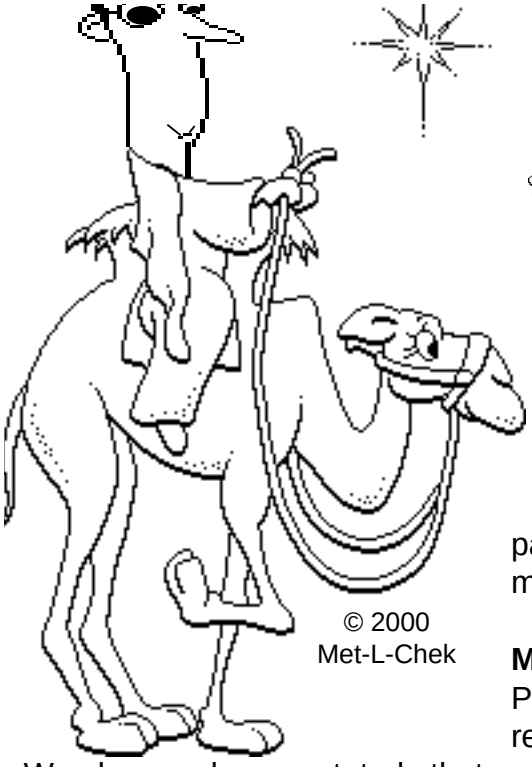

Greetings

from Met-L-Chek and the

Penetrant Professor

We have always stated that Met-L-Chek has a history of trying to provide product innovations that simplify or improve the inspection process. In reflecting on the new products we have started offering in the last 18 months, we even surprised ourselves on how many have been introduced. Lets take a quick look at some of these items.

Nortex 3025: a ferrous metal corrosion inhibitor approved by P&W for use under SPMC 172 (SPS172). Excellent for short term storage and handling of parts prior to finishing or between processes.

300LF: Aqueous alkaline cleaner approved to GE, P&W, and RR aeroengine overhaul cleaning specifications. May be used in immersion, spray or UT cleaning methods prior to or after penetrant inspection.

Met-L-Glo Carrier #2: Lower natural fluorescence, improved particle suspension, reduced particle degradation, and lower, much lower cost.

Met-L-Glo 1400 Bath Shots: Premeasured quantities of fluorescent wet method magnetic particles. Eliminates the guess work and waste of the powder, 1 bath shot makes 5 gallons of bath of proper concentration to meet ASTM E-1444. Sold in cases of 12 bath shots.

R-503 and **R-504**: AMS 2644 & AMS 2647, petroleum solvent free, fast drying, residue free, wipe solvents with applicator tube. Ideal for indication wipe verification.

R-503, PMC 9094-1, 5 gallon
R-504, PMC 9008-1, 5 gallon
R-503, PMC 9094-2, 55 gallon
R-504, PMC 9008-2, 55 gallon
R-503, PMC 9094-3, 12 oz. aerosol
R-504, PMC 9008-3, 12 oz. aerosol
R-503, PMC 9094-4, 16 oz. aerosol
R-504, PMC 9008-4, 16 oz. aerosol

Splitter Series: Penetrant process waste water treatment systems, utilizing nanofiltration. Specializing in problem solutions for low volume users.

VP-30A: Dark purple colored water washable visible penetrant.

VBP-300: VOC free, biodegradable, dark red water washable visible penetrant.

16 oz. aerosols: Prefered size internationally.

Pen-Chek® and **Mag-Chek**: in use material testing service with 24 hour turnaround, meeting the requirements of ASTM E-1417 and ASTM E-1444.

FP-922: Level 2 sensitivity, water washable fluorescent penetrant for smooth uniform wash from rough surfaces, while producing bright, sharp indications on any surface. Low viscosity for easy of spray and reduced drag out in dip applications.

This is just the beginning. 2001 will see the introduction of many more new products and packaging innovations. If you are interested in penetrant quality, reliability, service and innovation you should use Met-L-Chek, the new leader for the 21st Century.

Met-L-Chek Co., 1639 Euclid St., Santa Monica, CA 90404 (310) 450-1111, FAX (310) 452-4046

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PROFESSOR sional publication To receive it, Beverly Clarke.

SOLVENT WIPE, OR METHOD C

Here is a conundrum. What is the proper solvent remover for a method C solvent wipe of a water washable penetrant? The answer to this is as old as can be, but is poorly understood. In fact, Met-L-Chek delivered a talk which addressed this subject in 1985, entitled Solutions to the Use and Misuse of Visible Penetrant Inspection. The talk was later published in the November 1986 issue of Materials Evaluation. This early article pointed out that there was occasional abuse of Method C, because inspectors did not sometimes have an approved Method C remover available. In those cases, the inspector would often improvise, using un-approved solvents, such as paint thinner, jet fuel, and the like. Art Swiateck, then at the United Airlines facility in San Francisco, designed a clever way around this misuse. Instead of solvent removable penetrants, he specified water washable penetrants, which are also qualified for use as a Method C penetrant. Then he specified that water be used as the solvent. Under the specification, this Method would be either Method A or Method C. The difference between the two Methods is simply that in Method A the water is traditionally sprayed on the part to remove the excess penetrant, and in Method C the excess surface penetrant is wiped from the surface with a cloth dampened with water. But in both Methods, water is used.

Is this according to specification? You bet it is. Water is the approved remover for water washable penetrants. Of course, traditional solvent removers will also work, and these solvents are listed on the QPL. Water is not listed on the QPL, but it is understood to be an approved remover, simply because it is required for use in Method A.

OK, so what else can water be used for within the specification parameters? Well, if a water washable penetrant is being used, and the inspector needs to "prove up" an indication that he or she is unsure of, the indication can be wiped clear with a Q tip or small brush which has been moistened with water. Is this OK? Of course it is. Water was used to remove the surface penetrant in the inspection process, and it is an approved remover for use in Method C with water washable penetrants.

Does everyone understand this? Regrettably no. Admittedly, it is not a widely used technique, and so it might seem strange to someone who has not thought the process through. But to believe that water cannot be used to remove a water washable penetrant is simply a contradiction with no foundation at all.

There is a cautionary note to this use. That is, water does not evaporate as fast as other solvent removers, and consequently one must be careful to only moisten the applicator, and to be sure that the surface is dry prior to applying developer.

The Penetrant Professor