

SPECIAL APPLICATION GASKETS

Low Emission Gasket.

The Flexitallic Low Emission gasket is a high performance spiral wound gasket that has been specially engineered to exceed stringent oil and gas industry fugitive emissions requirements, such as those found in the Chevron Fugitive Emissions Test (CFET).

Gaskets to suit standard ASME B16.5 and B16.47 flanged connections remain diametrically unchanged and in this respect are dimensionally compliant with ASME B16.20. Enhanced sealing performance is achieved by modification of the sealing element. The key design features are specification of the filler thickness range 0.36 to 0.41mm; ASME B16.20 does not specify filler thickness and typically 0.5mm thick is used. In addition filler protrusion is specified to be within the range of 0.2 to 1.0mm above the metal winding; resulting in a thicker sealing element.

Compression requirements for LE gaskets are different from those specified in ASME B16.20 that stipulates a compressed sealing element

thickness for a given bolt stress irrespective of pressure class. LE gaskets are required to compress within specified limits based on directly applied gasket stress. Gaskets made to LE construction requirements are designed to compress to between 0.76 and 1.27mm above the guide ring thickness when subjected to a compressive stress of 128 MPa (see diagram A, left).

Independent testing in accordance with the CEFT protocol has shown that Flexitallic LE gaskets comfortably exceed allowable fugitive emissions leakage levels. Leakage testing of ASME Class 150 CGI spiral wound gaskets in accordance with the PVRC ROTT procedure shows that Flexitallic LE gaskets require significantly lower bolt stress to achieve a T3 tightness class (see diagram B, below).

For more information regarding Flexitallic Low Emission spiral wound gaskets please contact the Flexitallic Applications Engineering Team.

