

Parting Shots

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Where's Bubba and Why Can't We Make a Good Part Today?

In every die casting plant 20 years ago, there was usually one person; we'll call him Bubba, who could almost always make a good casting. The problem was the productivity of the operation was limited by the number of hours he could work. And what if he took a vacation? Bubba was the "black art" die caster. He could persuade the process to produce an acceptable casting by twisting knobs and various die spray techniques known only to him. Eventually he would train an operator in the technique and for a few hours they could continue to produce good castings. Then the next shift would arrive and a new recipe would be introduced and the quality would change, usually worse. When you were in a crisis for parts, Bubba would be called back on overtime to "fix" the problem, after a few minutes or hours, the process would produce good castings again, he would train that operator and you were good until the next shift change.

How do I know? I used to be Bubba. I've had those 2:00 AM phone calls when things just wouldn't go.

Thankfully, with the availability of modern process monitoring equipment and statistical techniques, we don't have to rely on sound, feel, intuition, and opinion to manage the process.

There is an alternative. Train Bubba! While I will agree that the die casting process is one of the most complex manufacturing processes, the science of die casting can be taught. The benefits are numerous. They include on-time delivery, higher profits, less scrap, reduced overtime, lower employee turn-over and others.

How do you select a trainee? I look for people with a mechanical aptitude. They may or may not be involved in maintenance

and set up in your facility, but may maintain the family vehicle, motorcycle, boat, or snow mobile etc. Another vital ingredient is drive and initiative. The desire to improve and learn can often overcome the lack of education. I once worked with a set up person who was illiterate. That's right; he could not read or write his own name. However, he developed a system for recording the entire job set up in a note book he carried in his pocket. The system included illustrations and sketches and numbers that identified the job and machine. He was both effective and dedicated.

I worked with another set up man who was illiterate. His employer was to receive a prestigious quality award from one of their customers. With the support of his employer, at the age of 46 he took night courses to learn to read so he could deliver an address representing the machine operators during the award ceremony. He received a standing ovation for his short but noteworthy speech.

If you're worried about Bubba accepting the training, don't, it will enhance his value and self-confidence. The newfound knowledge will affirm his prior experience and make him more successful.

One of the most common requests I get is to assist in recruiting technical people to fill engineering and supervisory positions. While I certainly know many competent people in the industry, I don't believe the long term solution is to fill those positions by recruiting people from another city or state. The main objection I have is that of loyalty and longevity. The most loyal people in your company are the ones already working for you. Some employers have raised the objection that they don't want to train for someone else. For fear the employees, now more highly trained will abandon them in favor of a higher paying position elsewhere. Stories abound of

people whose employer helped educate them and are now lifelong enthusiasts for that employer. Why not capitalize on their loyalty by helping them become more successful in your company.

What types of training are important in a die casting facility? The building blocks of the die casting process include the following:

- Die Cast Gating
- Process Control
- SPC (Statistical Process Control)
- Die Casting Defects
- Metal melting and handling
- Machine hydraulics and pneumatics
- Machine electrical systems including PLC (Programmable Logic Controllers)
- PQ²
- D.O.E., (Design of Experiments)

The above topics are available from NADCA, either at NADCA headquarters in Rosemont, IL, on-site at your location/facility or at M-TECH at Southwest Michigan College in Niles, MI. Some, for example SPC and hydraulics and pneumatics are also available through community colleges, technical schools and suppliers of hydraulic and electrical equipment. In addition, I can provide customized versions of the above training. Training can take place on any shift or work environment from class room to shop floor.

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