

Statistical techniques using Minitab and Q-das

In the production process, machines, peoples, materials, methods and environment lead to fluctuations in the results accuracy. Normal fluctuations have less impact on product quality and it is technically inevitable but abnormal fluctuations has more impact and lead to defects.

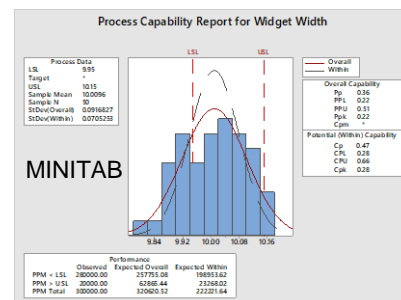
SPC – Statistical process control is a process control methodology using statistical methods and was invented for the first time using control charts at 1924 at Bell Laboratories in USA.



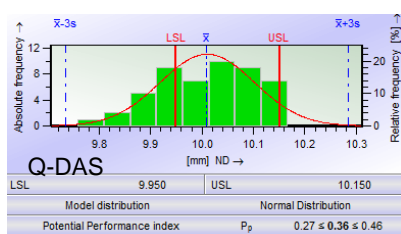
SPC is widely applied to Quality Management. Since there SPC was developed and continue to produce many kinds of new methods in practice. There is many statistical software on the market which provide for different kinds of solutions - MINITAB, Statgraphics, JMP/SAS, SPSS, Statistics and Q-DAS.



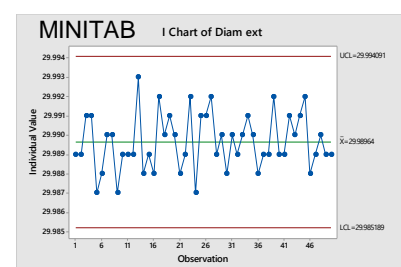
These statistical software programs incorporate full statistical functions for data analysis, run variances tests, correlation tests, normality tests, linear regression analysis, nonlinear regression analysis, ANOVAs, two-level factorial design of experiments, general factorial design of experiments, and multivariate analysis just to name a few. Most statistical software programs are not designed to be used online in a real-time environment to meet the needs of users on the production floor – as example MINITAB.



This statistical software is designed as an off-line application; it is used by engineers to take data collected for off-line analysis and studies. As example see capability test using MINITAB. This software is very easy to use and have a lot of examples in help files.

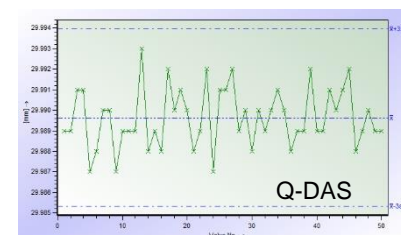


In Q-das case can have in some modules cameras to integrate with gage devices and data collection equipment. After automatically measurement the data are stored in a database and engineers can search the data to make analysis.



As weak point - Q-DAS is very expensive comparing with MINITAB and requires knowledge concerning software and network rights to make statistical analysis.

Q-das need some minim requirements as advanced operating system, RAM, hard disk space, monitor resolution. MINITAB works without software or memory requirements. Please see an individual control chat made using MINITAB and Q-das.



We invite you to the trainings organized by Effective Flux order to discover the advantages of SPC (Statistical Process Control) and MSA (Measurement System Analysis) with MINITAB or Q-DAS.