FLAWLESS EXECUTION

We have grown at an average rate of 15% per year since 1982 and we are continuously adding people at all plants.

By year 1990 we were little over 100 employees. Shop leadership was hands-on interacting directly with engineering under my personal supervision. We then produced units up to 10 MVA. In the 90’s we grew to over 300 people. We started a training shop in early 90s which we called BAT – Build A Transformer. A Transformer Circa was assembled and disassembled to give hands-on training to operators.

In the early 2000’s, we initiated on-boarding & training programs where operators were trained in five (5) basic skills of crimping, brazing, sealing, torqueing and painting. In the same decade a Fit and Finish (FF) function was established to reduce the defects on the product.

By the year 2010, we were building up to 100 MVA / 230 kV size units. We realized that a reliable product requires Six-Sigma process control. We started assigning the experts in each department. These experts were called Technicians, their focus was on training and product quality thru process.
assurance. A unique idea of All Technician work forces was born out of necessity in order to raise the process assurance.

Did you know that our FPY (First Pass Yield) is > 98% and RTS (Ready to Ship on time) is > 95%! What is our secret?

Let me share how we do it:

Process control sheets are completed by the operator and verified by the technician. The technicians sign-off on CTQ s, and on the product to transfer to the next department while the Quality Engineer verifies the product quality with PCC.

A Technician is 10 to 20 years experienced in their skill: winding, assembly, processing, etc. Their job is to observe the work being performed. Their observation of defects results in process improvement, design improvement and more training. They learn the engineering design of each project and execute this on the floor. They guide and coach the teams in new and difficult areas of a project. They are trained in the WHAT’s & WHY’s: what is the role of the insulation – angle rings, cap rings, HV lead metallizing, the technology of crimping, why the windings must be tight …. They do not work hands-on; they just observe. Also, each design is categorized from A to F, F being the one needing highest technical oversight. New process is written when needed. This critical area such as crimps or core ground are checked by the technicians while certain other steps are checked by the quality engineer. Complex features are checked by technical managers depending upon the category of the design.

We train all new operators in basic skills for 30 days. Additionally, the operators are trained by technician in their job and work instructions. The supervisor Owns the operator and is responsible for retention. Operators are also assigned a Big Buddy to help them settle within the department team.
Smart Scheduling system accounts for the special feature such as 2 DETC and Smart Quality system adds special check points for the features.

Development of technical work force: Selected operators are trained in the technology of transformer for 30 days to launch on their path to become technician. These graduate of L3 program are trained in all departments, and while training are given the knowledge of shop technology to deliver the intent of the design...... Flawless execution is the key to our success!