

# GEOSCIENCES AND ENGINEERING DIVISION NONCONFORMANCE REPORT

Project No. 06002.01.322.

NCR No. 2006-08

**PART 1: DESCRIPTION OF NONCONFORMANCE**

Review of scientific notebooks # 604 (pages #288 and #280), # 533 (page 197), and #737 (page 7) revealed that the mill-annealed specimens (1/2" by 1/2" by 0.06" plates purchased from Metaspec, see pages 280 and 283 of notebook #604) that were used for corrosion rate measurements documented in the draft IM 06002.01.322.610 report had a different metallurgical heat treatment condition than originally thought. These specimens were thermally treated at 870 °C for 30 minutes (see page 288 of notebook #604) before they were used in the tests. Because the heat treatment information was not properly marked on the specimen bag, the specimens were treated as mill-annealed specimens.

Initiated by: Lietai Yang

Date: Feb. 17, 2006

Action Required by: Lietai Yang

Response Due Date: 2/28/2006

**PART 2: PROPOSED DISPOSITION AND CORRECTIVE ACTION**

Disposition: Accept as is.

Basis of Disposition: Report will be revised to reflect heat-treated

Action to Correct Nonconformance: Samples instead of mill-annealed  
Sample: VS213

Selected test specimens (three) that were used for the corrosion rate measurements have been examined for their microstructure. The microstructure of these specimens were compared against that of a mill-annealed specimen (HT2277-3-3266, page 22 of notebook #729) and those from the literature (Heubner et al., Corrosion, vol 45, page 252, 1989). The comparison verified that the specimens that were treated as mill-annealed specimens were indeed thermally treated specimens. The affected notebook entries will be corrected. The material identification and heat treatment information will appropriately marked according to TOP-012.

The affected sections of the draft IM 06002.01.322.610 report will be corrected in the revised report.

Target date for completion: March 1, 2006

Proposed by: Lietai Yang

Date: 2/21/2006

**PART 3: APPROVAL**

Manager: [Signature]

Date: 2/23/06

Director of QA: [Signature]

Date: 2/23/06

Comments/Instructions: for RDB

**PART 4: CLOSE OUT**

*Scientific Notebook 604 pages 282+283 have been annotated to identify the  
Comments: correct heat treatment process. The  
sample bag has been marked and properly  
indicates the samples are solution annealed and  
thermally aged. Report IM 06002.01.322.610 has  
\**

**Distribution:**

Original-CENTER QA Records

- L. Yang
- Y. Pan
- V. Jain
- S. Mohanty

Verified by: [Signature] date: 3/8/06

*\* been revised and correctly identifies the  
thermally treated specimens. No further  
action is required.*

*[Signature] 3/8/06*