	Buntrock Industries, Inc. Investment Casting Supplies	Document#: 7.39
		Rev#: 0
	Title: Yttria Prime Slurry Maintenance	Page#: 1 of 2

Rev	Description of Change	Author	Date
0	Initial Release	Joe Norvell	1/21/15

1.0 Scope:

1.1 This procedure describes the method for maintaining a yttria prime slurry made using T-123 binder and Buntrock yttria blend.

2.0 Purpose:

2.1 Proper slurry maintenance is extremely important for yttria slurries. In addition to the usual controls, the pH must be kept between 10 -11 to get maximum slurry life and performance. This document outlines the steps for proper maintenance of a Buntrock yttria slurry.

3.0 Hazard and Safety:

3.1 Consult the Material Safety Data Sheet (MSDS) for required handling procedures and Personal Protective Equipment (PPE) required.

4.0 Equipment:

4.1 Equipment for Slurry Viscosity – Flow Cup Method, document 7.1.

4.2 Equipment for Slurry pH, document 7.7.

4.3 Equipment for Slurry Binder Specific Gravity and Silica Content, document 7.16.

4.4 Equipment for Slurry Density – Graduated Cylinder Method, document 7.31.

4.5 Equipment for Slurry Bacteria, document 7.15

5.0 Procedure:

5.1 Slurry may be kept in an open slurry tank or in a closed container while being rolled but a closed container is preferred.

5.2 Check the viscosity frequently using a #5 Zahn cup and referring to document 7.1. Maintain a range of +/- 0.75 seconds. Frequency depends on amount of dipping relative to the size of the slurry container and environmental factors like airflow and temperature.

5.2.1 Thin the slurry with a 50/50 mixture of binder and water during production dipping.

5.2.2 Use only water if slurry is not in use and is kept in an open container. A closed container is recommended.

5.3 Check the pH of the slurry at least once a day using the procedure in document 7.7. If the pH is below 10.0, use TEAH to adjust the pH upward.

6.0 Results:

6.1 See section 5.0 Procedures for recommendations on how to interpret the results fo the tests in this document.

6.2

6.3

6.4

7.0 References:

7.1 Buntrock yttria prime slurry typical properties:

pH = 10 – 11

Slurry Density = 2.95 Kg/liter

Solids Content = 83.0 – 84.0%

Binder Density = 1.06 g/cc