

FACIAL SEAL OF RESPIRATORS



This is an extract from AS/NZS 1715: 2009 “*Selection, use and maintenance of respiratory protective devices*” which describes the requirements for correct use of breathing apparatus (BA) in an irrespirable atmosphere. It is essential that all trainees conform to this standard to successfully complete the practical component of a course requiring the use of BA.

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Appendix B: Facial Seal of Respirators (Normative)

B1 GENERAL

Beard growth, some hairstyles and other facial features prevent an adequate seal between the wearer’s face and the fitting surfaces of a face-piece or mouth-piece. Facial hair may also interfere with inhalation and exhalation valve operation. The complete sealing surface of the respirator mask should be in contact with the wearer’s skin.

B2 BEARDS

Bearded persons cannot expect to achieve adequate respiratory protection when wearing a full face-piece or a half face-piece respiratory protective equipment (RPE). Accordingly, no one who requires respiratory protection shall wear either a full face-piece or half face-piece RPE over a beard. When the person at risk has a ‘bushy’ facial hairstyle, hair trapped between the lips and mouthpieces may prevent a satisfactory seal being obtained. For positive pressure supplied air full face-piece RPE, excessive leakage of air may result from the wearing of beards. At high rates of work, beards may cause inward leakage even when using positive pressure RPE.

B3 MOUSTACHES

Moustaches may interfere with the fit of a half face-piece respirator and the peripheral seal of a full face-piece respirator. For positive pressure supplied air full face-piece RPE, excessive leakage of air may result from the wearing of moustaches. At high rates of work, moustaches may cause inward leakage even when using positive pressure RPE. A moustache that interferes with the seal of the orinasal mask of a full face-piece will cause exhaled air to pass from the inner mask to the outer mask, resulting in an unacceptable accumulation of carbon dioxide in the inhaled air.

B4 SIDEBURNS

When a full face-piece is being worn, sideburns shall not extend below a line drawn through the top of the tragon (the notch in the cartilage of the ear just above and immediately in front of the earhole) and the canthus (corner) of the eye. This line is illustrated in Figure B1 Length of Sideburns.

Figure B1

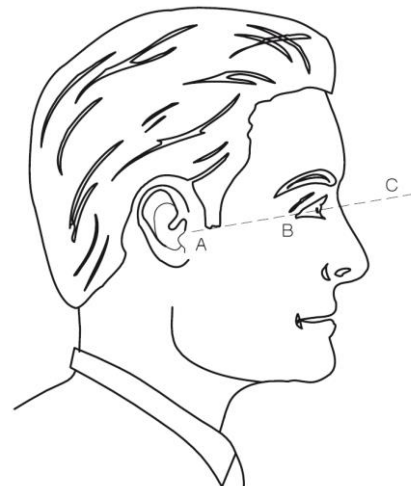


Figure B1 Legend:

A = Notch in the cartilage of the ear

B = Canthus of the eye (the angle formed by the meeting of the upper and lower eyelids at either side of the eye)

C = Line below which the sideburns should not exceed

B5 STUBBLE GROWTH AND LONG HAIR

Stubble growth, depending on its length and stiffness may interfere with proper sealing of a face-piece and it is necessary that male wearers of respirators shave daily. When the hair is worn long, particular care should be taken to ensure that none is trapped beneath the sealing surface.

B6 OTHER FACTORS

All forms of jewellery that may interfere with the facial seal should not be worn while using respirators. Facial make-up and creams applied to the face should not be worn because they may migrate during the period of wear and interfere with the face seal.