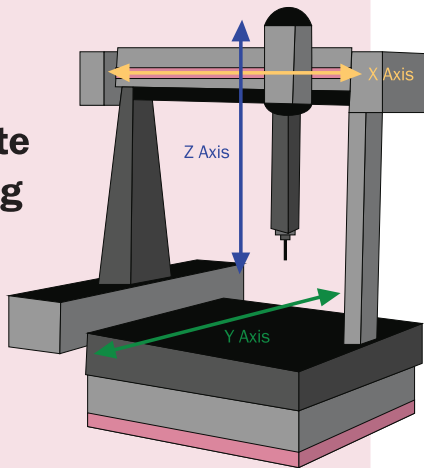


BACKGROUND

The history of measurement parameters dates to the early industrial era, where manual measurement techniques were used to ensure product quality. Over time, advances in technology led to the development of more sophisticated measurement instruments and equipment, such as coordinate measuring machines (CMMs) and laser scanners, which enabled more precise and accurate measurements. In recent decades, the advent of computer-aided design (CAD) and computer-aided manufacturing (CAM) systems, along with advanced data collection and analysis software, has further enhanced the use of measurement parameters in advanced manufacturing.

Today, measurement parameters are an essential aspect of modern manufacturing, enabling high-quality production, improved efficiency, and better overall performance of products.

Coordinate Measuring Machine (CMM)



CONCEPT Measurement parameters are critical factors that help ensure high quality and consistent production. These parameters typically include various measurements related to the dimensions, surface finish, material properties, and other characteristics of the manufactured parts or products.

REAL WORLD CONNECTIONS

To ensure high quality and performance, many wind turbine blade manufacturers use a range of measurement parameters, including dimensional measurements, surface finish measurements, and material properties measurements. An example includes the use of laser scanners and CMMs (Coordinate Measuring Machines) to measure the dimensions of the blades to ensure they meet the required tolerances and specifications. They use profilometers to measure the surface finish of the blades to verify the required roughness and texture specifications have been satisfied. Additionally, they use material testing equipment to measure the material properties of the blades, such as strength and elasticity, to validate the blades meet strict performance requirements, engineering specifications and industry standards.