You will not find a pot of gold at the end of the rainbow in South Africa, guaranteed! The reason for that might be because it is stolen or maybe, because it is a myth. Myths keep people's minds occupied and give some the opportunity to do some research. During ones research you will find that there are many myths some that have been around for many years.
One area that is filled to the roof with myths is the Non Destructive Testing field. Some of these myths are funny, quite bizarre and others are just plain stupid and can be very dangerous in the long run.
Over the next couple of months we will be looking at some of these myths, shine some light on them and supply information so that they will not surface again. Feel free to give feedback and share some of the myths you came across over the years.

Myth Number 1: Dye Penetrant Testing is for dummies.

I have heard many times over the years that Dye Penetrant Testing is easy to do, only need a crash course for training or ñcan be done by the assistant and just be checked by the technicianò.

Unluckily for these myth supporters there are much more to Dye Penetrant Testing than they think. To all thinking that Dye Penetrant Testing is for the brainless people, here are a few questions for you;

- ÅDo you know the contrast ratio of your current Dye Penetrant Testing setup?
- ÅDo you know the difference between a hydrometer and a refractometer?
- ÅDo you know the sensitivity level of your current Dye Penetrant Testing setup?
- ÅIs your pre-cleaning sufficient before applying penetrant?
- ÅHow do you achieve more sensitivity?
- ÅWhen is it crucial to post clean a part after the Dye Penetrant Testing process?
- ÅWhy is Lipophillic Emulsifier not used as a preferred emulsifier?

Iôm sure that if you had the answer to all of the above that you are not one of the Dye Penetrant Testing myth supporters.
Great care should be given to pre-cleaning as it is many times the most neglected part of the Dye Penetrant Testing process. Drying is also seldom given much thought. Many technicians out there are not always informed or properly trained in the advantages and disadvantages of certain penetrants and their method of excess removal. For many technicians the application of the non aqueous wet developer is the most important part of the test and not must though is given afterwards to post cleaning.
There is much more to Dye Penetrant Testing than meets the eye. Dye Penetrant Testing is an excellent method to help Non Destructive Testing technician detect surface breaking indications. It was one of the first Non Destructive Testing methods and might be one of the last.

Myth Number 2: Isotope size and safety.

Radiation Safety is a topic that has many myths attached to it. Problem is that these myths just make things worse and even more unsafe. One of these is, believe it or not:

Using a smaller radiation source is safer when you are standing close to the isotope.

Let us take the example of Radiographic Testing a 10mm Carbon steel plate using a 500mm Source to Film Distance and a ñFast Filmò. There is a choice of an 8 curie and a 24 curie Iridium192 source. According to the myth you will receive less dose using the 8 curie Isotope.

Let us look at some of the facts. If you want to achieve a density of 2.5 you will use an exposure time of 10minutes for the 8 curie and an exposure with the 24 curie, yes you have guessed, 3.3 minutes. So whether it is the film being exposed or you, using the small isotope for longer compared to bigger isotope for shorter, you and the film will receive the same dose.

You can also look at it this way. If you stand on a scaffold 3 meters away from the source and is too lazy/stupid to climb down you will receive a dose of 815µsv while using the 8 curie Isotope and for the 24 curie, yes you have guessed it again, 815µsv.

Radiation myths do not belong in the work place and definitely not on site! Work safe and when in doubt, ASK.

NDT Myth No: 3. Battle of the Qualifications.

Nowadays we have the choice to choose between a Corsa or a C-Class, a Bantam or a Hummer. We are spoilt for choice between petrol, diesel or even electric.
We can argue that one is better than the other. Some of us know the history of the vehicle and with that information we argue which is the better. Others mention the vehicle specifications and some use the sales records to argue what is the next vehicle that one should buy.

In the end, the ñbetterò vehicle depends on;

Å What can be afforded?
Å What is the vehicle going to be used for?
Å Who is going to drive it?
Å Who is going to pay for it?

The same arguments are also ñfoughtò in the Non Destructive Testing circles.

Å Where should one go for training?
Å Which is the best qualification?
Å Where must certification be obtained from (in-house or independent)?

Å Is it really necessary to be approved / authorised after a qualification and certification is obtained?

Å Are technicians that have various qualifications and / or certifications expected to do their jobs differently?

Surely not!

As an example, the certification requirements for a technician being permanently employed and the certification requirements for a ñfree-lancerò could be very different from each other, with the ñfree-lancerò probably certified independently and the staff member possibly certified in-house. It is not to say the qualification / certification of the ñstaff-memberò is better (or worse) than that of the ñfree-lancerò. It depends on where they want to work, who they want to work for and what the requirements of their employers are going to be.
From all of this, it could only be argued that the best qualification / certification depend on the needs and career path of each individual. So, before making a claim again on which is the better qualification / certification, one should know what the requirements are. If you are unsure rather get some unbiased information before spreading more NDT myths.

Submitted by council member Hannes Barnard

MYTH 4: NDT TRAINING SCHOOLS ARE THE ALPHA AND OMEGA IN TRAINING NDT TECHNICIANS

Today, we hear a lot of parents complaining about the level of education that their children receive at school. They complain about the syllabuses, lack of discipline, quality of handbooks, the amount of homework, etc. If one analyses the complete picture, more often than not, one will notice a lack of involvement in their childrenôs education, from such parents. They are so busy in the ñrat raceò that they have no alternative but to let schools provide all the education that their children require. Can a parent expect from a school to develop his child into a responsible adult, with all the life and social skills, values, etc. required by society on top of basic knowledge?

Isnôt this also true when it comes to the training and education of non-destructive testing technicians? Donôt some NDT companies totally delegate or abdicate responsibility for developing technicians to NDT training schools?
Instead of dispatching a new technician to a NDT training school at the first opportunity, these persons should get on-the-job-training from their employers, primarily as orientation and screening. After some experience obtained under the direct supervision of a qualified person, they should be allowed documented training from the company Level 3 and/or a NDT training school.

When a technician getôs his/her qualification from the company Level 3 and/or a training facility, whether it is level 1 or 2, they only have their ñlearnerôs licenseò. They should now be given the opportunity to gain further experience in the field by using the knowledge they obtained, still under supervision, until the required practical experience has been obtained as required for certification.

Training facilities in South Africa and worldwide for that matter, are not the Alpha and Omega for training Non Destructive Testing technicians. Companies, Level 3ôs, supervisors and peers should all play their part in providing training to technicians.

So, before complaining about the current state of education/training in South Africa, have you done your part?

MYTH 5: NDT IS A GET RICH FAST CAREER

The recession still lives on in our minds and pockets. The people that lost the most were most probably stockbrokers and investors. Especially those that thought that investing is easy or buying and selling could make you rich fast, were quickly brought back to earth. Many cars and houses were lost not to mention the amount of relationships that crumbled.

On the other hand, some people might not invest or buy stock but they think that Non Destructive Testing is a get-rich-quick-job.

Firstly, NDT is not a job, it is a career. Training does not only involve a crash course and some on-the-job training. Most training from assistant to Level 1 to Level 2 takes a lot of hard work, dedication, long hours away from home and sometimes the sacrifice of your weekends.

In the beginning of your career training is expensive, the right experience hard to get and gratitude, almost non-existing. Competing in a cutthroat industry also does not make it easy to find a job with a company that will look after you.

Most big companies also know that the dropout rate for trainees are extremely high as the trainees struggle with the long hours, small starting salaries and the peer pressure on sites.

However, with the right mindset, NDT can be a rewarding career that is always growing, interesting and will have enough to satisfy the person that wants to know more.