

The NDTs of NDT • Part 1: Now Dire Times



The world of NDT is very exciting and rewarding, but it also faces many challenges. It doesn't matter who you talk to or what industry you may be working in – the challenges that we are currently facing are the same. The next few articles in Career Zone will look into some of these challenges, as well as provide some insight, and hopefully plant some seeds that will help bring the NDT community a step closer to solving some of these challenges.

Now Dire Times

By far the biggest concern right now is that we are in dire times when it comes to qualified/certified technicians. It doesn't matter if we look at the oil & gas industry, the aerospace industry, or the nuclear industry, there seems to be a desperate need for technicians and this need is not going to go away any time soon. With the aging

infrastructure that surrounds us all and the stricter regulatory compliance that is being placed on new structures, the demand for NDT has increased tremendously in the past few years (approximately 9% annually according to a Frost and Sullivan study). The structures of today are definitely built far better than they were in decades gone by, but the demand we put on them – the “we need more, faster” society we live in – is requiring increased monitoring and evaluation. Unfortunately, this increase has not been mirrored with respect to qualified individuals, and this places a heavy burden on inspectors and service companies as we progress to meet the needs of such a busy society. There are a number of factors in addition to the growth of the industry that are contributing to future challenges to overcome the lack of certified technicians to fill such a high demand.

Another contributor to the lack of qualified technicians

is in part due to technology. Progress has no patience and the technological progress that has occurred in the last decade alone is proof that NDT has become a high tech industry. Gone are the days of technicians walking into the field with only a magnetic particle yoke in hand. Now, we get to the field with high end computer driven equipment capable of recording data, analyzing it, and displaying it with nice bright colors. The problem? Technology has advanced quicker than the experienced technician pool did. Every one of us is to blame for this lag. The technicians want the new equipment, but don't fight adequately to justify its purchase and become complacent. The company leaders are wary of the investment, and regulatory bodies are resistant to the change that this new technology brings.

Phased Array Ultrasonic Testing (PAUT) is a perfect example of this. PAUT has been around now for many years, but just ask any NDT equipment retailer how long and how hard they had to work to convince the industry that this technology worked, saved time, and saved money, and I am sure they will all say not too long, and not too hard. Now ask them how long and how hard they had to work to actually sell a unit...

Today PAUT is recognized as a valuable NDT tool; its technology has been proven, and the efficiency it provides is a definite advantage, but where are the technicians? Technology advanced faster than the work force did. It does not matter what industry- just look at the job postings. How many of those are seeking people with PAUT experience? There is a definite need, but a limited amount of experienced technicians. How many experienced technicians can there really be, when we did not take the proper actions at the right time? And guess what, the reality is that they are all already working. So what can a service provider do to keep the customer happy?

Now we can't overlook a major root cause responsible for this lack of available technicians: we are all getting older. Less than a decade ago, the average age of an NDT practitioner was 41.5 years, today it is

up to approximately 48. Numbers don't lie; the next generation is not entering the profession at the rate that is required to maintain solid skill, experience and customer satisfaction. This is just in the last decade! If we look further, just 40 years ago, the number of 20 year olds that were entering the profession was approximately 2.4 times greater than the number of the average 60 year old technician. Today that number has fallen to an alarming ratio of 0.8!¹

I think we can all agree that this is not a pretty picture and that something has to be done. This is why we are all struggling to get the technicians we need to get the job done, satisfy our customers, and keep society safe.

So what can we do to get ourselves out of this situation? Being aware is always the first step in any problem solving exercise and committing to take action is always the hardest part. When we break down each situation into smaller parts, the issues are easy to see and seem less overwhelming. There is no magic pill that will solve all our issues and no genie in a bottle that will grant us all the qualified/certified technicians we need. But there are steps, some little ones and some that will require a bit more effort, but we can begin to change the tide and provide a solid professional industry.

The next installments of the NDT's of NDT will continue to look at the challenges we face, outline what we can do as a community to reduce the burden and begin to pave the way for the next generation.

The journey of a thousand miles begins with a first step. Let's take that step!

References:

¹ Trends in NDT Certification and Training in Canada, L. Coté, PK. Yuen, J. Zirnhelt, PAN American NDT 2011.

Average Age of NDT Technicians
(source PQNDT Annual Surveys)



Fulvio Mini

Fulvio Mini holds a Bachelor degree in Physics from McGill University, and holds CGSB Level 3 certification in PT, MT, ET and RT. He has over 20 years experience in NDT related to the aerospace industry: from manufacturing aircraft to the maintenance, repair and overhaul of airframe, engines and components of commercial and private jets. His latest project has been the development

of an inspection facility with the aim to provide a real world inspection environment to those entering the field and seeking experience.