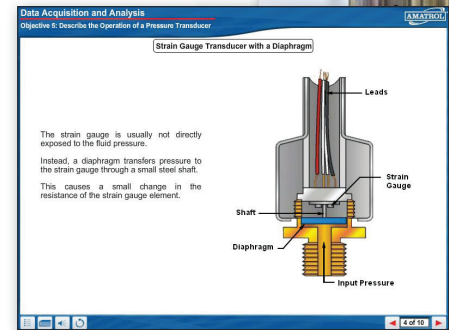
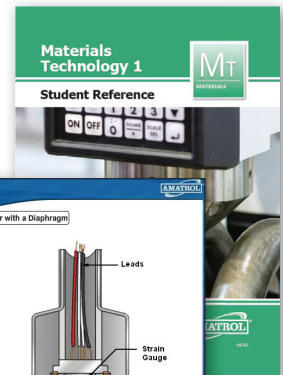


96-MT1



Multimedia Curriculum and Student Reference Guide

Learning Topics:

- Materials Quality Control
- Cause and Effect Diagram
- Destructive and Non-Destructive Testing
- Tensile Strength Analysis
- Tensile Characteristics
- Tensile Testing
- Tensile Analysis
- Data Acquisition Systems
- Transducers
- Data Acquisition Operation
- Data Acquisition Analysis

Amatrol's Materials Technology 1 Learning System (96-MT1) covers the characteristics of materials that are important in design and the role of quality assurance in working with these materials. This learning system provides foundational knowledge for quality assurance professionals or any manufacturing professional that must understand how to test and analyze production materials. This learning system was designed and created for Amatrol's Project Based Learning program, which prepares high school students for careers in advanced manufacturing and associated professions or as a stand-alone system.

The Materials Technology 1 Learning System includes a materials engineering console, data acquisition system, material test set, starter specimen set, and non-destructive testing system. These components will be used to study materials technology topics and skills such as material quality control, destructive and non-destructive testing, tensile strength testing and analysis, and data acquisition and analysis. These heavy-duty, industrial quality components are the same kind of components and materials that learners will see in real-world manufacturing environments. Amatrol provides real-world components so that learners will have the opportunity to gain competencies that they can apply to actual job opportunities.



Technical Data

Complete technical specifications available upon request.

Materials Engineering Console

- Materials Test Base Assembly
- Console Frame Assembly
- Hydraulic Pump Assembly
- 18-Compartment Box with Text Sheet

Data Acquisition System

- Signal Conditioner
- Power Supply
- Linear Potentiometer Assembly
- Pressure Transducer

Material Test Set 1

- Dowel Pin
- Top Hand Nut Assembly
- Micrometer Assembly
- Top Holder
- Micrometer Extension Assembly
- Micrometer Bracket Assembly
- Hydraulic Pressure Gauge Assembly
- Flat Tensile Assembly

Starter Specimen Set 1

- Tensile Test Specimen, Aluminum
- Tensile Test Specimen, HRP & Steel

Non-Destructive Testing System

- Penetrant
- Cleaner
- Developer

Multimedia Curriculum (MB782)

Instructor's Guide (CB782)

Installation Guide (DB782)

Student Reference Guide (HB782)

Additional Requirements:

Computer: See requirements at: www.amatrol.com/support/computer-requirements

Recommended:

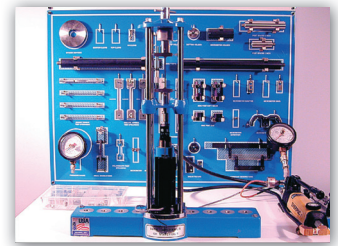
Mobile Technology Workstation (82-610)

Utilities:

Electricity (120 VAC/60 Hz/1 phase)

Heavy-Duty Components for Material Testing and Data Acquisition

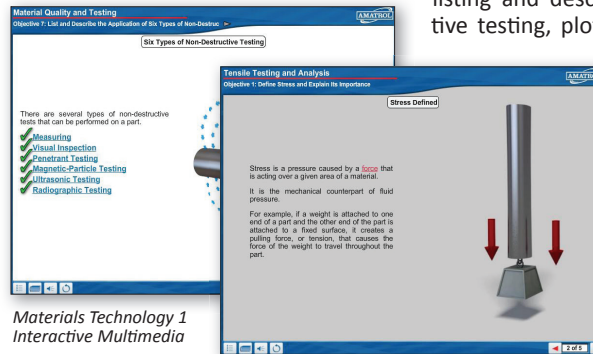
The Materials Technology 1 Learning System features a variety of heavy-duty components like a hydraulic pump assembly, signal conditioner, linear potentiometer assembly, pressure transducer, micrometer assembly, hydraulic pressure gauge assembly, flat tensile assembly, and tensile test specimens, including aluminum and steel test pieces. Learners will use these components to complete hands-on skills like calculating strain given a set of data, setting up and performing a tensile test using mechanical data collection, and testing the operation of a pressure transducer.



Tensile Testing

Practice Interactive Multimedia Exercises Covering Quality Control and Strength Analysis

The Materials Technology 1 curriculum covers three main areas: material quality control, tensile strength analysis, and data acquisition systems. Within these areas, learners will study topics like listing and describing the application of non-destructive testing, plotting and analyzing a stress/strain diagram given a set of data for tensile testing, describing the function of a data acquisition formula, and many more! This curriculum is presented in a stunning multimedia format that can be used anywhere with a computer and internet access. This curriculum features interactive tests and quizzes, beautiful 3D graphics, videos, and audio voice-overs to meet every kind of learning method.



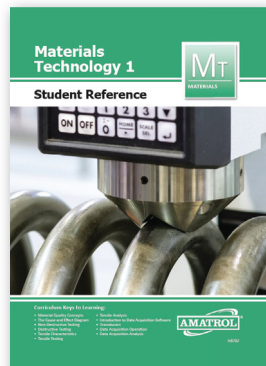
Materials Technology 1
Interactive Multimedia

Amatrol's Project Based Learning: Building Problem-Solving, Teamwork, and STEM Skills

The Materials Technology 1 Learning System is part of Amatrol's Project Based Learning program. The Project Based Learning program was designed for high schools to teach valuable problem-solving, teamwork, and STEM skills and provide a strong base to build toward careers in engineering, manufacturing, and many more. Learners will study industrial concepts and practice hands-on skills in teams across a wide range of learning systems, which culminates with the learners solving a variety of project kits like a hovercraft, automated can crusher, and automated drawbridge.



Hovercraft Project Kit (96-PK-TR1)



Student Reference Guide

A sample copy of the Materials Technology 1 Student Reference Guide is also included with the system for your evaluation. Sourced from the system's curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfectly-bound book. Student Reference Guides supplement this course by providing a condensed, inexpensive reference tool that learners will find invaluable once they finish their training making it the perfect course takeaway.

