

# BEXAR METROPOLITAN WATER DISTRICT MATERIALS SPECIFICATIONS

## Section 007 Fitting Clamps Repair and Tap

### 007.1 Scope of Work/Description

This specification covers single and multiple band full circle clamps to repair full circumferential breaks, holes, cracks, or other damage on cast iron, ductile iron, asbestos cement, steel and other types of pipe

### 007.2 General Requirements

1. Band or shell shall be of the O.D. size range and length specified. Band shall be of Type 304 stainless steel.
2. Lugs shall be of high strength ductile iron per ASTM A536, and securely attached to the band or shell. Each lug shall be so designed to allow "drop in bolts" and stabilizing "fingers" to provide maximum torquing of the bolts. Lugs are to be shop-coated with an oil-modified urethane corrosion-resistant paint.
3. Gasket shall provide a 360° sealing surface and of such size and shape to provide an adequate compressive force against the pipe after assembly to affect a positive seal under all combinations of joint and gasket tolerances. Materials used shall be vulcanized natural or vulcanized synthetic rubber with antioxidant and antiozinant ingredients to resist set after installation. No reclaimed rubber shall be used. A heavy gauge Type 304 stainless armor plate shall be vulcanized into the gasket to span the lug area. d. Bolts shall be of high strength, low alloy steel with semifinished hexagon nuts and washers in accordance with AWWA/ANSI C111/A21.11.
4. Quality control procedures shall be employed to insure that the gasket, band, and lug are properly fabricated and free of any visible defects. Each clamp shall have a working-pressure rating not less than the following:

Pipe Size (inches)	Minimum Working Pressure Rating (psi)
12 and smaller	200
16 thru 20	100
24	75

5. The bolt and lug design shall be closed on one side.

### 007.3 Standard Clamp Ranges

1. Single Band

Nominal Dia. x Width	O.D. Range*
6" x 7½"	6.84" - 7.24"
8" x 7½"	8.99" - 9.39"
12" x 7½"	13.70" - 14.10"

2. Multiple Band

A. 4" x 12½"	4.74" - 5.57"
A. 6" x 15"	6.62" - 7.42"
B. 6" x 15"	7.20" - 8.00"
A. 8" x 15"	8.50" - 9.27"
B. 8" x 15"	9.25" - 10.05"
10" x 15"	11.04" - 12.24"
A. 12" x 15"	13.14" - 14.34"
B. 12" x 15"	13.65" - 14.85"
A. 16" x 10"	18.08" - 18.84"
B. 16" x 20"	17.15" - 17.90"
C. 16" x 20"	18.46" - 19.21"

A. 20" x 10"	22.90" - 23.65"
B. 20" x 20"	21.52" - 22.27"
C. 20" x 20"	23.21" - 23.97"
A. 24" x 10"	27.28" - 28.34"
B. 24" x 20"	25.70" - 26.80"
C. 24" x 20"	27.72" - 28.82"

NOTE: Widths shall not vary more than (+/-) 1 inch.

3. Where 2, 1½, 1 and ¾ inch tapped repair clamps are specified, they shall be multiple band in the sizes specified in paragraph (4) above.
4. Unless otherwise specified, each clamp shall be stenciled or coated in a satisfactory manner to identify the size range. The markings shall be permanent type, water resistant, and will not smear or become illegible.
5. BMWD may, at not cost to the manufacturer, subject random repair clamps to testing by an independent laboratory for compliance with these standards. Any visible defect or failure to meet the quality standards herein will be grounds for rejecting the entire order.
6. The attached qualified products list identifies specific manufactured items by catalog number that are approved.

\*Ranges may be broadened but not narrowed.

**007.4 Approved Manufacturers and Models**

Manufacturer	Repair Clamp Model	Tap Clamp Model
Smith-Blair, Inc.	226, 227, 228	238,239
The Ford Meter Box Co., Inc.	F1, F2, F3	F1, F2, F3

END OF SECTION