

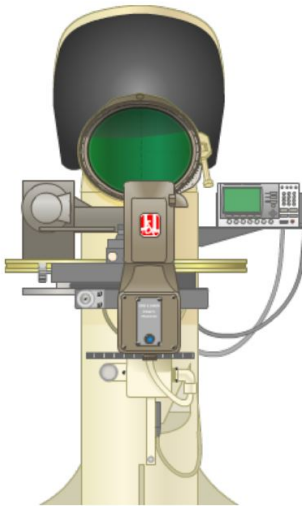
Optical Comparators eLearning Course | Industrial Quality Assurance Training

Introduction to Optical Comparators - WXMT207-XX01XEN-E2

Objective 1: Define an Optical Comparator and Explain Its Function

Optical Comparator Defined

An optical comparator, sometimes called an optical projector, is an inspection device that projects a two-dimensional, magnified silhouette of a part onto a screen using light, lenses, and mirrors.



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eLearning Course: MXMT207

Amatrol's Optical Comparators eLearning Courseware (MXMT207) focuses on optical comparator components and uses. This quality assurance training course covers major topics like operation, types, advantages, and disadvantages of optical comparators, as well as optical comparator components and lens magnification.

Teach Optical Comparators

What is an Optical Comparator?

An optical comparator, sometimes called an optical projector, is an inspection device that projects a two-dimensional, magnified silhouette of a part onto a screen using light, lenses, and mirrors. Optical comparators simplify the inspection of otherwise difficult-to-measure parts, small parts, or part components.

Optics, or the physics of visible light, has been used for visual evaluation and measurement since the 1600s, following introduction of the telescope and the microscope. The idea of using optics to inspect machined parts came about just after World War 1 when James Hartness and Russell Porter were awarded the first patent for a screw thread comparator. The screw thread comparator projected the shadow of the part being inspected onto a screen across the room from a projection device. The inspector could measure the shadow and compare the results against draft designs. Because the screw thread comparator proved to be versatile and reliable, its use quickly spread to other industries. As a result, the screw thread comparator became known as the optical comparator.

Interactive eLearning

Optical Comparators eLearning Curriculum Features Interactive Multimedia

Amatrol's peerless interactive multimedia [curriculum](#) utilizes text with voiceovers, pictures, videos, stunning 3D animations, and interactive quizzes and reviews that engage learners in theoretical knowledge and concepts. This thorough, detailed curriculum begins with the basics and advances to complex concepts. Through partnerships with key industry leaders and leading educators, Amatrol developed the right balance of knowledge to train learners to work in their chosen field.

Additional Info

Requires:

- Computer [\(see Computer Requirements\)](#)

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