# ATTACHMENT B

## General Electric Specification P16BYP3, Revision 6, "Chromium Alloy Coating 'Electrolyzing'"

# GE Nuclear Energy

| P16BYP3 | SH NO. 1 |
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| REV 6 | |

EIS IDENT: CHR ALY CTG ELCTLYZING

REVISION STATUS SHEET

DOCUMENT TITLE CHROMIUM-ALLOY COATING "ELECTROLIZING"

LEGEND OR DESCRIPTION OF GROUPS

TYPE: PROCESS SPECIFICATION

FMF: GEN USE

MPL ITEM NO: N/A

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| REVISIONS | | | | C |
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| 6 | A. FORTIN OCT 11 1993 | RJA | | |
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PRINTS TO

| MADE BY | APPROVALS | GENERAL ELECTRIC COMPANY |
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| | 7/6/71 | CONT ON SHEET 2 |

EIS

1. SCOPE

1.1 This specification defines the Engineering requirements for the chromium-alloy coating on ferrous and most nonferrous metal surfaces (excluding titanium, magnesium, beryllium, and lead) through the use of a proprietary process known as "Electrolizing" identified as follows:

P16BYP3A – Chromium Alloy Coating, Thickness – .0004 inch nominal

P16BYP3B – Chromium Alloy Coating, Thickness – As specified

2. PROCESSING REQUIREMENTS

2.1 Parts shall be coated by use of the "Electrolizing"* process.

2.2 Materials hardened to Rockwell C30 and above shall be baked at 350°F to 500°F for 4 hours after final coating.

2.3 The maximum number of replating/stripping cycles shall be two unless otherwise qualified.

2.4 Protection of Surfaces. Any sensitized zones in Austenitic Stainless Steel, any hard surfaced zones and creviced areas or blind holes, shall be masked or fixtured to prevent contact with acid plating and stripping solutions. Creviced areas shall be masked or fixtured to prevent entry of caustic solutions. Precipitation hardened material shall be masked or fixtured to protect non-plated surfaces from plating and stripping solutions.

3. REQUIRED ATTRIBUTES

3.1 Coating Thickness

3.1.1 The coating thickness for P16BYP3B shall be as specified on the drawing.

3.1.2 The coating thickness for P16BYP3A shall be 0.0003 to 0.0005 inches on all surfaces except threads and curved surfaces with radii less than 0.015 inches.

3.1.2.1 The coating thickness for curved surfaces with radii less than 0.015 inches shall be a minimum of 0.00005 inches and a maximum of 0.001 inches.

3.1.2.2 The coating thickness for threads shall be 0.00005 inches minimum at the root diameter, 0.00015 inches minimum at the pitch diameter, and 0.0005 to 0.001 inches on the flank adjacent to the crest.

3.2 The electrolized coatings shall be free of such defects as pits, flaking, spalling, and chipping, as determined by visual inspection.

*The Electrolizing Corporation, Los Angeles, California

3.3 The plating shall be capable of passing a bend test. The plated test coupon shall be prepared and examined as follows:

1. Where the coupon has plating on the ID, the coupon shall be cut open and bent approximately flat and the former ID examined.

2. Where the coupon has plating on the OD, the coupon shall be bent approximately flat and the former OD examined.

3. When the coupon is bar stock or strip, it shall be bent to a uniform radius of 5D or 5T (where "D" is the diameter of the test rod or "T" is the thickness of the test strip). Bend the coupon over the approximate radius mandrel with the plated surface away, until the two legs are bent approximately parallel.

Examination of the bent ID or OD of the tubular coupons or the outside bend radius of the strip coupons should not exhibit flaking, spalling, or chipping when picked at with a sharp metal probe.