Application of Statistical Process Control (SPC)

Training Programme
by
Dream Catcher Consulting Sdn Bhd

21 - 22 Aug 19
Dream Catcher Consulting Sdn Bhd, Penang

303-4-5 & 303-4-6 Block B, Krystal Point
Jln Sultan Azlan Shah 11900 Sg Nibong Penang, Malaysia
http://dreamcatcher.asia
enquiry@dreamcatcher.asia
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+604 640 7110
Synopsis

Variability, in which no two units of product are exactly alike, exists in any manufacturing operation regardless of how well it is designed. For the product to meet or exceed the requirements of customers, the manufacturing operation must be capable of producing output with little variability around the product's target or nominal dimensions. Statistical Process Control (SPC) is an effective means towards achieving this. The routine application of SPC will enable the engineer to understand process variation and as a whole a company to continuously reduce the amount of variability in its output and to avoid off-specification product.

Course Highlight
This course provides a basic understanding of the important concepts in SPC and focuses on the powerful SPC technique of control charts. Practical information on how to properly implement and maintain SPC control charts in a manufacturing environment will be emphasized. The use of statistical method for performing the necessary calculations in SPC will also be illustrated.

What You Will Learn

- Key SPC concepts
- Types of SPC control charts for variable and attribute data
- Setting up and using SPC control charts
- Interpretation of control charts and action
- Process capability and comparison with different processes
- Process capability assessment

Who Should Attend

- Process engineers
- Quality engineers
- Design engineers
- Customer service engineers

Prerequisite

Basic background in statistics.

Course Methodology

This course is presented in the form of lectures and group discussions. Case studies will be cited. Participants will be assigned individual as well as group exercises throughout the entire course duration.
2 day(s), 9am - 5pm

**Course Structure**

**SPC Level 1 - Introduction to SPC**

1) SPC and Variation

- SPC's advantages vs. quality control by inspection
- SPC's purpose is to "fight variation"
- Differences between attribute and variables data
- Explanations of special and common cause variation
- How SPC can be used to detect the different types of variation in manufacturing processes.

2) Pictures of Numbers - Histograms

- Building, reading and identifying parts of a histogram
- Histograms make visible the patterns caused by variation
- Histograms can show the ability of a process to meet customer specifications

3) Introduction to Control Charts

- Understanding the parts of control charts
- Control charts are calculated from the process data itself
- Control charts can indicate whether process variation is from common or special causes
- Rules governing use and interpretation of control charts

4) Exercises or Test are introduced at appropriate stage to check the proper understanding of Level 1 knowledge

**SPC Level 2 - Applying SPC**

1) Selecting Parameters

- Taking a new look at your process
- Preparing to collect data
- Block diagrams, pareto charts, fishbone diagrams
- Parameter test checklist and monitoring priorities
- Manufacturing case study

2) Types of Control Charts

- Control chart review - benefits, parts, rules
- Variables control charts - X bar and R chart, X bar and S chart
- Attribute control charts - P, NP, C, U charts
- Choosing the appropriate control chart

3) Setting Up and Using a Control Chart
- Rules for constructing variables and attribute control charts
- Calculator tutorial
- Basic statistics and step-by-step directions for setting up an X bar and R Chart and a C Chart

4) Interpretation and Action

- Control chart patterns and possible causes
- Control charts as an indicator of process problems
- Deciding when and if to adjust a process
- Steps to determine the causes of variation

5) Exercises or Test are introduced at appropriate stage to check the proper understanding of Level 2 knowledge

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**Course Instructor(s)**

**Mr Albert Lim**

Mr. Albert Lim has been working in several MNCs' companies since 1989. He brings with him an extensive exposure in manufacturing audio commercial products, automotive audio products, EMS for printed circuit board assembly in computer and aircraft products and PCBA for automotive electronics and antenna design & manufacturing.

Having a Master degree in Business Administration and a Diploma in Electronics Engineering and with more than 23 years of working experience in various departments such as quality assurance, process, manufacturing engineering and production, he has developed an extensive knowledge in establishing quality management system, manufacturing process control system tools, total quality control in PCB assembly process, new product introduction process and quality system audit processes.

He has working experiences in local companies, multinational companies in EMS and OEM industries from US, Japan, Malaysia and European countries with cross culture countries exposures and have travelled to several locations in China, Europe, & US.

He has in depth knowledge experience in business processes, proven leadership skills from working with internal, external and cross countries team throughout the design, development and implementation of operation business applications in QMS software developments, shop floor manufacturing software system integration.

He has won several new businesses through developing and designing of shop floor manufacturing system with traceability at product level till components and supplier level through improvement on business application processes.

He was a qualified internal lead auditor in ISO 9000 quality system and involved in several hands on application training in process FMEA application, problem solving and decision making, statistical process control, process capability, DOE, electrostatic discharge (ESD), 8D problem solving methodology, internal quality audit, 5S awareness program, lean manufacturing, six sigma program and lead free soldering application.

Albert is a highly motivated person with his bottoms up leadership skills and down to earth
hands on application person has built up trust and good relationship with the team he works with. Have conducted several training as part time freelance trainer for SPC, FMEA and ESD with training consultancy company.
Administration Details

Programme Logistics

**Duration:** 2 day(s), 9am - 5pm  
**Date:** 21 - 22 Aug 19  
**Venue:** Dream Catcher Consulting Sdn Bhd, Penang

Morning break, lunch and tea break will be provided throughout the course duration. Course Manual and Certificate of Attendance will be provided.

Your Investment

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<th>Type</th>
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<tr>
<td>Regular Fee</td>
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<tr>
<td>Early Bird Discount</td>
<td>Saver Package (2 pax)</td>
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<td>Group Discount</td>
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Additional cost may incur for customization or extra material request. Course fee is 100% claimable from PSMB (SBL scheme) in accordance to PSMB guidelines.

3 Easy Steps to Register

- **Phone** +604 640 7111 / 7112
- **Fax registration form** to +604 640 7110
- **Email registration form** to register@dreamcatcher.asia
Method of Payment

Crossed cheque / bank draft made in favour of DREAM CATCHER CONSULTING SDN BHD. Registration form together with payment to be couriered to:

Dream Catcher Consulting Sdn Bhd
303-4-5 & 303-4-6
Block B, Krystal Point
Jln Sultan Azlan Shah
11900 Sg Nibong
Penang, Malaysia

Payment must be received no later than 10 working days before the course commences. An undertaking may be accepted in cases where payment is delayed. However all payments must be made before the course commences.

Closing registration date is 07-Aug-2019.

Refund and Cancellation

Fees will only be refunded in full for cancellation received in writing more than 10 working days prior to the commencement date. Substitute attendee(s) will be accepted at no extra charge.

Disclaimer

Dream Catcher Consulting Sdn Bhd reserves the right to change the instructors, date and to vary/cancel the programme should unavoidable circumstances arise. All effort will be taken to inform participants of the changes. Upon sending the registration form, you are deemed to have read and accepted the terms.

Enquiries

call us at +604 640 7111 / 7112 or email us at enquiry@dreamcatcher.asia
# Registration Form

**Course Title** | Application Of Statistical Process Control (SPC)  
**Course Date** | 21 - 22 Aug 19  
**Location** | Dream Catcher Consulting Sdn Bhd, Penang

*(Emails are required to ensure notification of any changes reach the participant)*

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**Total Amount**

*(Emails are required to ensure notification of any changes reach the participant)*

**Submitted by:**  
Company Name:  
Company Address:  
Contact Person:  
Designation:  
Dept:  
Phone:  
Email:  

*Please complete this form with an authorised signature below and fax to fax registration form to +604 640 7110 or email to email registration form to register@dreamcatcher.asia. Call us at phone +604 640 7111 / 7112 for any enquiry*

Authorised Signature:  
*Please print full name (authorised signature) if you submit via email*

Name:  
Designation:  
Dept:  
Date:  

*This registration is invalid without a signature. Payment must be made no later than 10 working days before the course commences. An undertaking may be accepted in cases where payment is delayed, However all payment must be made before the course commences. Participants who registered but did not attend will be invoiced accordingly. Fees will only be refunded in full for cancellation received in writing more than 10 working days prior to the commencement date. Substitute attendee(s) will be accepted at no extra charge.*

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Enclosed cheque/bank draft no  
_________________________ made in favour of DREAM CATCHER CONSULTING SDN BHD