

## FUSED EPOXY COATING SPECIFICATION

### General Overview

This fused epoxy surface is bounded to the valve's surface areas. It is non-porous, improving the flow coefficient of the valve, and effectively seals the cast iron from intersection with the controlled liquid, as well as the environmental attack. The finish prevents mineral buildup and rust (a major factor in control pilot failure), simplifying maintenance, and prolonging the life of the valve.

The fused epoxy surface is FDA approved for potable water applications. It is unaffected by any petroleum product compatible with the valve's elastomers (diaphragm/seal).

### Procedure

#### Cleaning-Degassing

After masking, all parts are placed in the degas oven for a time period of 5 hours, at a temperature of 600°F. This removes all the fluids and gasses from the part. This process is critical to the longevity of the epoxy coating. Epoxy applied to an uncured part is subject to release from the surface of the part.

#### Surface Preparation

Parts, in small quantities to assure adequate room to process, are loaded into a cleaning chamber. Here they are pressure blasted with steel beads until the surface is clean and equal to a commercial 250 finish.

#### Preheating

Parts are next oven heated for 1/2 hour a temperature 350°F. Thermal expansion of the part provides greater porous surface upon which the epoxy can be applied.

#### Coating

The heated part is next moved into an electrostatically charged spray booth. Electrostatic charging assured proper consistent coverage of the coating on all surfaces. Parts are sprayed with epoxy powder which fuses to the heated surface. The finished result yields a coating thickness of 3 to 5 mil (as recommended by manufacturer.)

This powder coating complies with FDA Regulation 21 CFR 175.300, Resinous and Polymeric Coatings.

#### Curing

Following the coating application all parts are returned to a curing oven for 1/2 hour at a temperature of 400° F.

#### Cool Down

All parts upon removal from the oven are allowed to cool down under normal room temperature.

#### S.A. Armstrong Limited

23 Bertrand Avenue  
Toronto, Ontario  
Canada, M1L 2P3  
Tel: (416) 755-2291  
Fax: (416) 755-9101

#### Armstrong Pumps Limited

Peartree Road, Stanway  
Colchester, Essex  
United Kingdom, C03 5JX  
Tel: 01206-579491  
Fax: 01206-760532



#### Armstrong Pumps Inc.

93 East Avenue  
Buffalo, New York  
U.S.A. 14120-6594  
Tel: (716) 693-8813  
Fax: (716) 693-8970  
1-800-FLOW-845

#### Armstrong Darling Inc.

2200 Place Transcanadienne  
Montreal, Quebec  
Canada, H9P 2X5  
Tel: (514) 421-2424  
Fax: (514) 421-2436