

# Northwest News and Notes

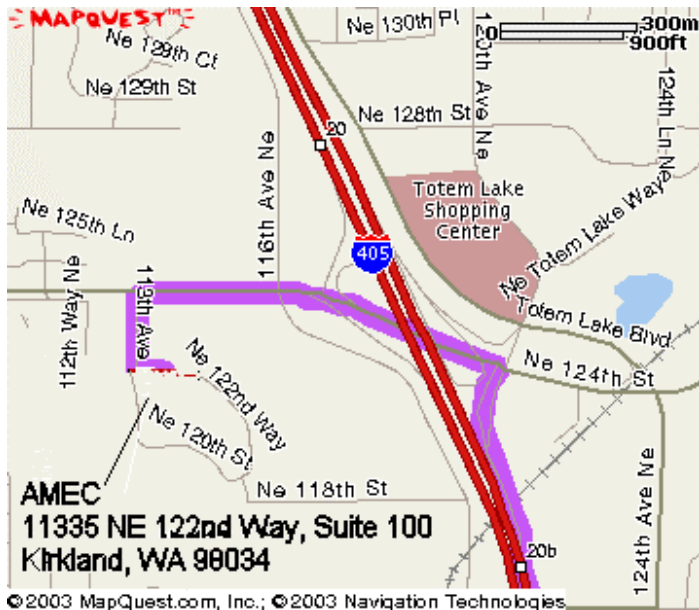
American Society of



A Publication of the Pacific Northwest Section of ASNT  
Volume 47, Issue 5

page 1

**Nondestructive Testing**  
January, 2004



## January Meeting

**Topic:** [Industry Tour of AMEC](#)  
**Speaker:** Mr. Don Empey, PE  
**Date:** **Thursday January 8, 2004**  
**Location:** **AMEC**  
11335 NE 122nd Way, Suite 100  
Kirkland, WA 98034  
**Time:** 6:00 pm - 9:00 pm

Would you or someone you know like to be a guest speaker at a section meeting? Is there a topic you would like to hear about? If so contact [ward.a.fong@boeing.com](mailto:ward.a.fong@boeing.com)

Your advertisement could be in this newsletter. Contact [ward.a.fong@boeing.com](mailto:ward.a.fong@boeing.com) regarding rates.



Emery E. Roberts  
Secretary, Pacific Northwest Section  
1807 S 118<sup>th</sup> #202  
Seattle, WA 98168

RETURN REQUESTED

**Mailing label**



## Section Officers

For term June 1, 2003 to May 31, 2004

### Chairperson

Ward Fong  
The Boeing Airplane Company  
Work Number 425- 234-8512

### Vice Chair

Dave Hall  
L and W Research  
Work Number: 206-619-2848

### Secretary

Emery E. Roberts  
Professional Service Industries, Inc.  
Work Number 206-282-0666

### Treasurer

Lynn Graham  
MPM Products  
Work Number: 253-813-1811

### Directors

Dave Odegard

Bob Swisher  
American NDT

Dale Morgan  
Caliber Inspection

Gary Smith  
The Boeing Company

Bill Meade  
The Boeing Company

Mark Marlow  
Caliber Inspection

Flynn Spears  
between

TJ Peraza  
Cascadian Technologies

### Past Chairman

Clive Graham  
Western Pneumatic Tube  
Work Number: 425-822-8271

### Awards Chairperson

John Deboo  
Boeing Airplane Company

## SECTION NEWS

### Electronic Newsletter Distribution

We would like to stop sending you paper copies of the monthly newsletter. Please send email to [secretary@asntpnws.org](mailto:secretary@asntpnws.org) so you can be removed from the paper newsletter mailing list. Include the following information:

1. Name
2. The fact that you want to stop getting the paper copy
3. Email address to receive email copies only.

Most company email servers will not accept email unless it has a specific address such as you@server.com.

If your E-mail address has changed, please E-mail the changes to the Chapter's Sec. at [secretary@asntpnws.org](mailto:secretary@asntpnws.org).

### THE WEB PAGE HAS A REAL-TIME CHAT ROOM

Access it by choosing the PNW Chat link from the main page at <http://www.asntpnws.org> It has an unlimited number of simultaneous users and unlimited number of users. A password is normally not needed to login here.

### GENERAL OVERVIEW

The chat room uses HTTP tunneling allowing users of the same website to communicate with each other in real time using text messages.

The chat room interface consists of a *User List* on the right showing the usernames of users currently in the chat room, the *Message Output* area in the center where room messages are displayed, the *Message Input* area located beneath the output area where you type your own messages for the room, plus various *Menus* and *Buttons* to perform more advanced functions within the room.

Messages that you type into the *Message Input* area are sent to all users of the room and displayed in the *Message Output* area.

### ENTERING THE ROOM

To enter the chat room, locate the chat login box and enter your desired nickname into the box marked *Member Name*. Valid usernames must be 3-15 characters in length and consist of standard letters and numbers only.

Once the above details have been entered, click the *Chat* button to connect to the chat room. Once connected, the chat room window will show.

### CHAT IN THE ROOM

While connected to the chat room, any messages typed by other users will be shown in the large *Message Output* area. To send your own messages, type them into the *Message Input* area and press the *Enter* key on your keyboard or *Send* icon.

The chat room can be used for board meetings, get to togethers, etc. As with NDT the limit of use is your imagination.

### LEVEL III CERTIFICATES

Certificates are available at each meeting to document your meeting attendance for Level III renewal points. See an officer for details.



## COMING EVENTS

### Industry Tour of AMEC facilities, January 8, 2004.

#### Directions From South

North 405 to 124th/Totem Lake Exit (20b)  
turn left on 124th Avenue West over 405 to 3rd signal  
(Olive Garden)  
turn left on 113th and go one block  
turn left on 122nd Way, AMEC is first building on right

#### From North

North 405 to 124th/Totem Lake Exit (20)  
turn right on 124th Avenue West  
turn left on 113th and go one block  
turn left on 122nd Way, AMEC is first building on right

### NDT Expo, February 5, 2004 at the Museum of Flight, Seattle, WA.

(See the only Concord on the West coast – set a new world's record time from New York to Seattle)  
Anyone interested in assisting the planning committee, please contact a board member. Note: Vendor's interested in having a table/s, for this event, please contact any of the following EXPO committee members: [Lynn Graham](#), [Bob Swisher](#), or [Ward Fong](#). So far, vendors will be Staveley Instruments, Yxlon, Inspection Technologies Inc., RD Tech, NDT Engineering, Karl Storz Endoscopy, and L&W Research. Tables are going fast. A rapid response via email or ph. (by mid Dec. ) to confirm your desire to take part in the event and make the publishing deadline of the newsletter is appreciated. Table Fee's will be \$225 for 1 table. 2 tables will be \$375. Contact [Ward A. Fong](#) if interested.

### A Seminar on Radiation Safety

Saturday, March 20, 2004

Mountaineers Club

#### Objective

The objective of this seminar is to provide the radiographer with eight hours of refresher information designed to help reduce over-exposure, the risk of over-exposure, and provide safety officers and managers with a refresher course on the subject. This course is designed to comply with the radiation safety refresher training requirements of industry and each participant will be provided a certificate of attendance upon completion of the seminar.

#### Subjects Covered Include:

Necessity for a Seminar on Radiation Safety; Radiation Equipment; Effect of Radiation Exposure; Government Radiation Regulations; Fundamentals of Radiation Safety; Radiation Detection Equipment; and Transportation Requirements. Speakers have included people from the State of Washington DOH Radiation Control Division, AEA, The Boeing Company, Pacific Northwest Laboratories, Flohr Hanford, CSI-Radiation Safety Academy, University of Washington, ICN Dosimetry and Ft. Lewis.

### OTHER EVENTS – 2004

- FEB 4-6 **2004 ANNUAL NDTMA CONFERENCE**, Caesars Palace, Las Vegas, NV  
MAR 8-12 **13th Annual Research Symposium 2004** (ASNT Spring Conference), Hilton Austin, Austin, Texas. Contact ASNT at [kwise@asnt.org](mailto:kwise@asnt.org). See [Call for Abstracts](#), [Online Abstract Submission](#), [Invitation to Exhibit](#).  
MAY 9-11 **NDT in the Heartland: An Aerospace Perspective**, Hyatt Regency Wichita, Wichita, Kansas. Contact ASNT at [kwise@asnt.org](mailto:kwise@asnt.org).  
SEP 14-17 **Structural Materials Technology** (SMT): NDE/NDT For Highways and Bridges, Buffalo Hyatt Regency, Buffalo, New York. Contact ASNT at [kwise@asnt.org](mailto:kwise@asnt.org). See [Call for Papers](#), [Online Abstract Submission](#), [Invitation to Exhibit](#).  
NOV 15-19 **ASNT Fall Conference and Quality Testing Show**, Riviera Hotel, Las Vegas, Nevada. Contact ASNT at [kwise@asnt.org](mailto:kwise@asnt.org). See [Exhibitor Prospectus](#) and [Exhibitor Contract](#).  
MARCH 30-APRIL 1 **AeroNDT 2004 Exhibition & Technology Forum**, Hamburg, Germany, <http://www.AeroNDT.com> or <http://www.aerospacetesting-expo.com>  
JULY 25-30 **31st Annual Review of Progress in Quantitative Nondestructive Evaluation** Colorado School of Mines, Golden, Colorado <http://www.cnde.iastate.edu/qnde/qnde.html>  
AUG 30 - SEP 3 **16th World Conference on Nondestructive Testing**, Montreal, Canada, <http://www.wcndt2004.com>

# Northwest News and Notes

American Society of



A Publication of the Pacific Northwest Section of ASNT  
Volume 47, Issue 5

page 4

Nondestructive Testing  
January, 2004

## Section Web Pages

### ASNT Section

[Alaska Section](#)  
[Central Florida Section](#)  
[Central Savannah River Area Section](#)  
[Charlotte, North Carolina Section](#)  
[Chattanooga, Tennessee Section](#)  
[Chicago, Illinois Section](#)  
[Colorado Section](#)  
[Golden Gate Section](#)  
[Hawaii Section](#)  
[Houston, Texas Section](#)

### ASNT Section

[Lewis & Clark Section](#)  
[Metro New York - Northern New Jersey Section](#)  
[Mowhawk-Hudson Section](#)  
[New Orleans Section](#)  
[North Atlantic Section](#)  
[Oklahoma Section](#)  
[Pacific Northwest Section](#)  
[Pittsburgh, Pennsylvania Section](#)  
[San Diego, California Section](#)  
[South Texas Section](#)

## WEB LINKS

Nondestructive Testing Management Association (NDTMA) ..... <http://www.ndtma.org>  
Center for Nondestructive Evaluation  
at Iowa State University ..... <http://www.cnde.iastate.edu/Default.htm>  
Personnel for Quality and Nondestructive Testing, Inc (PQNNT) ..... <http://www.pqndt.com/>  
Sonotech, Inc. .... <http://www.sonotech-inc.com/>  
Inspection jobs.com ..... <http://www.inspectionjobs.com/>  
NDT Mall ..... <http://www.NDT-Mall.com/>  
ASNT Job Market..... <http://www.asnt.org/marketplace/jobs.htm>  
NDT at Ridgewater College ..... <http://www.ndt-hutch.com>  
Business Communications Company (Stay up to date on new technology)  
..... <http://www.buscom.com/letters/ndtpromo/ndtpromo.html>  
NDT Resource Center ..... <http://www.ndt-ed.org>

If you have a favorite site related to nondestructive testing please [submit it](#).

## MEETING DATES

Below is a list of meeting dates, topics and speakers. Meeting date is the second Thursday of the month unless otherwise noted. In case of last minute changes be sure to check the section website at <http://www.asntpnws.org/>.  
**Future Meetings are on the second Thurs. of each month unless noted otherwise.**

<b>Date</b>	<b>Topic, Speaker, Company</b>
Sept. 8 <sup>th</sup>	NDT in South America, Jim Pellicer, The Boeing Company
Oct. 9 <sup>th</sup>	Acoustic Emission Basics, Peter Don, Physical Acoustics
Nov. 20 <sup>th</sup>	High Energy Applications of RT in Homeland Security, Dave Hall, L & W Research AGFA
Dec. 11 <sup>th</sup>	Christmas Party
Jan. 8 <sup>th</sup>	Industry tour to AMEC
Feb. 5 <sup>th</sup>	NDT Expo at the Museum of Flight, 5-9 pm (entry to Expo also provides entry to Museum)
March	Spring Social and Bylaw Revisions
April 8 <sup>th</sup>	Joint meeting with AWS or ASQC and/or Regional Director
May 13 <sup>th</sup>	UT Applications & Elections
June	Annual Picnic
July	Executive Board meeting
August	Annual Golf Tournament

If you have a nominee for an award please contact a section officer or leave a message to [awards@asntpnws.org](mailto:awards@asntpnws.org) or complete the survey on the section web page ( [www.asntpnws.org](http://www.asntpnws.org)).

# Northwest News and Notes

American Society of



A Publication of the Pacific Northwest Section of ASNT  
Volume 47, Issue 5

page 5

Nondestructive Testing  
January, 2004

## MORE SECTION NEWS

The [section web site](#) contains two surveys and a member database. A [membership survey](#) is about general section operations and meeting dates. An [educational survey](#) asks for your input on which educational topics are best suited for our membership. Please take a few minutes to complete these surveys to provide input for the board. They do get looked at so your input is important in deciding which direction the section travels.

### [MEMBERSHIP DATABASE](#)

Also located on the section web site. Keep your information up to date in order to get the latest newsletter and other information.

### [MEMBERSHIP RENEWAL](#)

For renewals within 6 months of expiration use the form at

<http://www.asnt.org/membersonly/forms/individmrenew.ihtml>

If your membership expired more than 6 months ago, please use the form at

<http://www.asnt.org/membership/forms/individualmema.ihtml>.

### [WELCOME NEW OR RENEWED MEMBERS](#)

Mr. Jeffrey G Thompson, Mr. John P Johnston, Mr. Roger St Claire, Mr. Ron E Von Wahldt, Ms Pamela Fernan From the Radiography Level 1 course: Michael Gould, Robert Baleisis, Donald Colberg, John Kirchhofer, John Bangsund, Jason Lund

### [PAST EVENTS](#)

Christmas Party - December 11, 2003

Thirty three members, guests, spouses and children gathered for a Christmas party. Everyone sat for a photo with Santa. The party was held in a private room at Jillian's Billard Parlor at Lake Union in Seattle. The annual pool tournament ( a natural for a Billard parlor) started with 8 players. A round-robin tournament yielded Gerry Miller of Boeing as the tournament winner and Mark Marlow of Caliber as the 1<sup>st</sup> runner-up. A cash prize of \$30 was awarded to Gerry and \$10 to Mark. A hearty thank you to the sponsors of this event goes out to [American NDT](#), [AGFA](#), [MPM Products](#), [Caliber Inspection](#) and [RD Tech](#).

The 30-dollar door prize is being contributed to an accumulative pot that has the name of attendees at each meeting entered. So the more meetings you attend the better your chances are at winning the pot at the end of the year. (\$30 x 8 = \$240! If we have more than 8 meetings the pot grows that much more. Better odds than the lottery!).

### [HINTS AND TIPS](#)

The operating frequency for cellular telephones and walkie-talkies is the proper wavelength to generate erroneous high dose readings on the Electronic Personal Dosimeter (EPD2) pocket dosimeter.

[Do you have a helpful hint? It could be here next month.](#) [Submit it to the Section secretary.](#)

### [NEWSLETTERS](#)

We are looking for past newsletter/meeting notices for any year for inclusion on the web site. Of particular interest are those edited by Mr. Harold Pinsch. If the section can borrow them for scanning purposes please contact a board member.

[The 2003-2004 YEARBOOK is available on the section web site at <http://www.asntpnws.org/newsletters>](#)

### [WALLET CALENDAR](#)

The front page of the wallet size Pacific Northwest Section 2003-2004 calendar is to the right. The back is located on the next page and has cut lines so the calendar can be cut out, carried to serve as a reminder of upcoming events.

PACIFIC NORTHWEST SECTION OF ASNT																				
June					July					August					September					
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5	6	7	8	9
8	9	10	11	12	13	14	6	7	8	9	10	11	12	13	14	15	16	17	18	19
15	16	17	18	19	20	21	13	14	15	16	17	18	19	20	21	22	23	24	25	26
22	23	24	25	26	27	28	20	21	22	23	24	25	26	27	28	29	30	31	28	29
29	30						27	28	29	30	31									
2003					2003					2003					2003					
October					November					December					January					
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4			1	1	2	3	4	5	6	1	2	3	4	5	6	7	8
5	6	7	8	9	10	11	2	3	4	5	6	7	8	7	8	9	10	11	12	13
12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20
19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27
26	27	28	29	30	31		23	24	25	26	27	28	29	28	29	30	31			
2003					2003					2003					2004					
February					March					April					May					
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	1	2	3	4	5	6	7	8
8	9	10	11	12	13	14	7	8	9	10	11	12	13	4	5	6	7	8	9	10
15	16	17	18	19	20	21	14	15	16	17	18	19	20	11	12	13	14	15	16	17
22	23	24	25	26	27	28	21	22	23	24	25	26	27	18	19	20	21	22	23	24
29							28	29	30	31				25	26	27	28	29	30	31
2004					2004					2004					2004					

# Northwest News and Notes

American Society of



A Publication of the Pacific Northwest Section of ASNT  
Volume 47, Issue 5

page 6

Nondestructive Testing  
January, 2004

## YEAR BOOK

Member names and addresses are a yearbook requirement. Unless the address of the member is specifically authorized for inclusion it will not be published. In preparation for the 2004-2005 section yearbook a request is being made for inclusion of your address in the yearbook. If you do not wish your address published, do nothing. If you do send a message authorizing your address publication to [yearbook@asntpnws.org](mailto:yearbook@asntpnws.org). If you are interested in serving on the yearbook committee please contact [Emery E. Roberts](mailto:Emery.E.Roberts) or [Ward A. Fong](mailto:Ward.A.Fong) by January 1, 2004 or use the Member Survey form on the section web page at <http://www.asntpnws.org/>.

## NDT INDUSTRY NEWS (reprinted from the September NTIAC newsletter)

### Recent Developments At AFRL (Air Force Research Laboratory)

AFRL's Materials and Manufacturing Directorate at Wright-Patterson AFB have developed two new laser ultrasonic NDE systems in cooperation with the University of Dayton's Center for Material Diagnostics. The NDE Branch developed a near-field scanning interferometry system and a real-time holographic system to detect surface-breaking cracks in aluminum and titanium. The systems induce scattering in the ultrasonic waves around the crack; by imaging the scattering, the team effectively makes otherwise invisible cracks visible.

For more information, contact the AFRL Materials And Manufacturing Directorate's TECH CONNECT at 1-800-203-6451 or visit the website at <http://www.afrl.af.mil/techconn/index.htm>. In other news, the Directorate also recently discovered a method of detecting "kissing bonds" in composites, long a "Holy Grail" in NDE. Dr. Robert Crane discovered that Laser Shot Peening (LSP), most commonly used to induce compressive residual stresses in turbine blades, was also able to quantify the strength of an adhesive bond. By focusing a high-energy laser pulse at the bond, the bond can be loaded to fail, which would single out kissing bonds and other low-strength bonds.

The procedure has been demonstrated on composite, metal, and hybrid composite-metal components, anything with an adhesive bond. It is expected that the procedure could ultimately speed up certification of composite materials in aerospace applications, allowing composites to compete more economically with traditional riveted aluminum. For more information, contact the Directorate's Technology Information Center at (937) 255-6469 or email them at [techinfo@afri.af.mil](mailto:techinfo@afri.af.mil).

## WALLET CALENDAR

This is the opposite side of the wallet size Pacific Northwest Section 2003-2004 calendar found on page 5.

Just cut along the 'cut lines' and place in your wallet.

It is already printed on both sides.

It can be laminated and carried for a reminder of each event date.

cut lines

PACIFIC NORTHWEST 2003-2004 YEAR MEETINGS AND OTHER EVENTS	
2003	
June	Annual Picnic
July	Annual Golf Tournament
August	Executive Board meeting
Aug 30 - Sep 3	16th World Conference on Nondestructive Testing, Montreal, Canada.
July 25-30	31st Annual Review of Progress in Quantitative Nondestructive Evaluation
Sept. 18 <sup>th</sup>	NDT in South America, Jim Pellicer, The Boeing Company
Oct. 9 <sup>th</sup>	Acoustic Emission Basics, Peter Don, Physical Acoustics
Nov. 3-15	Radiographic Level I course
Nov. 20 <sup>th</sup>	High Energy Applications of RT in Homeland Security, Dave Hall, L & W Research
Dec. 11 <sup>th</sup>	Christmas Party
2004	
Jan. 8 <sup>th</sup>	Industry tour to AMEC
Feb 4-6	2004 ANNUAL NDT/MA CONFERENCE, Caesars Palace, Las Vegas, NV
Feb. 5 <sup>th</sup>	NDT Expo at the Museum of Flight
Mar 8-12	13th Annual Research Symposium 2004 (ASNT Spring Conference), Hilton Austin, Austin, TX.
March	Spring Social and Bylaw Revisions
March 20 <sup>th</sup>	Radiation Safety Refresher Seminar
March 30-April 1	AeroNDT 2004 Exhibition & Technology Forum, Hamburg, Germany,
April 8 <sup>th</sup>	Joint meeting with AWS or ASQC
May 9-11	NDT in the Heartland: An Aerospace Perspective, Hyatt Regency Wichita, Wichita, Kansas.
May 13 <sup>th</sup>	UT Applications & Elections
July 25-30	31st Annual Review of Progress in Quantitative Nondestructive Evaluation
Aug 30 - Sep 3	16th World Conference on Nondestructive Testing, Montreal, Canada
Sept 14-17	Structural Materials Technology (SMT): NDE/NDT For Highways and Bridges, Buffalo Hyatt Regency, Buffalo, NY.
Nov 15-19	ASNT Fall Conference and Quality Testing Show, Riviera Hotel, Las Vegas, NV.



## NDT INDUSTRY NEWS



774 Marine Drive Bellingham, WA 98225-1530 360-671-9121 Fax 360-671-9024 [www.sonotech-inc.com](http://www.sonotech-inc.com)

December 16, 2003

### SONOTECH, INC —Sonotech Offers New NDT Ultrasonic Couplant Catalog

Bellingham, WA, -- Sonotech, Inc. has published an updated version of the NDT Ultrasonic Couplant Catalog. The new full-color catalog includes quick product reference guides that emphasize the key features of each product, allowing the user to compare couplants based on specific application requirements. The catalog also contains couplant selection tips, detailed couplant information, an improved couplant comparison chart, custom options and much more. Sonotech understands how critical ultrasonic inspections can be and has designed the new catalog to assist the NDT professional in finding the right couplant for each unique application.

For a free copy of the NDT Ultrasonic Couplant Catalog, please call 360-671-9121 or e-mail [egrice@sonotech-inc.com](mailto:egrice@sonotech-inc.com).

---

## CONSTANT EXPOSURE CHART

A quick and semi-accurate way of developing an exposure chart for a particular material and specific conditions uses the step wedge. The most common exposure chart is the **constant density chart**. The following steps will assist you in developing an exposure chart for your specific radiographic conditions:

1. Make an exposure at an energy level that would normally be used, and determine which step has the desired density (2.0).
2. Make another exposure by increasing or decreasing the TIME ONLY to produce the same density on a step with a different thickness value.
3. Plot the time (MAS) and material thickness of the step with the 2.0 density on a piece of semi-logarithmic paper. Draw a line through the points and label with the kV used. Can be used with X-ray or Gamma radiation.

### STEPPED WEDGE

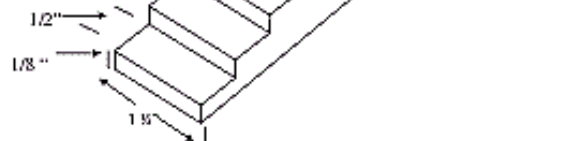
KEEP YOUR UNIT MACHINES PROFICIENT  
HAVE SOME STEPPED WEDGES MADE.

USED FOR INSPECTION OF PARTS HAVING  
GREAT VARIATIONS IN THICKNESS OR A  
COMPLEX GEOMETRY.

IT IS USED WITH APPROPRIATE  
PENETRANETS ON EACH STEP

\* THE STEPPED WEDGE MUST  
BE MADE OF MATERIAL  
RADIOGRAPHICALLY  
SIMILAR TO THAT BEING  
RADIOGRAPHED

TRY IT OUT!!



---

## SECTION PHOTO COLLAGE

Anyone that has any old photos of past local ASNT people/functions or anything that maybe interesting for a section photo collage, please contact [Lynn Graham](mailto:Lynn.Graham). She would like to put together something nice for the section and is asking for your help in doing so. Thanks very much. Lynn can be reached at (253) 813-1811.



## NDT INDUSTRY DEFINITIONS

### Direct Radiography

Direct Radiography technology uses a direct conversion process to convert x-ray energy to digital signal. No intermediate processes are required. By utilizing this process, the operator will employ an amorphous selenium (a-Se) or an amorphous silicon (a-Si) flat plate. This plate is placed with the product to be inspected between it and the x-ray beam just as it is in the film radiography systems. However, when x-rays are energized, the latent image is captured on the flat plate and transferred directly to the computer in electrical charges producing an image. This direct radiography system provides the opportunity for more rapid inspection, immediate feedback, and systems can be networked for easy distribution of images.

### Computed Radiography

Rather than utilizing conventional x-ray film to capture an image, computed radiography uses an imaging plate. This plate contains photo sensitive storage phosphors which retain the latent image. When the imaging plate is scanned with a laser beam in the digitizer, the latent image information is released as visible light. This light is captured and converted into a digital stream to compute the digital image. The phosphor plates are available in standard film sizes and can be used directly in your existing cassettes or may be purchased complete with a hard cassette for better protection of the plate.

### Digital Radiography

Digital Radiography is a dedicated electronic system that enables X-ray images of products under examination to be generated and displayed on a Radiography Image display monitor.

A Digital Radiographic System has five main components:

1. Radiograph Image Acquisition (with Direct Radiograph Capture or Flexible Imaging Plate);
2. Radiograph Image Storage and Retrieval package;
3. Radiograph Image Display monitor;
4. Radiograph Image Information Management System;
5. Radiograph Image Analysis/Measurement application system.

Overall radiographic performance is dictated by the critical parameters that enable a high definition radiographic image to be generated and displayed. Although a computer processes the components the system has to meet ASME, CEN and ASNT Codes of Practice. The technology additionally offers 8 to 10 times better performance than real time radiography and matching performance to the films. Digital Radiography has been demonstrated to work with X-rays, gamma, Se75, ytb169, and IR 192 radiation types.

---

### NEWSLETTER ADDRESS LABEL

The first line of the address label contains the member number followed by the expiration date of membership for that number.

---

### PRESIDENT'S POINTS

First quarter standings have the Pacific Northwest section tied with the Houston section for 9<sup>th</sup> place.