What is claimed is:

1. A flameproof housing (202), comprising:

a display aperture (212) formed in the flameproof housing (202);

a shoulder (207) adjacent to the display aperture (212);

a transparent panel (230) including an outer face (231) and a perimeter (232); and

a fastener element (236) comprising a threaded retaining element configured to engage an interior surface (203) of the flameproof housing (202) and adjustably hold the transparent panel (230) against the shoulder (207);

wherein a perimeter interface region (264) between the perimeter (232) of the transparent panel (230) and the interior surface (203) of the flameproof housing (202) creates a perimeter gap that does not exceed a predetermined flameproof gap limit and wherein a face interface region (260) between the outer face (231) of the transparent panel (230) and the shoulder (207) creates a face gap that does not exceed the predetermined flameproof gap limit.

2. The flameproof housing (202) of claim 1, further comprising:

a seal groove (209) formed in the shoulder (207); and

a seal (210) positioned in the seal groove (209), wherein the seal (210) prevents moisture from entering the flameproof housing (202) at the display aperture (212).

3. The flameproof housing (202) of claim 1, with the shoulder (207) including a predetermined shoulder width that defines the face interface region (260).

4. The flameproof housing (202) of claim 1, with the transparent panel (230) including a predetermined panel thickness that defines the perimeter interface region (264).

5. The flameproof housing (202) of claim 1, with a flamepath length comprising a predetermined panel thickness plus a predetermined shoulder width.

6. The flameproof housing (202) of claim 1, with the perimeter interface region (264) providing a first flamepath span L_1 and with the face interface region (260) providing a second flamepath span L_2, wherein the first flamepath span L_1 plus the second flamepath span L_2 provides a flamepath length that equals or exceeds a predetermined minimum flamepath length.

7. The flameproof housing (202) of claim 2, with the perimeter interface region (264) providing a first flamepath span L_1 and with the face interface region (260) providing a second flamepath span L_2, wherein the first flamepath span L_1 plus the second flamepath span L_2 provides a flamepath length that equals or exceeds a predetermined minimum flamepath length, wherein the second flamepath span L_2 comprises a shoulder width of the shoulder (207) minus a seal groove width of the seal groove (209).

8. The flameproof housing (202) of claim 2, with the perimeter interface region (264) providing a first flamepath span L_1 and with the face interface region (260) providing a second flamepath span L_2, wherein the first flamepath span L_1 plus the second flamepath span L_2 provides a flamepath length that equals or exceeds a predetermined minimum flamepath length, wherein the second flamepath span L_2 comprises an outer shoulder portion (208) that is located outward from the seal groove (209).

9. A method of forming a flameproof housing, the method comprising:

providing a display aperture in the flameproof housing;

providing a shoulder adjacent to the display aperture;

providing a transparent panel including an outer face and a perimeter; and

providing a fastener element comprising a threaded retaining element configured to engage an interior surface of the flameproof housing and adjustably hold the transparent panel against the shoulder;

wherein a perimeter interface region between the perimeter of the transparent panel and the interior surface of the flameproof housing creates a

perimeter gap that does not exceed a predetermined flameproof gap limit and wherein a face interface region between the outer face of the transparent panel and the shoulder creates a face gap that does not exceed the predetermined flameproof gap limit.

10. The method of claim 9, further comprising:
providing a seal groove formed in the shoulder; and
providing a seal positioned in the seal groove, wherein the seal prevents moisture from entering the flameproof housing at the display aperture.

11. The method of claim 9, with the shoulder including a predetermined shoulder width that defines the face interface region.

12. The method of claim 9, with the transparent panel including a predetermined panel thickness that defines the perimeter interface region.

13. The method of claim 9, with a flamepath length comprising a predetermined panel thickness plus a predetermined shoulder width.

14. The method of claim 9, with the perimeter interface region providing a first flamepath span L_1 and with the face interface region providing a second flamepath span L_2, wherein the first flamepath span L_1 plus the second flamepath span L_2 provides a flamepath length that equals or exceeds a predetermined minimum flamepath length.

15. The method of claim 10, with the perimeter interface region providing a first flamepath span L_1 and with the face interface region providing a second flamepath span L_2, wherein the first flamepath span L_1 plus the second flamepath span L_2 provides a flamepath length that equals or exceeds a predetermined minimum flamepath length, wherein the second flamepath span L_2 comprises a shoulder width of the shoulder minus a seal groove width of the seal groove.

16. The method of claim 10, with the perimeter interface region providing a first flamepath span L_1 and with the face interface region providing a second flamepath span L_2, wherein the first flamepath span L_1 plus the second flamepath span L_2 provides a flamepath length that equals or exceeds a predetermined minimum flamepath length, wherein the second flamepath span L_2 comprises an outer shoulder portion that is located outward from the seal groove.