

# Nap-Gard®

# 7-0017 SPECIFICATION FOR PLANT APPLICATION OF NAP-GARD BLACK BEAUTY FBE ON LINE PIPE

Revised: 16 September 2013

1.0 SYSTEM: NAP-GARD® BLACK BEAUTY FBE

### 2.0 GENERAL

## **SURFACE PREPARATION**

- 1.1 All oil and grease shall be removed prior to abrasive cleaning in accordance with SSPC-SP1-63.
- 1.2 All pipes should be preheated before grit blasting in order to prevent oxidation of the cleaned surface.
- 1.3 The surface to be coated shall be cleaned to a "White Metal" finish in accordance with Swedish Standards #Sa3 using steel grit, flint or garnet of appropriate particle size.
- 1.4 The blast pattern shall be uniform, angular anchor profile with a minimum depth of  $40 \mu m$  (1.5 mils) to  $100 \mu m$  (4.0 mils).
- 1.5 The surface will be inspected immediately after blasting and all slivers, scabs, and gouges made visible by blast cleaning shall be removed with media that will maintain the anchor profile.
- 1.6 Before coating, the pipe will be inspected for cleanliness and compliance with Section 1.3 above.
- 1.7 Total elapsed time between grit blasting and coating of the blasted surface shall be kept to a minimum to avoid the formation of oxides on the cleaned surface. Visual formation of such oxides shall cause the pipe to be re-blasted prior to coating.

#### **APPLICATION**

2.1 Spray apply a liquid phenolic primer to the cleaned pipe/pipe components. The dried film thickness shall be between 0.75 (18 μm) and 1.0 mil (25 μm). The surface temperature shall not exceed 150°F during the application of the primer. Heat the primed pipe in an oven (450°F to 475°F air temperature) temperature approximately 20 minutes to bring the temperature to 400 ± 25°F.

Apply Nap-Gard<sup>®</sup> Black Beauty FBE using fluidized air system. Place the coated pipe back in the oven immediately for approximately 10 minutes to bring the temperature to above 375°F. Surface temperature should be above 375°F for at least 10 minutes.

Air cool, (or if needed) water quench the pipe bringing it to ambient temperature.





- 2.2 Minimum dry film thickness for all systems shall be specified by the purchaser but it is recommended that this specified minimum be no less than 15.0 mils (400 um) and maximum 30 mils (750 um).
- 2.3 The use of recycle powder shall be permitted if proper recovery and screening equipment is used and maintained. This equipment must meet the approval of the Purchaser and the coating manufacturer.

A properly designed recycle system automatically and continuously blends recycled powder with virgin powder in the delivery system.

Recycled powder should be screened and an 80 mesh screen is recommended.

2.4 All air used to fluidize, transport, and apply the powder shall be dry and free of oil. It is recommended that the dry air system be capable of delivering air of at least - 20°F (-30°C) dew point or lower.

#### **INSPECTION**

- 3.1 Dry film thickness measurements of the cured coating shall be made with a "MICROTEST" magnet film thickness gauge. Calibration of gauge shall be verified daily utilizing U.S. Bureau of Standards certified coating thickness calibration standards.
- 3.2 Holiday detection shall be carried out at 125 volts D.C. per mil. The holiday detector used shall be low-amperage, with adjustable D.C. voltage, employing an audible signaling device. The holiday detector voltage shall be periodically checked with an accurate D.C. Voltmeter. The detector electrode shall be in direct contact with the surface of the coating to be inspected. There shall be no gaps in the electrode or separators between the electrode and the surface of the coating.

All holidays shall be clearly marked for repair.

- 3.3 Other tests shall include cure (TM) and adhesion tests using appropriate methods.
- 3.4 Chemical resistance tests using pressurized autoclave vessel may be conducted on coated samples. Test conditions shall be relevant to field/service conditions.

Always consult product Material Safety Data (MSDS) prior to handling.

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