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Near White Blast Cleaning
(Bead Blasting)

PROCEDURE # 099-A-M022
DATE January 7,1999

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PREPARED BY James Hinkle **Date** January 07,1999

Approvals:

Manufacturing Manager Ken Runyan **Date** 1/8/99

Engineering Manager Ian Pratt **Date** 1/11/99

Quality Assurance Manager Eric Barkhurst **Date** 1/8/99

NEAR WHITE BLAST CLEANING
USING GLASS BEAD BLAST MEDIA

1.0 Purpose:

This standard covers the requirements for near white blast cleaning of stainless steel, copper and interior mild steel surfaces by the use of glass beads to achieve a defined degree of cleaning and profile as a surface finish. SSPC-SP10 (steel structures painting council) near white blast cleaning is used as a guideline for this standard.

2.0 Scope:

N/A

3.0 Responsibilities:

3.1 Engineering will be responsible for noting this Workmanship Standard on the drawing, as applicable.

3.2 Manufacturing will be responsible for performing the tasks as described in Section 6.0 below.

3.3 Quality Control will be responsible for performing the tasks as described in Section 6.0 below, if applicable.

4.0 References:

4.1 Steel Structure Painting Council - Surface Preparation 1 (SSPC - SP1)

4.2 Steel Structure Painting Council - Surface Preparation 10 (SSPC – SP10)

4.3 Steel Structure Painting Council - Visual Standard 1 (SSPC - VIS 1-89)

4.4 Retech Environmental Safety and Health Manual

5.0 Definitions:

5.1 Near white:

A near white blast cleaned surface when viewed without magnification shall be free of all visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, corrosion or other foreign matter, except for staining as noted.

5.2 Staining:

Staining may consist of light shadows, slight streaks or minor discoloration caused by stains of rust, stains of mill scale or stains of previously applied coating. Random staining shall be limited to 5 percent of each unit area of surface. A unit area is 9 square inches or a section 3" x 3".

6.0 Procedure:

6.1 Safety Requirements:

Because abrasive blast cleaning is a hazardous operation, all work shall be conducted with the proper safety equipment and in a safe environment. Note, all in-house blast cleaning shall be in compliance with the Retech Environmental Safety and Health Manual, Appendix J.

6.2 Pre Clean Before Blasting:

Before blast cleaning, all surfaces with visible deposit of oil or grease shall be cleaned using a suitable solvent or degreasing compound. Surface imperfections such as weld splatter, burn slag, sharp edges or minor surface laminations should also be removed.

6.3 Protection and Covering:

All machined surface areas shall be covered and protected from abrasives during the blast cleaning process to prevent any damage of machined surface areas. All tapped holes shall be plugged or covered to prevent blast media from entering threads. All water jacket openings shall be covered before the blast cleaning process to prevent abrasives from entering the water jacket area.

6.4 Blast Cleaning:

Only clean dry compressed air shall be used when using compressed air blasting equipment. Nozzle pressure of 90 to 100 psi is recommended. Abrasive size and type shall produce a profile height of .7 min. to 1.3 max. mils. A recommended size is BT 8. Only new abrasive should be

used and it must be kept dry and free of grease, oil or other harmful contaminants.

6.5 Surface Preparation Prior to Coating:
Dust and residues from blasting shall be removed with clean dry compressed air, brushing, or vacuum cleaning. Clean dry compressed air is the preferred method. Care shall be taken not to contaminate the freshly cleaned surface. Any visible deposits of oil or grease shall be removed with a suitable solvent or other degreasing cleaner. If surface is to be coated, coating should be accomplished as soon as possible after blast cleaning. The time interval is dependent on atmospheric conditions and temperature. Under mild ambient conditions it is best to blast clean and coat the surface on the same day. Under severe atmospheric and environmental conditions it may require a more expedient coating application.

6.6 Inspection Prior to Coating:
Visual inspection should show compliance with the provisions of section 5.0 and 5.1 of this standard.

6.6.1 Cleanliness of Blasted Surface:
The degree of cleanliness (mill scale, stain, shadows, etc.) can be determined using photographically depicted panels for a comparison. Colored print standards SSPC VIS 1-89 can be used for this. Note, this is a recommendation and not a necessary requirement of this standard.

6.6.2 Profile:
The profile of the blasted surface shall be checked and be between 1.5 and 2.5 mils. The profile can be determined using a Keane-Tator comparator or Testex Press-O-Film tape.

A Keane-Tator comparator is recommended.

6.7 Protective Coating:
In most cases bead blasted surfaces will not be coated. In the event that a coating is desired a specification will be supplied, or follow the manufactures recommendation for that coating.

7.0 Records:

N/A

8.0 Attachments:

N/A