



Address: 11910 CR 492 - Tyler, Texas 75706  
 Telephone No.: (800) 527-8478  
 Fax Number: (903) 882-2347  
[www.tylerunion.com](http://www.tylerunion.com)

## 21U • AWWA Cement & Asphaltic Coating or Lining

### SUBMITTAL (Current revisions for all ANSI/AWWA standards apply)

Tyler Union Waterworks manufactures and distributes ductile iron waterworks fittings. Tyler Union Waterworks lined and/or coated 2 inch through 48 inch fittings are provided in accordance with and meet all the applicable terms and requirements of ANSI/AWWA C104/A21.4-08, ANSI/AWWA C110/A21.10-08, ANSI/AWWA C111/A21.11-7, ANSI/AWWA C153/A21.53-06, and ANSI/AWWA C151/A21.51. Lined and Coated fittings distributed by Tyler Union Waterworks are NSF 61 compliant. Current revisions apply for each noted standard.

The Asphaltic coating and lining utilized on the “inside” of pipe and fittings is to aide in the proper curing of the cement mortar lining as described in the AWWA C104 standard, Section 4.10. Beginning in 1995 the asphaltic lining for the inside of fittings is no longer required by the AWWA but is recommended in instances where the pH of the water is less than 6.0 or greater than 10.0.

The purpose of the cement lining on the “inside” of ductile iron waterworks fittings is to reduce the degree of tuberculation (buildup) or corrosion on the fitting wall. Tuberculation or corrosion of the fitting wall is minimized in soft or acid water as the cement lining creates a high pH at the fitting wall. The AWWA standard specified thicknesses for Cement linings and Asphaltic linings in ductile iron fittings 2 inch through 48 inch are as provided.

Fitting Sizes	AWWA Std. Cement Lining	AWWA Dbl. Cement Lining	AWWA Std. Asphaltic	Std. Tyler Union Asphaltic
2 inch to 12 inch	1/16”	1/8”	1 mil	2 mil
14 inch to 24 inch	3/32”	3/16”	1 mil	2 mil
30 inch to 48 inch	1/8”	1/4 “	1 mil	2 mil

The Asphaltic coating and lining utilized on the “outside” of pipe and fittings is for cosmetic purposes and intended to provide some level of corrosion protection prior to being installed. Unless specified upon order placement, all cement lined fittings provided by Tyler Union Waterworks will be provided with an asphaltic lining and coating.

#### Cement Lining - Field Repair

1. Remove the damaged portion or area of the lining down to the metal surface, making sure any remaining lining edges are undercut slightly or perpendicular to the fitting wall.
2. Clean the surface of loose debris and any tuberculation or corrosion where the lining was removed.
3. Prepare a stiff mortar from a mixture of sand, cement, and water making sure the mix contains no less than one part cement to two parts sand by volume.
4. Thoroughly wet the cut out area and the adjoining lining.
5. Apply mortar mix and trowel smooth with the adjoining lining
6. After any surface water has evaporated, but while the patch is still moist, cure the lining as provided.
7. The repaired cement lining can be kept moist by seal (asphaltic) coating or with the use of \*\*wetted burlap bags placed over the entire waterway opening of the fitting or access point. Once the mortar is applied to the fitting apply the seal coat by spraying or brushing on the seal coat within 5 to 15 minutes after any surface water has evaporated.

- \*\*Note:
- 1) In instances where seal coat is not used, cure cement as provided for 24 hours after application.
  - 2) In cold weather the patched area should be protected from freezing.
  - 3) If Seal coat is used during field repair, allow a cure time of 48 hours after the seal coat is applied before placing fitting back in service.

#### Asphaltic Paint – Field Repair

1. Paint repair to the fitting body or mechanical joint includes use of a hand steel bristle brush to remove loose corrosion. Wipe area free of dust or debris with a cloth suitable for the task and recoat exterior areas of the fitting with the paint provided as needed using a standard paint brush sized for the task.
2. Recoating of the cement lining is achieved by wiping the lining with a cloth to remove any loose paint or debris and then apply paint using a standard size paint brush suitable for the task applying paint to affected areas as needed.

#### \*Tyler Union Waterworks Contact Information\*

**Tyler:** 11910 CR 492 • Tyler, Texas 75706 • (800) 527-8478

**Anniston:** 1501 W. 17<sup>th</sup>. St. • Anniston, Alabama 36201 • (800) 226-7601

**Corona:** 1001 El Camino Ave. • Corona, California 92879 • (866) 527-8471

**Portland:** 6204 N. Marine Dr. • Portland, Oregon 97203 • (866) 527-8471

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