



IF IT IS APRIL, IT MUST BE ASNT TIME

The Spring meeting of ASNT was held in Anaheim, California during the first week of April. The technical sessions were especially good and were pretty well attended. The nice thing about these sessions was that they gave the answers to some vexing questions. For example, the first talk was presented by **John Brausch**, of the Air Force Materials Laboratory. His group has been studying the effect of reflected UV or blue light from the surfaces of parts under examination, to determine if this reflection might interfere with seeing small defects. The talk was illustrated with excellent photos that proved the points. Two types of glasses were used in the analysis to see how they improved the situation.



The first thing noted was that the various sources of UV radiation had

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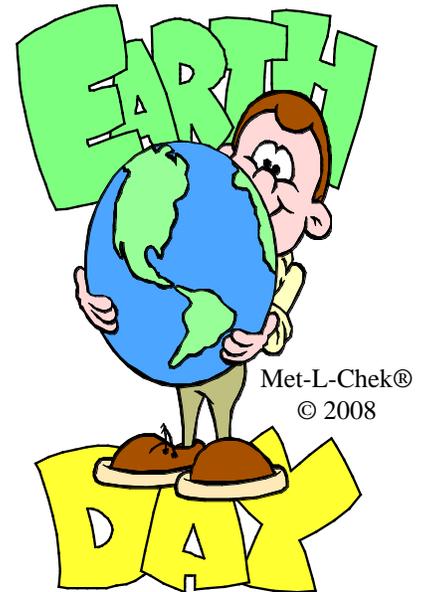
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outputs that varied from the 365 nm used for excitation of the fluorescent penetrant indications, and that the variance from this frequency was a cause of the glare. To counter this glare, UV blocking glasses were very effective, as long as they blocked radiation of 400 nm and below.

A secondary result of the research was that the new light emitting diode sources have a very low intensity output. The attractiveness of these lamps in terms of them being cool, instantly being on, and being battery powered, is countered by them not having a high enough output for most applications or specifications. The full text of John's talk will probably be the subject of a published article that will appear in MATERIALS EVALUATION.

The three following talks gave the results of work by CASR at Iowa State University. This work has been continuing for some time, and the way that it is conducted is an example of excellent and detailed research. The first of these talks was given by **Lisa Brasche**, and summarized the work that has been done on developer application. Some of this work had previously been reported, but Lisa brought us up-to-date on the



additional work that has been done with electrostatic application of dry powder developer. In summary, dry powder developer is not uniformly applied using electrostatic application. The heaviest coat appears on the surface facing the applying gun, and the lightest coat appears on the back side of the part under inspection. This investigation is still in its infancy, because there are numerous variables involved that need to be investigated before conclusions can be reached that are helpful in a full understanding of this application method. However, Lisa did present a bar chart that is very useful and illustrative of the brightness produced by the various developers. In brief, it showed that the dip and drag method of applying dry powder developer produced the best results of all dry powder application methods. The use of either soluble or suspendible developers produced better results than even dip and drag dry powder, and by far, the best results were obtained by using alcohol based non aqueous developer. Perhaps surprisingly, acetone based

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non aqueous developer produced poorer results than the alcohol based product. The acetone based product is favored by some users because it dries faster, but the results are not as sensitive as those produced by the alcohol based product.

The talk that followed this presentation reported research that was concerned with cleaning methods on titanium parts. The question was whether some cleaning methods resulted in situations that were detrimental to the penetrant inspection that followed. We will not attempt to detail the results except to point out that all of the cleaning methods examined are in use in industry today, and that some of them were found to affect the penetrant inspection process negatively.

The last of these talks was a very preliminary examination of the time required for the various developers

15th.



to produce maximum intensity of the indications. Much more is scheduled on this research, but in general, it was found that the maximum brightness was reached at a longer time than most specifications stated. When this work is completed, it may result in a reexamination of some specifications.

Change in Personnel

Recent callers may have noticed that Heather has not answered the phone. With some reluctance, Heather decided to return to her hometown of Bakersfield, California, and with equal reluctance to see her leave, we held a good-bye lunch and wished her well in her future endeavors. We have located a replacement for her job in the person of **Leslie Benner**, and we are sure that you will get to know her pleasant voice, as she shares answering the phone and taking orders with Beverly.

The Penetrant Professor



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