MIRACOM

Quality/Yield Management QMS

Data science-based quality innovation
Stepping stone to global quality management

Overview

Quality Management System

It Identifies the root causes through production data analysis and visualization, and improve product quality which leads to productivity enhancement.

Why needed?

01 Difficulty in obtaining cost competitiveness due to low yield caused by inconsistent production quality

02 Difficulty in maintaining process quality due to manual collection of quality data for processes/equipment

Benefits

Improve quality and manufacturing productivity through systematic data collection and analysis

Prevent quality risk through management of quality goal and history

Solutions

Composed of YMS(Detecting Abnormal Yield), SPC(Analyzing Abnormal Information of Unit Process), and DMS(Analyzing Product Defect). And it analyzes correlation between production data and quality data, and support quality enhancement.

YMS	SPC	DMS
(YMS : Yield Management System)	(SPC : Statistical Process Control)	(DMS : Defect Management System)

* Data Science : A comprehensive approach for gaining insights from data

Features

Improve production quality through predictable quality management.

01   Yield Management System(YMS)

- Provide visual analysis map for analyzing the causes of product defects
- Visually read Index with high frequency of defect occurrence
- Analyze Good/Bad LOT through report functio
- Track accurately process and equipment where abnormal yield occurs

02   Statistical Process Control(SPC)

- Early detection of defect cause based on data pattern of real-time measuring/Inspection
- Maintain and control optimal parameter value through process monitoring
- Improve process capability by managing process capability index(CP/CPK, PP/PPK)
- Manage efficiently process quality level by measuring and evaluating data value

* Process Capability Index : Metrics to Measure required Level to improve process and process capability

* Short-Term Process Capability : CP(Capability of Process)and CPK(Capability of Process Katayori)

* Long-Term Process Capability : PP(Process Performance)and PPK(Process Performance Katayori)

03   Defect Management System(DMS)

- Collect and analyze real-time data of inspection/review equipment
- Analyze defect result in real-time and improve abnormal yield
- Provide defect map for identifying and analyzing defect type
- Analyze defect trend through defect map gallery