166 and instead of referring to inward leakage requirement, refer instead to leaktightness requirement.

Other Details

6.	Any other observation:	Some parts of the form could not be filled properly due to technical problems. Please see the attached review analysis form for accurate details. Outside comments were also received on the standard, which have been discussed in the attached review analysis form.
7.	Upload Supporting Document(s)	
7.1 ARP Report		Proforma for Review Analysis of Indian Standard.pdf
7.2 Draft Document		First Revision of IS 14166 - P draft.pdf
8.	Recommendations - On the basis of the analysis of the info available as mentioned above consideration of sectional committee is solicited on the following aspects of the IS under review:	Working document has been prepared and it is proposed that it may be circulated as P draft for comments.