

Flanged Pipe for Water and Other Liquids (cont.)

Flange Compatibility and Pressure Ratings

The ANSI/AWWA C115/A21.15 Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges standards conform to the drilling and facing of ANSI B16.1 Class 125 flanges. This B16.1 Class 125 designation leads some to conclude that these AWWA flanges are only rated at 125 psi service which is not correct. Note Pressure Ratings on page 6. These ratings are at ambient temperatures with at least a 2:1 factor of safety. Special gaskets such as U.S. Pipe's **FULL FACE FLANGE-TYTE™** or **RING FLANGE-TYTE™** Gaskets are required for operating pressures greater than 250 psi for sizes 04" - 24".

(Flanges of Ductile Iron fittings meeting the requirements of **ANSI B16.1 Class 250** cannot be joined with **ANSI/AWWA C115/A21.15**.)

Coating Systems

Unless otherwise specified, flanged pipe will be furnished with a standard thickness cement-mortar lining with asphaltic coating inside and outside. Primer coatings are available upon request. Please contact U.S. Pipe Special Projects Department at 866-DIP-PIPE for a list of available interior linings and exterior primers.

Special Service Requirements

When requesting prices for flanged piping other than water service, please furnish complete information regarding the type of material to be conveyed, composition, concentration, pH, pressure and temperature.

Installation

U.S. Pipe recommends the use of **FULL FACE FLANGE-TYTE™** Gaskets or **RING FLANGE-TYTE™** Gaskets with Ductile Iron flanged joint products supplied by U.S. Pipe. These gaskets were designed specifically for the unique surface of Ductile Iron. Flat rubber gaskets are NOT considered equal in performance and may not provide the sealing capability the project requires. In addition, their use could result in unintended damage to the flanges and threads of the fabricated pipe by applying excess torque to the bolts/flanges in order to seal the joint. Please refer to U.S. Pipe's **FULL FACE FLANGE-TYTE™** or **RING FLANGE-TYTE™** Gaskets at www.uspipe.com.

The use of flanged joints underground is not recommended because of the rigidity of the joint.

Flanged faces should bear uniformly on the gasket, and the bolts should be tightened in a progressively crisscrossed pattern, such as by tightening the bottom bolt first; then, the top bolt; next, the bolts at either side; and finally, the remaining bolts. This process should be repeated until all bolts are adequately tightened.

Users of flanged piping should be careful to prevent bending or torsional strains from being applied to flanges or flanged appurtenances. Piping systems must be designed so that piping connected to flanges is properly anchored, supported, or restrained to prevent breakage of flanges and flanged fittings or appurtenances.

Impact wrenches cannot be used in many cases when assembling flanged joints due to the many variations of flange shroud diameters and impact wrench socket dimensions, in combination with nut configurations (heavy or regular hex).

CAUTION: U.S. Pipe does not recommend the practice of assembling threaded flanges on pipe in the field.