Revision of IS 6229:1980 – ALPS Comments

In view of the call for comments over revision of IS 6229:1980, based on the source of the requirements of the standard, the following are observations made by ALPS:

1. Superseding of ANSI S3.19-1974

As stated in BIS and ANSI records, the IS 6229:1980 standard was prepared with assistance from ANSI S3.19-1974. This ANSI standard had been superseded and replaced by ANSI S12.6-1984 (currently ANSI/ASA S12.6-2016, re-affirmed in 2020).

(Reference https://blog.ansi.org/2017/08/measuring-noise-reduction-hearing-protective-ansi-epa/)

2. Highlighting View of USA experts on ANSI S3.19 and ANSI S12.6

View on Noise Reduction Rating (NRR) derived from the ANSI S3.19-1974 standard, as per the 2009 US EPA proposal. (Reference https://www.govinfo.gov/content/pkg/FR-2009-08-05/pdf/FR-2009-08-05.pdf - Page 272 onwards).

i. Poor correlation between the labelled NRR on hearing protectors tested as per ANSI S3.19-1974, and actual attenuation realized by wearers. Public organizations like OSHA do not take NRR values at face value and perform a "de-rating" to derive more accurate attenuation values from the stated NRR.

ii. NRR based on ANSI S3.19– 1974, can result in unrealistically high sound reductions that are generally not attainable in real world use. This can result in users being under-protected and subject to potential hearing damage.

iii. ANSI/ASA S12.6 for Hearing protectors is believed to yield data that more closely mirrors the ''real world'' effectiveness of hearing protector devices.

iv. Specifically, testing as per ANSI/ASA S12.6 '*Method A'* (trained-subject fit) in "*passive mode*" is recommended in the proposal due to less variability in its results than other methods. Method A is similar to the ISO 4869–1 test standard.

3. Research published by 3M in conjunction with US EPA findings.

Report on Hearing protector ratings - prepared in 2004 for the US EPA by 3M and approved by ANSI S12/WG11. (Reference https://multimedia.3m.com/mws/media/893205O/a-new-hearing-protector-rating.pdf)

The report provides recommendations for labelling as per the 2 methods in ANSI/ASA S12.6. It also finds that attenuation ratings as per ANSI S3.19 correlate the worst with real-world data.