



International Operations & Maintenance
Conference in the Arab Countries

Under the theme of
The Integration of Maintenance and Asset Management

 15-16 December 2020

ORGANIZER



ORGANIZING PARTNER



**MEASUREMENT MANAGEMENT SYSTEM
FOR RELIABLE MAINTENANCE PROGRAM**

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Which **one** you will use ?!



Trusted measurement implies reliable maintenance

<https://www.facebook.com/groups/calibration/permalink/10157491223507081>



AGENDA

- What is maintenance , measurement, system?
- Measurement Management System
- Management responsibility
- Resource management
- Metrological confirmation and realization of measurement processes
- Measurement management system analysis and improvement



RUSSELL DESILETS



METROLOGY

Five Key Components of an Effective Scale Maintenance Program

The right program more than pays for itself



“Calibration is the key component of periodic maintenance”

Russel Desilets

Acme Aggregate Co.	
Weighing volume	500 trucks per day
Weighing frequency	Five days per week
Product value	\$26.50 per ton
Scale inaccuracy	-200 pounds
Lost annual revenue	\$344,500



What is Maintenance



Maintenance, in general, can be defined as efforts taken to keep the **condition** and **performance** of a machine always like the condition and performance of the machine when it is still **new**.



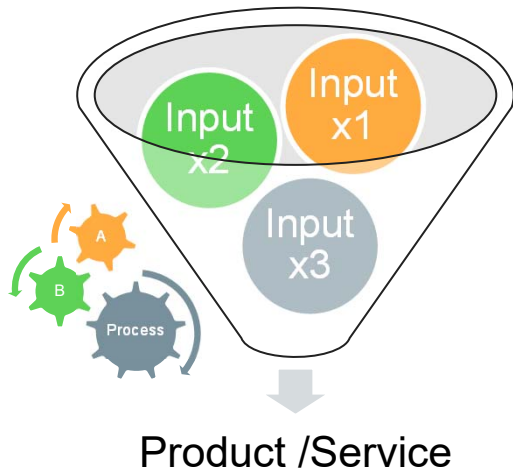
What is measurement



It is an action tells us about a **property** of something. It might tell us how heavy an object is, or how hot, or how long it is. A measurement gives a number to that property.



What is System



a system is an organized collection of **parts** (or subsystems) that are highly **integrated** to accomplish an overall **goal**. The system has various **inputs**, which go through certain **processes** to produce certain **outputs**, which together, accomplish the overall desired goal for the system.



Calibration can never be guaranteed because accuracy is highly dependent on the way a scale is used and cared for.



Five steps for a good measurement equipment maintenance program

- 1. Make sure the testing process is thorough**
- 2. Conduct calibration using state-certified test weights**
- 3. Make sure the testing process is thorough**
- 4. Incorporate visual inspection and repairs**
- 5. Thorough reporting**



ISO MANAGEMENT SYSTEM

**ISO
9001:2015**

**Quality
management system**

**ISO
14001:2015**

**Environmental
management systems**

**ISO
45001:2018**

**Occupational health and
safety
management systems**



ISO 10012:2003

**Measurement management
systems**

**Requirements for measurement
processes and measuring
equipment**



**Management
responsibility**

Metrological function

Customer focus

Quality objectives

Management review





**Resource
management**

Human resources

Information resources

Material resources

Outside suppliers





Metrological confirmation and realization of measurement processes

Metrological confirmation

Measurement process

Measurement uncertainty and traceability



**Measurement
management
system
analysis and
improvement**

General

Auditing and monitoring

Control of nonconformities

Improvement

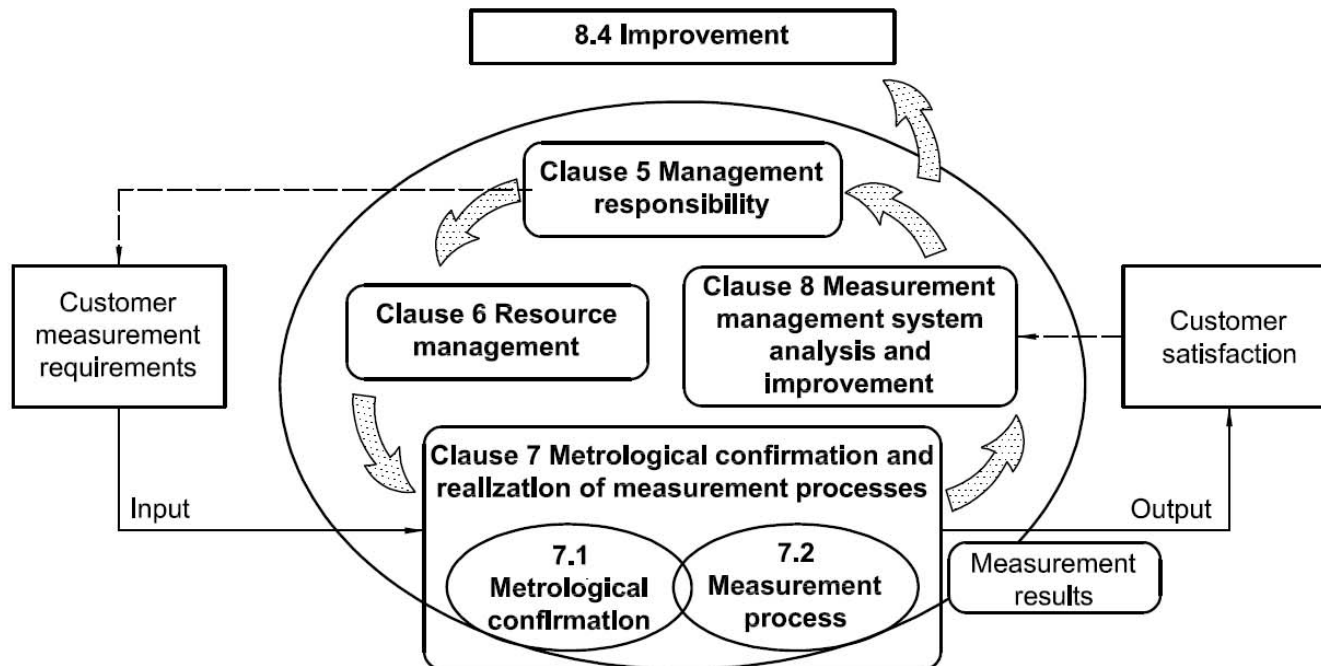


Figure 1 — Model of measurement management system





Thank you

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