



NewAge Casting

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Extend the life of the building.

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NewAge Epoxy

Waste System Installation & Design Recommendations



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1. Objectives

- To offer the most economical, easy to install and complete Excessive Corrosive Waste System.
- To provide building owners with a cost effective and lasting solution.
- For NewAge Epoxy Waste System to last beyond the life of the building.

2. Approach

Utilizing our core product, NewAge Epoxy Waste System, with our enhanced coating to resist the corrosive environments that flow through today's waste systems. NewAge Epoxy Waste System conforms to ASTM A888, ASTM A74 and CISPI 301 standards for hubless cast iron soil pipe and fittings and utilizes the EN877 standard for coating and testing.

3. Coating Process

The coating process begins with the boring of the interior surface of the pipe to achieve better flow characteristics by reducing the friction loss throughout the system. Following boring, each length of pipe is hydrostatically pressure tested at 5psi to verify the integrity of the pipe.

The pipe interior coating process utilizes a two-component epoxy system that is applied to a minimum 5 mil. thickness. The pipe exterior coating process also utilizes the two-component epoxy system which is applied over a zinc based primer that is applied to a minimum 2.5 mil. thickness. Both interior and exterior coatings demonstrate superior pipe adhesion. The fittings are powder coated on the interior and exterior to a minimum 5 mil. thickness utilizing a fusion bonding epoxy process.

4. Excessive Corrosive Environments

Where an excessive corrosive environment is encountered, measured as an acidity level less than or equal to 4.4 pH or an alkali level greater than or equal to 7.1 pH, NewAge Epoxy Waste System is recommended for installation with the touch-up protection.

Additional care in the cutting, end protecting and installation will provide a long lasting system.

5. Pipe Cutting

Note: NewAge Epoxy Waste System is available in standard 10 ft. lengths. These can be cut to length by a licensed plumbing contractor.

- 5.1. For a clean, square cut, a cut-off saw is the recommended cutting method. (Figure 1)

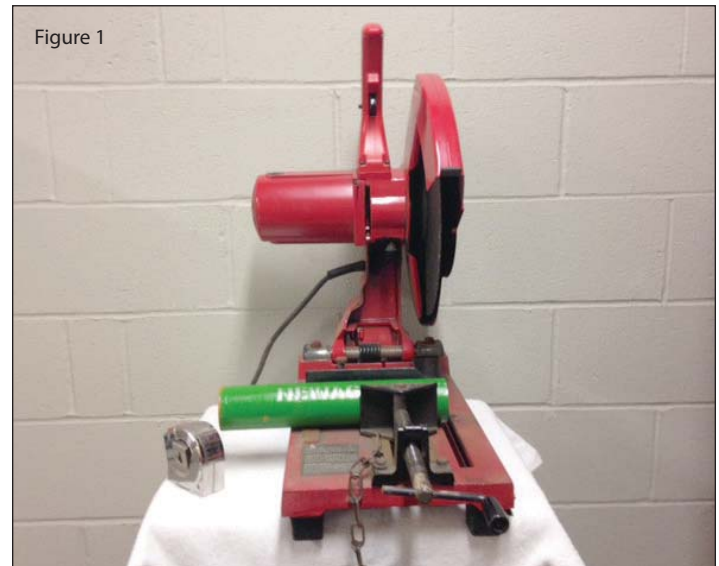


Figure 1

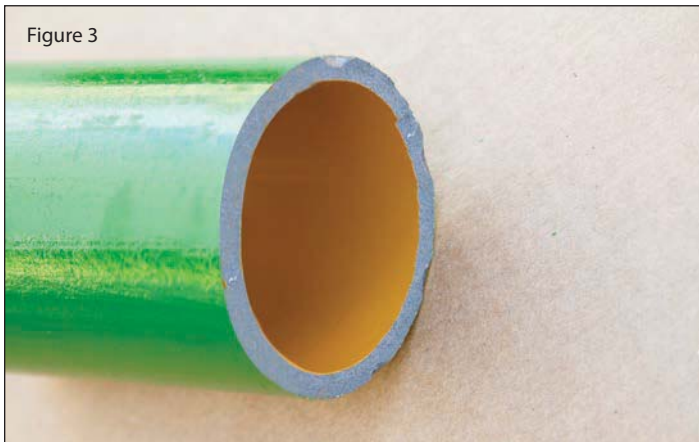
- 5.2. For a fast cuts performed in the field, a snap-cutter is acceptable. (Figure 2)



Figure 2

6. Protect the Cut Pipe End

- 6.1. Inspect and confirm the newly cut pipe is square and free from cracks or defects. (Figure 3)
- 6.2. Using an approved solvent and clean cloth, remove all grease, oil, and foreign debris from the interior and exterior pipe surface to be coated must be clean.



Optional Pipe End Protection

In standard DWV systems, end protection is not a requirement in the installation procedures.

Required Pipe End Protection

In all excessive corrosive waste system environments, the pipe ends must be protected. Protect the cut pipe end exposed iron using the NewAge Fast Dry Epoxy Touchup Kit.

NewAge Fast Dry Epoxy Mixing Ratio

The mixing ratio is premeasured by the dispenser.

NewAge Fast Dry Epoxy Applicator

Brush – Nylon/Polyester or Natural Bristle

Recommendations

- Prepare as many pieces as possible for painting.
- Thoroughly mix parts A and B.
- Do not attempt to dilute unused or dry epoxy for reuse.
- Coat pipe ends within 8 hours of cut.

Safety Precaution

When applying NewAge Fast Dry Epoxy, wear Nitrile gloves and eye protection with unperforated side shields. Hazmat suit is NOT necessary.

- 6.3. Thoroughly mix equal parts of components A and B.
- 6.4. Using a brush, generously apply NewAge Fast Drying Epoxy directly to (Figure 4):
 - The cut pipe end exposed iron.
 - 3/4" inside the pipe interior from the cut out to the end.
 - 3/4" outside the pipe exterior from the cut out to the end.



- 6.5. Once epoxy touch-up is applied, immediate pipe/fitting connections can be made. No cure time is required.
- 6.6. Inspect to verify coverage before installing.

Note: Step 6 should be followed for any required touch ups.



Figure 5

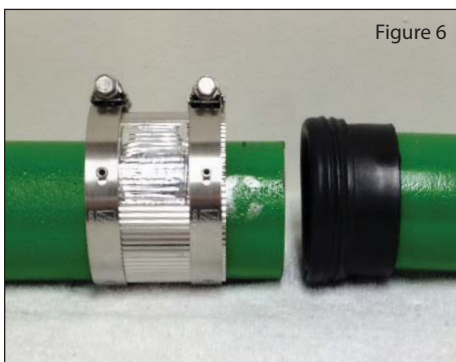


Figure 6

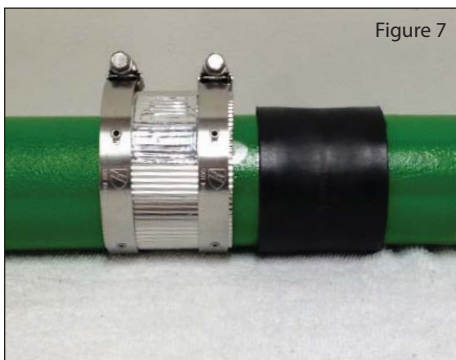


Figure 7

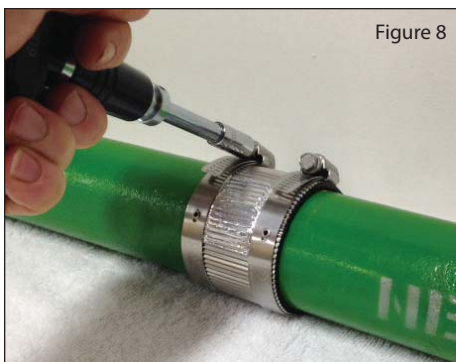


Figure 8

7. No-Hub Standard Shielded Coupling Installation

Important: NewAge Casting strongly recommends that its cast iron pipe and fittings only be joined with shielded No-Hub couplings that are manufactured in accordance with the following standards; CISPI 310, ASTM C1277. Gaskets are made from 100% EPDM rubber when installed in an excessive corrosive environment.

7.1. Follow these guidelines for joining NewAge no-hub couplings to no-hub pipe and fittings in accordance with standard industry practice.

Note: Each city, state or region may have governing codes, engineering requirements, and local practices of the plumbing trade that must also be followed.

7.2. A correctly calibrated torque wrench or power tool set at 60 inch-lb should be used.

7.3. Use of unapproved tool voids warranty. If power tools are used, they must be calibrated to 60 inch-lb.

7.4. Inspect cut pipe for squareness and defects. Remove foreign debris from pipe interior and exterior with a clean cloth and approved solvent.

7.5. Loosen the shielded coupling screws and separate from the rubber gasket (See Figure 5).

7.6. Place rubber gasket onto the end of one piece of pipe/fitting until the internal molded shoulder sits firmly against the end of the pipe (See Figure 6).

7.7. Insert the second piece of pipe/fitting into gasket, firmly placing both ends against the of the centerstop of the gasket (See Figure 7).

7.8. Ensure that the pipe/fittings to be joined are aligned. Slide and center loose coupling over the gasket so that the gasket is completely covered.

7.9. Tighten the shield using the appropriate torque sequence (as defined below) to 60 inch-lb (See Figure 8).

7.9.1. For sizes 1-1/2" to 4", tighten clamp 1 and then clamp 2 alternately in 20 inch-lb increments until the recommended 60 inch-lb is reached (See Figure 9).

7.9.2. For sizes 5", 6", 8" and 10", tighten the inner clamps 2 and 3 alternately in 20 inch-lb increments until the recommended 60 inch-lb is reached. Then tighten outside clamp 1 and 4 alternately in 20 inch-lb increments until the recommended 60 inch-lb is reached (See Figure 10).

7.9.3. For sizes 12 and 15", tighten the inner clamps 3 and 4 alternately in 20 inch-lb increments until the recommended 60 inch-lb is reached. Then tighten middle clamps 2 and 5 alternately in 20 inch-lb increments until the recommended 60 inch-lb is reached. Then tighten outside clamps 1 and 6 alternately in 20 inch-lb increments until the recommended 60 inch-lb is reached (See Figure 11).

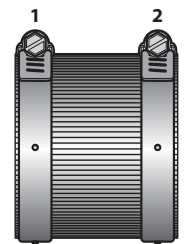


Figure 9

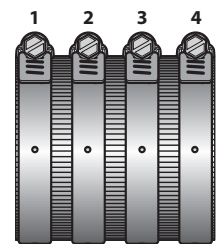


Figure 10

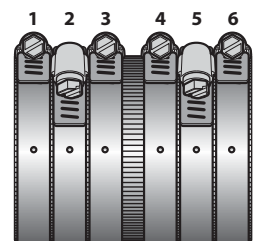


Figure 11



Figure 12



Figure 13

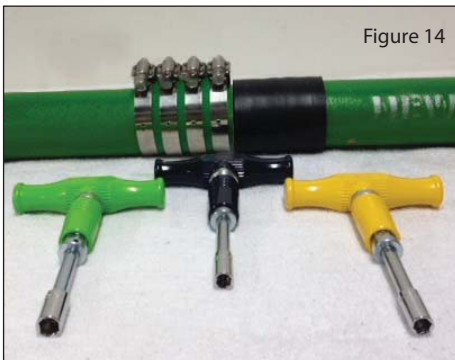


Figure 14



Figure 15

8. Heavy Duty & Extra Heavy Duty Shielded Coupling Installation

Important: NewAge Casting strongly recommends that its cast iron pipe and fittings only be joined with shielded Heavy duty couplings that are manufactured in accordance with ASTM C1540. Gaskets are made from 100% EPDM rubber when installed in an excessively corrosive environment.

8.1. Follow these guidelines for joining NewAge heavy duty and extra heavy duty couplings to no-hub pipe and fittings in accordance with standard industry practice.

Note: Each city, state or region may have governing codes, engineering requirements, and local practices of the plumbing trade that must be followed.

8.2. A correctly calibrated torque wrench or power tool set at 80 inch-lb should always be used.

8.3. Use of unapproved tool voids warranty. If power tools are used, they must be calibrated to 80 inch-lb.

8.4. Inspect cut pipe for squareness and defects. Remove foreign debris from pipe interior and exterior.

8.5. Loosen the shielded coupling screws and separate from the rubber gasket (See Figure 12).

8.6. Place rubber gasket onto the end of one piece of pipe/fitting until the internal molded shoulder sits firmly against the end of the pipe (See Figure 13).

8.7. Insert the second piece of pipe/fitting into gasket, firmly placing both ends against the center of the centerstop of the gasket (See Figure 14).

8.8. Ensure that the pipe/fittings to be joined are aligned. Slide and center loose coupling over the gasket so that the gasket is completely covered.

8.9. Tighten the shield using the appropriate torque sequence (as defined below) to 80 inch-lb. (See Figure 15).

8.9.1. For sizes 1-1/2" to 4", tighten inner clamp 2 and 3 alternately in 20 inch-lb increments until the recommended 80 inch-lb is reached. Then tighten outside clamp 1 and 4 alternately in 20 inch-lb increments until the recommended 80 inch-lb is reached (See Figure 16).

8.9.2. For sizes 5", 6", 8", 10", 12" and 15" tighten the inner clamps 3 and 4 alternately in 20 inch-lb increments until the recommended 80 inch-lb is reached. Then tighten middle clamp 2 and 5 alternately in 20 inch-lb increments until the recommended 80 inch-lb is reached. Then tighten outside clamps 1 and 6 alternately in 20 inch-lb increments until the recommended 80 inch-lb is reached (See Figure 17).

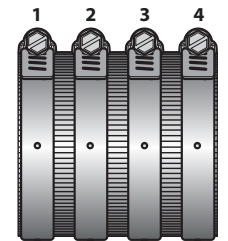


Figure 16

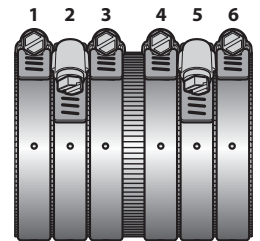


Figure 17

9. Hub and Spigot Installation

Note: Gasket and lead/oakum joints are both acceptable.

9.1. Complete all steps in Section 6 and make the joint connection per industry standard.