

Education and Controversy with DTI @ ATAC



Well, I guess it should have been expected, but the DTI team raised some eyebrows at the recent ATAC convention in Calgary.

Dennis and Sol gave two separate presentations on Quality Assurance and the expectations of the regulators, Transport Canada.

The main focus of DTI's presentation was that the Canadian Civil Aviation Certificate holders should

NOT institute a QA system just to meet TC's requirement, but instead should produce this system because it will make their company stronger. The fact that it will fulfill their regulatory requirement is just a side benefit.

The brothers further distanced themselves from the onslaught of "consultants" that have been preying on the fears of many of the smaller operators, by demonstrating how these "professionals" who have been producing generic manuals for the certificate holders are almost assuring an assessment failure when the TC inspectors come to visit.

They told the story of having seen 5 manuals that were purchased from these experts that were exactly the same, except for the name on the cover. They then addressed a specific part of the manual that delivered the procedure to an operational task that the certificate holder was unaware existed. They then explained that TC inspectors were being trained, by DTI, to zero in on these sections, since these were proof that the manual was actually a symptom of a deeper lack of commitment to the letter and, more important, the spirit of the new SMS regulation.

EVERY MONTH IN OUR NEWSLETTER

- ◆ Tips and new innovations in the Quality Assurance Field.
- ◆ What's happening at DTI?
- ◆ Anecdotes and more
- ◆ Answers to your questions



DTI and Skyservice Airlines partner on Quality Assurance Training in Canada!

On December 1, 2 & 3, Skyservice is holding a basic QA class that is open to anyone interested in learning more about this very important topic, especially civil aviation companies in Canada.

To find out more about how you can attend a similar class or sponsor a session at your facility contact us at 1-866-870-5490



This month's QA topic - A Continuation of our series on Corrosion

Galvanic corrosion (also called 'dissimilar metal corrosion' or wrongly 'electrolysis') refers to corrosion damage induced when two dissimilar materials are coupled in a corrosive electrolyte.

When a galvanic couple forms, one of the metals in the couple becomes the anode and corrodes faster than it would all by itself, while the other becomes the cathode and corrodes slower than it would alone. For gal-

vanic corrosion to occur, three conditions must be present:

- 1) Electrochemically dissimilar metals must be present;
- 2) These metals must be in electrical contact; and
- 3) The metals must be exposed to an electrolyte.

The relative nobility of a material can be predicted by measuring its corrosion potential. The well known galvanic series

lists the relative nobility of certain materials in sea water. A small anode/cathode area ratio is highly undesirable. In this case, the galvanic current is concentrated onto a small anodic area. Rapid thickness loss of the dissolving anode tends to occur under these conditions. Galvanic corrosion problems should be solved by de-

This month's pearl of wisdom from Dennis and Sol

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You may be becoming a "geek" if.....

If the salespeople at Best Buy can't answer any of your questions.

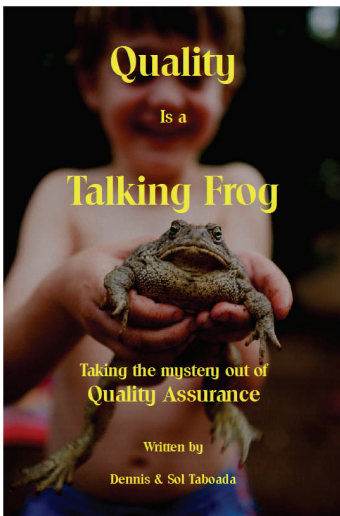
If your three year old son asks why the sky is blue and you try to explain atmospheric absorption theory

If you still own a slide rule and you know how to work it

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Corrosion Control (cont'd)



signing to avoid these problems in the first place.

The relative nobility of a material can be predicted by measuring its corrosion potential. The well known galvanic series lists the relative nobility of certain materials in sea water. A small anode/cathode area ratio is highly undesirable. In this case, the galvanic current is concentrated onto a small anodic area. Rapid thickness loss of the dissolving anode tends to occur under these conditions. Galvanic corrosion problems should be solved by designing to avoid these problems in the first place.

The difference in corrosion potential between brass and steel is quite important. This

difference can be estimated by a cursory examination of the galvanic series for these metals when exposed to humid environments.

Galvanic series relationships are useful as a guide for selecting metals to be joined, will help the selection of metals having minimal tendency to interact galvanically, or will indicate the need or degree of protection to be applied to lessen the expected potential interactions. In general, the further apart the materials are in the galvanic series, the higher the risk of galvanic corrosion, which should be prevented by design. Conversely, the farther one metal is from another, the greater the corrosion will be. However, the series does not provide any information on the rate of galvanic corrosion and thus serves as a basic qualitative guide only.

We recommend you get a copy of the Galvanic series chart from the internet, so you

can see these metallic relationships.

Non-uniform conditions along the surface of a metal can also cause different energy potentials. For example, the portion of an anchor embedded in concrete typically has lower energy potential than the portion exposed to soil. The use of the galvanic series has to be done with caution and a basic knowledge of the environments that is a necessary part of this serious form of corrosion. The following documents provide different points of view regarding the ranking of metals and coatings in practical schemes for preventing galvanic corrosion.

Next month we will continue the series of basic corrosion principles.

