

## **A Case Study used during a Job Interview**

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### **How a Case Study might be used during a Job Interview:**

- The Hiring Manager may use a Case Study during a Job Interview to see how comfortable the candidate is with talking about some initial steps to set up an investigation of a typical manufacturing problem.
- They are not looking for a perfect or correct solution, as much as an organized approach (methodology) for what to do at the beginning of an open-ended problem statement.

### **Example of a Case Study:**

A Quality/Defect Analysis for Medical Equipment problems found during Final Testing.

Here is a “*theoretical*” starting statement from a Medical Equipment, Production Manager to a staff Industrial Engineer:

- “We are having problems in the Final Testing of some of our Medical Equipment during Final Assembly. Over 50% of the machines are failing during some part of the final Quality Testing. This requires considerable re-work of the equipment that fails the testing. I don’t know what is causing the problem and need to have all the quality issues investigated so we can resolve the problem(s).”

The Case Study is to describe some of the starting steps & activities (methodology) you might initiate at the beginning of this Quality Control/Defect Reduction Analysis:

- The Production Manager doesn’t have much more to tell you, except maybe the models of machines having the problem, and the name of a contact you could start off talking to.
- The purpose of a Case Study in a Job Interview is not to solve the problem, but to show how the IE being Interviewed would approach an open-ended problem that is typical of issues that Industrial Engineers work on in manufacturing companies, on a complex assembly product, like medical equipment.

### **Some possible items to mention in responding to this Case Study:**

- Get some help from the Production Manager, to get you set up with one of his production Leads or Supervisors to give you a tour of the problem area and which models are having the trouble, and some recent history of the problem. Also a contact in Quality Control involved with the final testing of the machines.
- Go out into the shop and observe the problems live (on the specific medical equipment having the problems) and start talking to some people that do some of these final inspection tests.
- Talk to Quality Control and start getting some currently available data that helps quantify the problem (vs. just doing Interviews and getting anecdotal information).
- Talk to Quality Engineering about the Final Test procedures that they wrote & developed.

- Examine the process “*upstream*” to see if there are some earlier quality checks that should be catching some of the problems prior to the final quality tests.
- Decide if any new data needs to be obtained (if the current data is not helpful).
- Check to see if the problem is recent, or has occurred in the past.
- Check to see if the same problem occurs on both 1<sup>st</sup> shift & 2<sup>nd</sup> shift (if not, this might generate additional areas to investigate).
- Talk to the parts stockers to see if there is a Supplier Quality problem that they already know about.
- Build a Cause & Effect (“fishbone”) diagram, and maybe a 5-Whys chart, and other similar IE-analysis tools.
- Depending on how big the Investigation looks, consider forming a small Team to help with the Investigation, including preparing a draft Workplan that you run past the Production Manager to get his/her buy-in to a small Team investigation – to make sure the scope is not too large and the production time frame is considered (they may need an immediate short term solution or work-around, before committing to a longer more comprehensive project).