



# The Penetrant Professor from



**Met-L-Chek®**

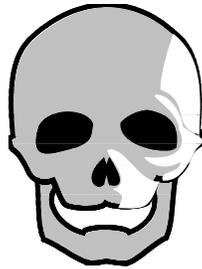


## Penetrant Sensitivity

We recently had a question about the relative sensitivity of Method **A** penetrants versus Method **D** penetrants, when the same sensitivity level was used. In accordance with **AMS-2644**, the sensitivity of a level 3 penetrant is identical, whether it is a Method **A**, Method **B**, Method **C**, or Method **D** penetrant. This has been determined by the sensitivity tests made by the Air Force as part of the QPL qualification tests.

If this is so, why do some users, particularly users who are testing rotating jet engine parts, require Method **D** only? The answer to this is that Method **D** is considered to be more tolerant to variations in the process than Method **A**. The idea is that Method **A** can be subject to overwashing, as an example, while Method **D** is less subject to this. This idea has the attraction of common sense to it, but it should be noted, however,

that there is no scientific evidence to confirm this that we are aware of. The logic behind it, to our knowledge, has not been confirmed by either laboratory or field tests. As a practical matter, when used by experienced inspectors, the results should be equivalent. But if one is working to a specification that stipulates that only Method **D** should be used, that is the way to go.



## The Fall Meeting of ASNT

The 24th to 28th of October will see the Fall ASNT meeting in Palm Springs, California. There are several presentations that should be of great interest to those of us who deal with penetrant or magnetic inspection. Looking at the program

chronologically, Monday afternoon will kick things off with the MT/PT Committee meeting, which begins at 4:00 PM and usually finishes by 5:00 PM so that the participants can get to the Welcome Reception and the opening of the Quality Testing Show, which lasts until 8:00 PM.

The MT/PT technical talks begin on Tuesday afternoon with four talks concerning magnetic inspection, one dealing with precleaning, and one concerning historical developments in qualifying penetrants. But there will also be a very important presentation by **John Brausch**, of the U. S. Air Force dealing with the new UV-A blacklight technologies. Recently a large number of new LED black lights have appeared on the market, offering a wide variety of differing intensity levels and frequencies, almost all of which are very different than the good old standard mercury vapor lights that



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most of us are used to. Our understanding is that John will address this subject and discuss the need for standardization of the acceptable lights to be used in the relevant NDT methods. Anyone who uses any of the new black lights should attend this important talk.

On Wednesday morning, there are two talks in the "Reliability Studies" section, one concerning the probability of detection with fluorescent penetrant inspection, and the other dealing with the performance of different penetrant testing chemistries. Wednesday evening features the Annual Awards Banquet from 6:30 to 9:00 PM, followed by the After Glow Party from 9:00 PM to 11:00 PM.

The Quality Testing Show continues to be open on Tuesday from 10:00 AM to 5:00 PM and on Wednesday from 10:00 AM to 2:00 PM.

With an attractive program like this being held in Palm Springs, it is a great opportunity to catch up on what is going on in our profession at a lovely venue.

We hope to see **you** there.



**PENETRANT PROFESSOR**  
is an occasional publication of  
**Met-L-Chek®**.  
To receive it, call or E-mail Beverly Clarke.

# Oct 2011

## Batch Numbers

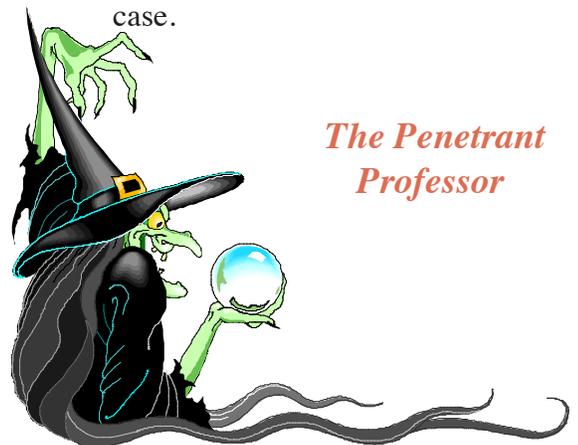
All of our products are accompanied by a number of important items. These include Material Safety Data Sheets (MSDS), the date of manufacture, the Type, Method, and Sensitivity level, the QPL approval information, and the batch number. The batch number is on the label of bulk products and on the bottom of each aerosol can. The batch number consists of 4 numbers, a letter, and two numbers. The first 4 numbers are the batch identifier, the letter is for the month; A-January, B-February, (we skip "I" to avoid confusion) to M-December, the last two numbers are for the year. The batch number is an important number when requesting certifications as it is specific to a quantity of material made with the same raw materials at a given time.

For various reasons, some customers want to replenish their tanks with the same batch number of material that is already in the tank. We do not question whether this is due to some requirement in their specification or not, and we do our best to comply with their needs, within reason. The question that we then address is what is "within reason". For a customer who buys small amounts at a time, and only buys once or twice a year, it is not possible to do this, since it puts us in the position of inventorying a batch solely for a single customer in the hopes that they will



eventually order it. For customers who order large amounts frequently it is a different story and we do our best to accommodate them. In the long run, though, if a customer has the need to use the same batch, it is far better for them to plan in advance and to order what they figure their future needs will be at one time. In essence, this puts the product under their control and they need not be concerned about whether that particular batch will be available from our inventory.

There is no technical reason to require the use of only one batch number and it has been standard practice by most users to add newer material to older materials in a tank. The monthly checks required by **ASTM E-1417** and other specifications ensures continued usability of the materials. The integrity of the penetrant manufacturer to produce batch to batch consistent products makes it unnecessary to start over with every batch change. The whole point of the **AMS-2644** Batch QC requirements is to give the users a consistent product batch to batch. At Met-L-Chek, our Quality Control procedures insure that this is the case.



*The Penetrant Professor*