We've said it before: We are always interested in reader feedback, no matter how it reaches us. Letters sent directly to our contributors in response to their respective columns or features can be especially helpful in that they often allow us to draw conclusions on the state-of-the-art, the mood of the industry, etc. That, in turn, lets us better serve you, the reader. An example of this process can be seen in a round of communications between Heinz Bloch and an unnamed Plant Manager. Focusing on "learning" out in the real world (an important topic in both MAINTENANCE TECHNOLOGY and our sister publication, LUBRICATION MANAGEMENT & TECHNOLOGY), we probably could have used this thoughtful exchange as a springboard to a stand-alone article in either magazine. Instead, we've chosen to share parts of it here, along with some additional insight from Heinz…

Dear Heinz:
I have enjoyed and learned much from your articles over the past two years since I discovered them. I particularly enjoyed your recent articles with implied (yet justified) comments about management not acting on rotating equipment advice—it brought a smile to my face. In my first stint and first year as a Process Manager, I was guilty of trying to be too clever. However, I soon came to appreciate the value of a first-class rotating equipment engineer and his advice.

At this time, I am about to re-enter a Plant Manager role in a refinery and wish to buy a text covering rotating equipment. My earlier experience has taught me how critical machinery issues really are. I'm aware of the importance of understanding the advice I am being given; certainly, a manager needs to know enough to ask the right questions.

That said, I recall that in one of your articles you quoted several texts as essential and am

wondering if you would mind advising which of two or three of your books would be best for me.

Please keep the articles coming. I am bringing them to the attention of my colleagues here to make us Chemical Engineers more knowledgeable about rotating equipment.

Name withheld by request
Via e-mail

Heinz promptly replied to the Plant Manager…
The (referenced) listing was actually published in the May-June 2006 issue of our sister publication, Lubrication Management & Technology (formerly Lubrication & Fluid Power). The first three books in our "Essential Machinery Reliability Library" should be of value and are recommended in answer to your request. However, the following three-step plan should be of general interest when training professional employees:

1. Technical book(s) should be read in stages and must be assimilated or digested in stages. A stage of development builds on the previous stage. As an example, issues of pump specification should be learned after having observed pump repairs.

2. The technical reader will have to understand when, where and how best-of-class actions or procedures described in the "Essential Reliability Library" (and representing Best Practices) differ from the way things are done at the reader's facility.

3. Equipment Reliability Professionals have to justify to their management why one should use Best Practices and what would be the safety and reliability implications of deviating from Best Practices.

Heinz P. Bloch, P.E.

We can assume that the Plant Manager who penned the letter (and prompted the above

response) realizes there is more to training than meets the eye. As so many of our contributors continue to point out in our pages, there is. Most importantly, there is no progress without training. Heinz elaborates…

Indeed, the frequent restructuring that took place and continues to go on in industry has affected the training of both professional and craft employees. In some locations, entire training departments have been dissolved and little or nothing has replaced them.

The challenge, though, is the implementation of meaningful and technically sound replacement training for those who accept the premise that people versed in stateof- the-art capacity assurance methods are a real asset. In response to this at some plants, a loosely defined and sporadically executed self-teaching routine has moved into the void. But, there is a better way.

The beginning of training should be a well-focused, written role statement that explains to both manager and managed their respective perceptions of the technical employee's role. Is he or she a parts changer or innovator? A fixer or an improver? A person who is expected to react to problems or anticipate problems? The role statement must, at least, allude to a training plan. The technical person and his or her supervisor should discuss both role statement and training plan initially and, of course, during scheduled future performance reviews.

A detailed training plan should probably be a separate document. Such a plan will give firm guidance and yet leave lots of room for individual initiative. Its aim will be the achievement of proficiency in a technical skill or craft. As an example, here's how technical training for a young engineer could be structured:

Let's say your facility employs four maintenance or reliability engineers or senior reliability technicians. You could get them to engage in worthwhile self-training by obtaining subscriptions to trade journals like Maintenance Technology and Lubrication Management & Technology, among others. (As you may already know, these types of subscriptions often are provided at no cost to qualified subscribers based on job title and responsibilities.)

If you find value in having your own personal copy of a publication month after month, others around your operations probably will, too—particularly those who work in large organizations or who travel extensively. Many publishers would be happy to ensure that a reasonable number of

additional copies find their way to key technical and management personnel at a company or site. (In the case of the publications referenced here, one of the easiest ways to do this is to encourage your associates to qualify for their own subscriptions by filling out the required forms on www.MT-online.com and/or www.LMTinfo.com. Keep in mind that these periodicals are sent to qualified subscribers in the U.S. and Canada free of charge.)

All technical personnel should have access to the information in the publications that are deemed to be important to your operations. The name of each technical person should be at the top of the in-plant routing sheet of two or three of these periodicals and he/she would be required to screen the content of the periodical(s) for relevant material. The employee would not have to read the various articles, but would be expected to recognize from headings or abstracts the present or possible future usefulness of the write-up. Electronic copies would have to be made of these writeups and sent to the other “Professionals-in-Training” on the “PIT” distribution form. One copy would be filed in the plant’s central computer under appropriate headings that might follow a simple, but logical identifier system to enable easy retrieval via a straightforward, well crossreferenced PC-based software program. Remember, before making copies and distributing copyrighted articles, it is a matter of professional courtesy to contact the editor to request permission to do so.

The second phase of training might be called the “dig-upthe- facts” phase. Each “PIT” would be asked to present periodically scheduled briefings or information sharing sessions to mechanical workforce personnel assigned to shop or field (e.g. millwright) tasks. Tacked on to the ubiquitous safety meetings, these 7-10 minute briefings or information sharing sessions might deal with topics such as:

- How to Install Rolling Element Bearings in Our Large Mixers
- Proper Lubrication Procedures for Our Pumps and Motors
- Why Four Different Types of Couplings Are Used at Our Plant
- When to Use Bellows Seals Instead of Pusher Seals in Our Plant’s XYZ Process Unit

There are literally hundreds of worthwhile topics to research and discuss and disseminate. The process would compel the presenter to do some homework instead of guesswork, communicating with vendors and manufacturers instead of reinventing the wheel, and perhaps even rediscovering one or more of the many good technical textbooks which are generally available at a fraction of the cost of making a single mistake. The researcher also would be educating himself/ herself and contributing to the development of team spirit and the enhancement of mutual respect and cooperation among the many job functions in the plant.

From here, the phased approach to training could move to in-plant courses by competent presenters with both analytical and practical knowledge in machinery maintenance and reliability improvement procedures, and then progress to welldefined, known-to-be-relevant outside seminars or symposia. If someone in your company or at your site suggests that training is expensive, just let them try to calculate what your costs would be without proper training.

Which takes us back to the original reader's request for an updated list of books that we have most often consulted in the past 25 years… For the "Essential Machinery Reliability Library" list, e-mail jalexander@atpnetwork.com. Be sure to put "Requesting Essential Library" in your subject line. On the other hand, you also can compile your own list through a Google Search or by entering Amazon.com and looking for either the author's name or the approximate title. The terms "RELIABILITY" or "UPTIME EXTENSION" usually appear in any such search.

E-mail questions or comments to: jalexander@atpnetwork.com Or post them on: www.mt-online.com We reserve the right to edit letters for clarity and brevity.