



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)

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Review Document

Basic Details

1.	Sectional Committee No. & Title:	CHD 8 - Occupational Safety and Health
2.	IS No :	IS 9167 : 1979
3.	Title :	Specification for ear protectors
4.	Date of Previous Review:	December, 2016

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	CSA Standard Z 94.2-1965	Hearing protectors. Canadian Standards Association	Yes in 2014 CSA Standard Z 94.2-2014 Hearing Protection Devices — Performance, Selection, Care, and Use	This edition expands on performance requirements and the rating schemes that might help the user select hearing protection devices. It now includes the widely used noise reduction rating (NRR) and an applicable derating scheme. The standard specifies two methods of measuring the real-ear attenuation provided by HPDs and outlines how to use the results to estimate the sound levels reaching the protected ear. In addition, the standard also addresses other issues related to HPDs such as fit, care, use, overprotection, selection and training.	Assistance can be taken from the revised version for rating the hearing protectors.
2	ANSI S 3.19-1974	Methods for the measurement of real ear protection of hearing protectors and physical attenuation of earmuffs.	Superseded by ANSI S12.6 : 2016 Methods for measuring the real-ear attenuation of hearing protectors	The standard specifies testing methods for measuring, analyzing, and reporting of the passive noise-reducing capability of hearing protection devices. It includes two testing procedures: Method-A and Method-B. Method-A is designated trained-subject fit, and it is meant for devices fitted by "individually trained and well-motivated users", while Method-B, called inexperienced-subject fit, is for devices that are for groups of occupational users. The hearing protectors covered by this standard can include communications headsets and earplugs, helmets, pressure suits, and other systems with sound-attenuating features.	Assistance can be taken from the revised version for the relevant test method.

5.2 Status of standard referred in the IS.

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	Changes in the referred standard which are affecting the standard under review	Action proposed
1	IS 7194:1973	Assessment of noise exposure during work for hearing conservation purposes.	IS 7194:2018/ ISO 1999: 2013 Acoustics - Estimation of noise Induced hearing loss (Second Revision)	The first revision of this standard was based on ISO 1999: 1990. The second revision of this standard had been undertaken to align it with the latest version of ISO 1999: 2013.	IS 7194 is referred in this standard to determine the effect of occupational noise exposure and its duration on hearing impairment. Hence the revised standard shall be followed.	Reference year needs to be updated.
2	IS: 4905-1968	Methods for random sampling	IS 4905:2015/ ISO 24153: 2009 Random sampling and randomization procedures (First Revision)	This standard had been revised to harmonize with ISO 24153 : 2009. It is hoped that the sampling methods as laid down in this standard, when implemented, would ensure a truly random and representative sample leading to sound and satisfactory estimation of lot quality. This revision, in addition, includes for information computer programming code for random numbers generation algorithm. Although the principles of this standard are universally applicable where random sampling is required and the sampling units can be clearly defined, preferably on the basis of discrete items.	IS : 4905 is referred in this standard for randomness in the selection and the standard has been updated keeping in view the international practices, the updated version is to be referred.	Reference year needs to be updated.
3	IS: 589-1961	Basic climatic and mechanical durability tests for components for electronic and electrical equipment (revised)	This standard has been withdrawn.	NA	Clause 6.1 Physical Requirements	A new test method standard is required to be referred for testing physical requirements (clause 6.1).
4	IS 6229:1971	Method of measurement of the real-ear attenuation of ear protectors at threshold	IS 6229:1980 Method for measurement of real - Ear protection of hearing protectors and physical attenuation of earmuffs (First Revision)	The revision had been undertaken to bring it in line with the corresponding ANSI publication (ANSI S3.19-1974) The principal changes in this revision are the inclusion of a method for the measurement of physical attenuation of earmuff devices and the substitution of narrow bands of noise for discrete tones as the test stimuli. The physical measurement method was intended for production test and engineering design, as it was not suitable for earplug testing. Sound attenuation measurement- Using real ear method (Clause 3, IS 6229:1980; Type testing) or by the physical attenuation method (clause 4, IS 6229:1980; For routine test)	IS 6229 is referred in this standard for terms and definitions for the measurement of the sound attenuation of an ear protector, So it shall be carried out in accordance with the revised standard.	Reference year needs to be updated.
5	IS 1885 (Part III)	Electrotechnical vocabulary: Part III Acoustics.	This part has been split into 8 sections.	In view of large number of aspects of acoustics including electro acoustics to be covered, it was decided to prepare this part in a number of sections. Section 1-Physical acoustics Section 2-Acoustical electro - Acoustical system. Section 3- Sound recording and reproduction. Section 4- Sonics, ultrasonics, and underwater acoustics. Section 5 – Speech and hearing. Section 6 – Acoustical Instruments. Section 7- Music Section 8- Architectural acoustics	IS: 1885 (Part 3) referred for terms and definitions. So, the terms and definitions shall be referred in accordance with all sections of IS 1885 (Part 3).	All sections need to be referred.

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	BSI - BS EN 352-1	Hearing protectors — General requirements Part 1: Earmuffs	Requirements criteria for earmuff	Product requirements needs to be re-defined
2	BS EN 13819-1 -	Hearing protectors - Testing Part 1: Physical test methods	Test Method Annexure's	Physical test method needs to be rewritten.
3	EN 352-3	Hearing protectors — General requirements, Part 3: Earmuffs attached to head protection and/or face protection devices	Requirements criteria for earmuff attached with head protection	Product requirements needs to be re-defined.
4	EN 352-2:	Hearing protectors — General requirements, Part 2: Earplugs	Requirements criteria for earplug	Product requirements needs to be re-defined

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	Committee Member	40 CFR § 211.207 Method to calculate NRR value, NRR value and Dearing, Hearing Fit requirement, Dual Ear protector, Microphone-in-real-ear (MIRE) technique	New clause	Needs to be incorporated in the standard
2	Committee Member	EN 13819-1: 2020 Test method's to be redefined	Clause – Annexure's requirements, IS 9167	Test method to be redefined.
3	Committee Member	EN 352-3:2020 Additional requirements criteria for Earmuff mounted with head protection	Clause – Test requirements, IS 9167	Requirements to be modified.
4	Committee Member	EN 352-2:2020- Additional requirements criteria for Earplug i.e., size range, low temperature test, cleaning and disinfection, ignitability...etc....	Clause – Test requirements, IS 9167	Requirements to be modified.
5	Committee Member	EN 352-1:2020 - Additional requirements criteria for Earmuff i.e., size range, cup rotation, cushion pressure, cleaning and disinfection, ignitability etc.	Clause – Test requirements, IS 9167	Requirements to be modified.

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
No entry made in this table					

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
No entry made in this table			

Other Details

6.	Any other observation:	The revision will essentially take care of the following: i. Publication of standards in A4 size and latest format. ii. Introduction of Hindi title on the first cover page. iii. Introduction of ICS no. in place of UDC no. on first cover page. iv. Copyright details and name/address of the institution and other details as per the latest practice. v. Style of forward to be as per the latest practice, indicating all previous versions, and introducing a para on the current revision. vi. Introduction of Clause 2 'References' (as per the latest format), and accordingly renumbering of all subsequent clauses. vii. Updating the details of types/classes/grades/ratings, etc. as per the latest cross-referred standards, such as in case of reference to another standard for material and its grade where the grades have since been modified in the latest revision of the cross-referred standard. viii. Use of latest style, manner and wordings, etc. such as 'Annex' for 'Appendix'. ix. Corrections of editorial/typographical mistakes in the existing standards. x. Removal of informatory list of standards at the end, if any. Updation of back cover page with mention of new document number, current details of Information shared therein including BIS offices.
7.	Upload Supporting Document(s)	
	7.1 ARP Report	62_2202231645615131_ARP_Report.pdf
	7.2 Draft Document	No Document Uploaded
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:	In view of the above, it is recommended that IS 9167 may be revised incorporating the above mentioned changes and other changes as deemed fit by the committee.