

# Data is the New Gold – Who will Claim the Crown in NDT?

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We currently use data we acquire be it X ray, UT or Eddy Current for a snap shot analysis. In the manufacturing QA context, we inspect the welds on a tube or pipe with say digital X ray and then clear the part for further processing or dispatch to a customer. This data or X ray image is then archived away and forgotten forever. Does this have value beyond the immediate? What is that value?

1) Can this weld inspection data be used to improve the weld process? What are the key parameters that can be controlled in a weld - the CLAMS in a manual weld process a) current setting b) length of arc, c) angle of electrode etc. In an automated weld process to, the current and other settings 2) Can this information come out of just the 1% or 2% of rejected welds 3) Is there value in the data from sub rejectable defect information? These are the questions that may have been asked in the past but can possibly be answered now. Similarly when you have inspection data of castings, does the defect pattern or clustering of defects in a one portion of the volume have implications for process control. Again, some of these can be answered by inspection data analysis.

The same questions arise when we look at inspection data in maintenance. This is a wonderful time series data since most of our infrastructure is inspected on a regular basis either annually or once every 2 years etc. Can this data be used to improve predictive maintenance or be seamlessly integrated with mechanical integrity to determine Remaining Life of Assets ( RLA)?

The industry is of course still grappling with the digital to analog transformation, proprietary data formats and rules from ASME, API, ISO, etc. Yet, the future will arrive and the prepared will win. So who are those preparing now? Clearly GE with their Predix platform are ahead of others and I propose another familiar name IBM with the Watson platform. These are giant data crunching platforms and will be glad to swallow all the inspection data being generated and throw up predictive analytics. I will try to expand in a later article.