

Finisher's Think Tank



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Spring Training—It Never Ends

Our work in the plating and surface finishing industry shares a close bond to a critical annual routine for professional and collegiate athletes. Every sport prioritizes the concept of pre-season or mini-camp. The focus is on preparing the body and mind through a prescribed regimen of exercise, games, and strategy. The goal is to develop and form a team—singular in purpose and camaraderie—with a burning desire to succeed. How do we correlate our industry activities in a similar way? Are we in it for the pre-season or is our focus 24/7? Let's review our coverage to update, improve, and improvise.

Where It Begins

Our place of business is, in many ways, the professional home ground. We cultivate it, maintain it, and keep it operating. It is an entity that lives and thrives. Through the years, I have visited many finishing installations and suppliers. With the advent of certifications (ISO, NACD, etc...), the mission statement—or company soul—is prominently displayed for one and all in a facility's foyer. Each statement is a concise description of that company's pledge and its game plan for operation. Many of these share common goals: on-going training, improvement, and education of the staff. Even non-certified companies, assuredly, do so. It's not only sensible ... it's the right thing to do.

In the Door

The "food" we buy to sustain our hungry team consists of a diet rich in chemicals and equipment. Our shopping list predominantly includes certifications or compliance information accompanying price quotations and ultimate deliveries. We have trained ourselves to be smart shoppers. This is our first step to finishing and delivering satisfactory products and finishes. Our driving force is acknowledging the standard logic: "Quality in means quality out."

Getting It Done

Companies that maintain a well-organized system often state in their operating guidelines or certification records that any employee can take customer orders and acknowledge particular complaints. Staff members have been trained to do this. Once the door to the finishing lines has swung open, competent, knowledgeable, safety-conscious people do the right job, the right way, on time, and to specification. The spring training that never ends may include the following regimen:

Safety

OSHA requires documented training at specific intervals. Subjects covered include: handling equipment and chemicals, protective clothing, posture (lift & carry), lighting, emergency response, safety guards, and other related items. Many companies also individualize safety updates and programs. Vendors offer on-site training and seminars. This can be supplemented by videos and situation re-enactment.

Finishing Cycles

Senior personnel may train junior associates how to process parts by specific cycles, from start to finish. An outstanding feature of the "old pros" is their ability to associate problems (mechanical, electrical) or chemical imbalances to what's not right with the parts. Recordkeeping is very important. Data related to operating parameters (ampere hours, temperature, concentrations, time, etc.) confirm the system on target, or that problems or excess related costs exist. How can one know full status without the facts? In many instances, customers provide finishing cycles or specifications requiring certain progression. Otherwise, there are limited options to meet the finishing objective.

New jobs or cycles are always reviewed by involved personnel. Test runs or pre-

scale-up cycles may be required, confirming the best direction in which to proceed. Vendors offer varying degrees of experience, by nature of the finish or use of their proprietary products. Professional organizations, such as AESF, offer excellent, comprehensive facts and information, to jumpstart most projects.

Keeping It Right *Lab Services*

Control and routine maintenance are very important. Customers flip with delight knowing the finisher conducts appropriate chemical analysis of the process baths. Happiness is two-fold: The baths must be at optimum operation and the finishing line won't shut down. That's all fine, as long as analysis and control are right on. To keep it so, the lab staff must be organized, adhere to the standards of proper lab work and recordkeeping, and understand the process baths they analyze and troubleshoot.

Never underestimate the importance of the waste treatment system. Compliance means the plant operates without danger of shutdown or expensive fines and unwanted publicity. Plant chemists are professionally trained. Their focus is the specific chemical nature and reactions occurring in various baths. This forms the basis for understanding the importance of control and troubleshooting.

Nothing beats "professor experience"—the best on-site teacher. Our industry is blessed with many sources of lab control and troubleshooting: acknowledged texts, videos, lecture series, and regionally scheduled seminars, to name some. Vendors of proprietary process baths are excellent sources of analysis, control, and troubleshooting. They offer comprehensive services based on system development, thorough related troubleshooting knowledge, and a healthy exposure to professor experience. Vendors also provide skilled field technicians, conducting on-site analysis,

control, and troubleshooting. Regional service labs offer the closest to in-house lab work, comprehensive troubleshooting, methods development, failure analysis, and corrective action.

Equipment Maintenance

Sources of energy (electricity, steam, etc.) comprise the operation's heartbeat. This importance is magnified by the related equipment used by finishers, such as rectifiers, heaters, dryers, pumps, and filters, etc. Tanks, plumbing, process lines, waste treatment, lighting, and other items comprise an important service list.

Lack of maintenance reminds me of an ADA (American Dental Association) public service ad campaign: "Ignore Your Teeth and They'll Go Away." Equipment breakdown or poor performance will always affect the final finish. Rejects grow, and the customer's blood pressure rises. So, schedule and adhere to a routine program of equipment checks, calibration, service and, when necessary, replacement of worn or non-functioning components. This will go a long way toward the goal of trouble-free operation.

Most finishing installations retain their

own service personnel or contract licensed technicians. Equipment vendors provide on-site checks and related training.

Quality Control

The importance or significance of quality control (QC) is frequently agreed upon by the finisher and his customer. It could be special testing or adhering to known specifications, such as military or ASTM. Calibration of test equipment and correct procedural work by the chemist or technician are usually part of the spec testing work. Sometimes, parts are submitted to certified testing labs for the required QC evaluation, by schedule or confirmation of in-house results. Vendors of proprietary chemicals typically formulate with certified-to-specification raw materials. Finished products are QC-evaluated by appropriate methods relative to their intended usage.

Processes, requirements, analysis, testing, and specifications are always subject to change. New systems, revisions to existing ones, and replacements occur regularly. Updating and upgrading keep us on the go. There is no pre-season for us. Our attention to detail, education, maintenance, and refinement is truly a 24/7 occupation. Keep

up to stay ahead.

Don't Overlook AESF As a Technical Resource

As emphasized in the past, don't overlook one of the industry's most informative sources: **AESF**. Your society is an education-based organization. Check it out at **www.aesf.org**. There are subjects covering safety, compliance, waste treatment, finishing processes, basic education, specialized courses, and quality control. Published information is available in hard copy or CD format. Seminars and courses are held regionally and during major AESF functions, and can also be scheduled at your facility. Home study courses are another alternative, and AESF course materials may now be purchased individually through the AESF Bookstore.

Visit **www.aesf.org** often. It will help you reach your goals ... and it's there for you, 24/7. *P&SF*