It is also recognized that at times the user holds the outer edges of the respirator during the donning procedure. This causes the user to touch the inside surface of the respirator. This can be disadvantageous in certain environments such as surgical use.

Furthermore it is recognized that the adequate opening of the respirator prior to donning affects the ease of donning and the perceived comfort of the wearer once the respirator is in position. There is therefore a perceived need to improve the ease of opening and donning of the respirator. Similarly there is a perceived need to reduce the likelihood that the internal surface of the respirator is handled during the donning and doffing the respirator.

Embodiments of the present invention seek to at least mitigate the above problems by providing a personal respiratory protection device which can open effectively and may be easier to open and don.

Summary

Accordingly, an aspect of the invention provides a personal respiratory protection device comprising:

an upper panel, a central panel, and a lower panel,

the central panel being separated from each of the upper and lower panels by a first and second fold, seam, weld or bond, respectively, such that device is capable of being folded flat for storage along the first and second fold, seam, weld or bond and opened to form a cup-shaped air chamber over the nose and mouth of the wearer when in use,

wherein the lower panel has a graspable tab attached to an interior portion of an external surface of the lower panel, the tab being graspable in use to open the device.

Advantageously, the provision of a graspable tab at attached to the lower panel enables the user to open the respirator without making contact with the inside surface of the respirator. Furthermore the positioning of the tab at the interior of the lower panel rather than, for example, the lower outer periphery can optimize the opening of the respirator as the point of action (i.e. the point of attachment) of the tab on the lower panel is closer to the axis of rotation of the lower panel relative to the front panel. In other words, the interior of the lower panel is pulled downwardly and outwardly rather than the lower outer periphery of the lower panel being pulled. This causes the middle of the lower panel to open wide which forms an air chamber which more closely matches the face of the user.

Preferably, the lower panel has a lateral storage fold when stored, the fold extending through the interior section, the tab being attached to the lower panel at a position proximate the lateral storage fold.

Claims:

1. A personal respiratory protection device comprising:

an upper panel,

a central panel, and

a lower panel,

the central panel being separated from each of the upper and lower panels by a first and second fold, seam, weld or bond, respectively, such that device is capable of being folded flat for storage along the first and second fold, seam, weld or bond and opened to form a cup-shaped air chamber over the nose and mouth of the wearer when in use,

wherein the lower panel has a graspable tab attached to an interior portion of an external surface of the lower panel, the tab being graspable in use to open the device.

2. The personal respiratory protection device of claim 1 wherein the lower panel has a lateral storage fold when stored, the fold extending through the interior section, wherein the tab is attached to the lower panel at a position proximate the lateral storage fold.

3. The personal respiratory protection device of claim 2 wherein the graspable tab is positioned within 10 mm above or below the lateral fold.

4. The personal respiratory protection device of claim 1, 2 or 3 wherein the graspable tab is positioned on the lateral fold.

5. The personal respiratory protection device of any one of claims 1 to 4 wherein the graspable tab is between 10 mm and 40 mm in width at its point of attachment to the lower panel, preferably 15 mm.

6. The personal respiratory protection device of claim 5 wherein the graspable tab is positioned on a longitudinal centerline of the device.

7. The personal respiratory protection device of any preceding claim wherein at least a portion of the tab is visible to a user when the device is folded.