August 23, 2012

NIBCO INC.
1516 Middlebury Street
Elkhart, IN  46516-4750

Re:  Testing of NIBCO Products for Stress Corrosion Cracking and Dezincification Corrosion

Laboratory testing was conducted at the request of NIBCO INC. on five (5) samples (Table 1) in accordance with ISO 6957:1988 (E) Copper Alloys – Ammonia test for stress corrosion resistance, and BS EN ISO 6509:1995 Corrosion of metals and alloys – Determination of dezincification resistance of brass. At NIBCO’s request, ISO 6597 tests were performed at a test solution pH of 9.5 in accordance with the above-referenced testing methodology. The acceptance criterion for ISO 6509 was that of BS EN 13828:2003, Section 5.1.1.2 (dezincification depth of less than 200µm in any direction). Following testing, test specimens tested per ISO 6509 were prepared for examination according to ASTM E 3 and examined at 500X magnification using an inverted metallographic microscope with a calibrated eyepiece reticle. The results are summarized in Table 1.

Table 1
Test Results

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>595 Valve End Piece (C87850) (Note 1)</td>
<td>No cracks</td>
<td>No dezincification (0 µm depth)</td>
<td></td>
</tr>
<tr>
<td>585-80 Valve Body (C87600) (Note 2)</td>
<td>No cracks</td>
<td>No dezincification (0 µm depth)</td>
<td></td>
</tr>
<tr>
<td>585-80 Valve End Piece (C87600) (Note 2)</td>
<td>No cracks</td>
<td>No dezincification (0 µm depth)</td>
<td></td>
</tr>
<tr>
<td>585-80 Valve Stem (C69300) (Note 1)</td>
<td>No cracks</td>
<td>No dezincification (0 µm depth)</td>
<td></td>
</tr>
<tr>
<td>585-80 Valve Ball (C69300) (Note 1)</td>
<td>No cracks</td>
<td>No dezincification (0 µm depth)</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Tested as individual component in ISO 6957. 2. Tested as assembled valve in ISO 6957.

CONCLUSION

All samples PASSED appropriate testing standards for both stress corrosion cracking and dezincification corrosion.

Approved:

Fred M. Sherman
Senior Materials Analyst

Bradley D. Krantz
Vice-President of Laboratory Services
NACE Materials Selection/Design Specialist Certificate #4195