

# NADCAP NDT

## Non-Destructive Testing Newsletter

First Edition  
May 2001

### **Issue Highlights**

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### **Editors**

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### **From the Chair...**

Welcome to the inaugural edition of the NDT Task Group Newsletter. Those of you who have been involved in the program know, and those of you who are new to the program will learn, that this is a dynamic process. This newsletter is meant to be a means of communicating the important changes directly to the people who can use it...you. Future editions will include columns from the different Method Chairs who will offer insights into "hot topics" within their discipline. They will also highlight Task Group resolutions, clarifications of Prime Supplier requirements, answers to your questions, and a column from the Supplier Task Group Representative, Dave Mitchell. Please feel free to contact Mark Aubele, the NDT Task Group Staff Engineer, or any of the Task Group members if you have a question you would like to see answered in the Newsletter.

### **NDT Task Group Core Team Members**

Phil Keown (GEAE) Chairman  
Keith Fightmaster (Honeywell) Vice-Chair  
Scott Sullivan (RR-Allison)  
Bob Reynolds (Boeing)  
Bob Hogan (Honeywell)  
Roche Fauchaux (Honeywell)

Dave Dierking (Lockheed Martin)  
Dave Royce (Pratt & Whitney)  
Terry Kettery (RR-Allison)  
Ron Rodgers (GEAE)

### **e-Business**

#### **What is your e-mail address?**

In today's "digitized" business world it is becoming more and more important to utilize the electronic media available to us to increase efficiency. Use of the Internet and e-mail not only reduces supply and mailing costs, it also reduces cycle time. An email is so much faster than posted mail. Future editions of this Newsletter will be posted on the NADCAP Web Page, with an email notice alerting you to its Web address. Also, we are encouraging all Suppliers to utilize email to answer NCR's, supply requested information, and to ask or answer any questions dealing with your audit. Please take a moment to send Mark Aubele your email address so we can update our current listings.

[Maubele@sae.org](mailto:Maubele@sae.org)

### **From the Task Group**

The following Position Papers were written by Task Group representatives for the purpose of clarifying the Task Groups position on these topics.

#### **Calibration (Scott Sullivan)**

The NDT Task Group's position regarding the required number of calibration points used during metrological confirmation is based on a review of ISO 10012-1 and ANSI/NCSL Z540-1. Neither standard is specific as to a definitive number of points required, but rather require that the calibration procedures address the required range and tolerance or uncertainty of each item or unit parameter being calibrated or verified. ANSI/NCSL Z540-1, Para. 10.2.a, requires that the

procedures shall be consistent with the accuracy required, and with any standard specifications relevant to the calibration/verification concerned. The guidance given in association with ISO 10012-1, Para. 4.3, states that when dealing with commercial devices, it is usual to take the manufacturer's claimed performance as the criterion of satisfactory performance and accuracy. The guidance of the NDT Task Group is to consult with the applicable unit's manufacturer's instructions to ascertain specific recommended calibration instructions. This guidance shall be in addition to and not weaken or detract from customer contract requirements.

If you have any questions, contact [david.s.sullivan@allison.com](mailto:david.s.sullivan@allison.com)

### ***Refractometer Checks of Water Based Emulsifiers (Mike Mitchell)***

#### **PREPARE A MASTER CHART**

Using the Master Sample of remover, prepare known concentration samples of at least 4 different levels covering a range of approximately +/- 50% of the desired concentration value. *(For example, if 20% is the desired value, then prepare (4) samples of approximately 10%, 17%, 24 % and 30%)* .

Take readings from each of the known samples by placing a droplet from each on the plate area of the refractometer (wipe the plate and plate cover clean between readings). Record the refractometer readings for each of the known values.

Plot the refractometer readings on graph paper using the Y-axis (vertical) for the refractometer scale reading, while using the X-axis (horizontal) for the corresponding sample's "known" solution value. Draw a straight line (or as near as possible) through these points.

To take a reading of the working bath, place a drop on the face plate, close the cover and note the refractometer reading. Compare this reading with the Master Chart to determine

actual value of the bath. This value should be recorded in the Process Control Log. If the working bath is outside the allowable range (e.g., 17%, +/- 3%), corrections to the working bath must be made.

If you have any questions, contact [Mike.mitchell@hs.utc.com](mailto:Mike.mitchell@hs.utc.com)

### ***Cleaning of Known Defect Test Panels (Dave Dierking)***

This guidance shall be in addition to and not weaken or detract from customer contract requirements.

1. Remove panel from the solvent container in which it is stored. Allow the panel to dry for 2-3 minutes. Spray inspection surfaces with a light coating of non-aqueous developer. The developer will be allowed to work for 10-15 minutes before the surface is viewed under UV light to determine the presence of retained penetrant. When viewing the panels they should be held at an angle that does not reflect the UV light into the observer's eyes.
2. If panel shows traces of penetrant in a starburst or on the rough surface area, the storage solvent shall be checked for contamination and changed, if necessary. Panels shall be cleaned by solvent soak, ultrasonic cleaning or soaking in hydrophilic remover. Panels shall then be rinsed, if necessary, dried, and the above step repeated. This process should be repeated until panel no longer shows signs of retained penetrant.
3. Clean, dry panels are now ready for use.
4. Panels should be post-cleaned as soon after processing as possible to prevent penetrant from drying in the starbursts.

If you have any questions, contact [dave.dierking@lmco.com](mailto:dave.dierking@lmco.com)

## ***Program Expansion***

The NADCAP program is now expanding into the United Kingdom. Rolls Royce U.K. has mandated that their UK suppliers be NADCAP accredited by the end of 2001. Other processes will have their own schedule to follow. In response to this, UK auditor candidates have been identified, hired and trained. Although this is a Rolls Royce, UK mandate, other primes may utilize these audits, also.

Speaking of training new auditors, PRI is still looking for additional auditor candidates to support the NDT Task Group. Contact Mark Aubele if you are interested.

## ***Next Meeting***

The next NADCAP meeting is scheduled for Pittsburgh, PA, July 15 – 17, 2001. For more information please reference the NADCAP homepage at <http://www.pri.sae.org/NADCAP>