CLAIMS

1. A ring-shaped gasket for sealingly joining opposed fluid conduit ports, the gasket comprising:

a gasket body having a radial outer surface, a first axial end surface, and a second axial end surface, the gasket body being pierced through by a hole creating a fluid pathway and defining a radial inner surface;

wherein at least one of the first and the second axial end surfaces having a stress concentration feature, the stress concentration feature being formed in the gasket body to define a lip on at least one of the first and the second axial end surfaces, the lip projecting axially outward beyond the first axial end surface and including a sealing surface adjacent a protective ridge, the lip being constructed and arranged to plastically deform in response to the sealing surface contacting a face surface of a first fluid conduit port;

wherein the stress concentration feature comprises a first surface and a second surface radially outward from the first surface of the stress concentration feature, a bottom portion of the stress concentration feature extending axially inward of at least a portion of the lip; and

wherein the protective ridge is disposed radially outward of the sealing surface.

2. The gasket of claim 1, wherein the stress concentration feature comprises a groove formed in the first axial end surface, a wall, being the first surface, of the groove closest the radial inner surface forming a approximately perpendicular angle with a plane of the first axial end surface.

3. The gasket of claim 2, wherein an outer periphery of the groove is surrounded by a portion of the first axial end surface that extends axially outward to a lesser extent than the lip prior to installation of the gasket.

4. The gasket of claim 1, wherein the stress concentration feature comprises an asymmetrical V-shaped groove formed in the first axial end surface, the second surface and the first surface of the groove forming an acute angle, and the first surface forming an acute angle with a plane of the first axial end surface.

5. The gasket of claim 4, wherein the gasket comprises a malleable material.

6. The gasket of claim 4, wherein the gasket comprises one of a unitary metallic material substantially identical to 316 stainless steel alloys and a unitary metallic material selected from the group consisting of a stainless steel alloy, a chromium alloy, a nickel alloy, commercially pure nickel, a copper alloy, and commercially pure copper.

7. The gasket of claim 4, wherein an axial extent of the gasket body adjacent the radial inner

surface of the gasket is less than the axial extent of the gasket body adjacent the radial outer surface.

8. The gasket of claim 7, wherein the protective ridge is disposed radially outward of the sealing surface.

9. The gasket of claim 8, wherein the gasket body includes a circumferential groove defined in the radial outer surface of the gasket body to accommodate a keeper.

10. The gasket of claim 9, wherein the sealing surface is a circumferential sector exhibiting a generally constant angle with respect to the first axial end surface.

11. The gasket of claim 4, wherein the protective ridge is disposed radially outward of the sealing surface.

12. The gasket of claim 4, wherein the gasket body includes a circumferential groove defined in the radial outer surface of the gasket body to accommodate a keeper.

13. The gasket of claim 4, wherein the sealing surface is a circumferential sector exhibiting a generally constant angle with respect to the first axial end surface.

14. The gasket of claim 1, wherein the gasket body includes a circumferential groove defined in the radial outer surface of the gasket body to accommodate a keeper.

15. The gasket of claim 14, wherein the sealing surface is a circumferential sector exhibiting a generally constant angle with respect to the first axial end surface.

16. The gasket of claim 1, wherein the sealing surface is a circumferential sector exhibiting a generally constant angle with respect to the first axial end surface.

17. The gasket of claim 1, wherein an axial extent of the gasket body adjacent the radial inner surface of the gasket is less than the axial extent of the gasket body adjacent the radial outer surface.

18. The gasket of claim 1, wherein an end region comprises a plurality of surfaces.