INFORMATION RELEASE GTP20150618

SIGMATECH COURSE OUTLINE
EFFECTIVE PROBLEM SOLVING

DATE: **18/6/2015**

TO: **All Training Organisations**

Course Outline - Effective Problem Solving

Introducing the Course

Solving real problems requires structured thinking, discipline, and the understanding of an effective process. You have to overcome the natural tendency to "throw" possible solutions at the problem in the hope that they prove successful, and you often need to control those who may be derailing your progress by trying to "find the easy way". But most of all, you need to be disciplined enough to base all decisions on data.

This is why using an effective process and a logical approach is the difference between success and failure. You need a process that can easily be learned, provides a common language to use in communication with stakeholders, and an appreciation of the tools that will enable you to converge on the real solution as quickly as possible.

Sigmatech engineers have spent decades in real problem solving and continuous improvement situations, and have developed a process to meet these aims. The process doesn't claim to be revolutionary, but has borrowed from many sources to form an approach that doesn't need a PhD in mathematics or years of study to understand. It's simple, it's based on well established platforms, and can be taught in a few hours.

Competency in the process simply requires you to learn the logical methodology and then spend some time applying it to a few projects to get familiar with the strategy. Your ability to be able to use it on complex problems will be proportional to the time you spend understanding the process and applying it. For this reason, you will be supplied with course notes and some handy guides to use on your own problems.

The methodology is based on traditional 8D problem solving process, but excels through the very clear escalation criteria applied to each step, and the defined tools for analysis of data. The system also incorporates procedures to enable the development of problem solving strategy.

It can be used equally effectively in simple problems to provide clarity between symptoms and causes, and in more complex situations where rules can be used to good affect to guide the definition and root cause activities.

The course overview:

Session 1 (2 hours)

1. Introductions and overview of problem solving experiences (class interactive session)
2. Introducing continuous improvement
3. Introducing 8D
4. The 8D steps and importance of discrete escalation criteria

Session 2 (2 hours)

5. The definition tree, what is analysis, and developing problem solving strategy
6. Definition tools and the logical thinking process
7. The root cause step and validation of outcomes
8. Case studies and exercises

Outcomes of the Effective Problem Solving Course

This course has been developed from the fundamentals of what engineers face in the process of solving difficult problems. The learning process is to introduce the system, its tools and rules, and then work through case studies on how they have been applied to successful projects.

The aim is to provide you with an understanding of a process to enable you to start working on difficult problems in the shortest possible time. You will be able to conceptualise the 8 steps, how to apply the rules for escalation from one step to the next, you will learn the rules that can be applied to guide the development of each step, and also the tools to use in processing the data to make decisions on strategy.

A four hour course will not lead to a mastery of the subject, but it will provide the basis for you to take your development in this area to the next level by learning a process and its tools, and how to strategise throughout the process from identification of the issue, definition, implementing an immediate containment, determining the correct cause, developing a solution, and implementing a preventative action to ensure that the risk of the issue reoccurring is eliminated.

The Facilitator

The course is facilitated by a engineer with a long history of working in the field. Experience bought to the course includes a track record of solving difficult engineering and product problems, and managing continuous improvement to improve product reliability and quality, as well as the reduction of warranty.

The facilitator has worked in engineering for more than 25 years, and has been employed in problem solving roles ranging from quality engineer to quality departmental director at OE level.

The case studies used in the course are actual problems that have been solved, and illustrate the processes and thinking required to work effectively in solving difficult issues.

All of the course content has been developed through hard won experience, and you will receive this instruction first hand by those who actually developed the process.