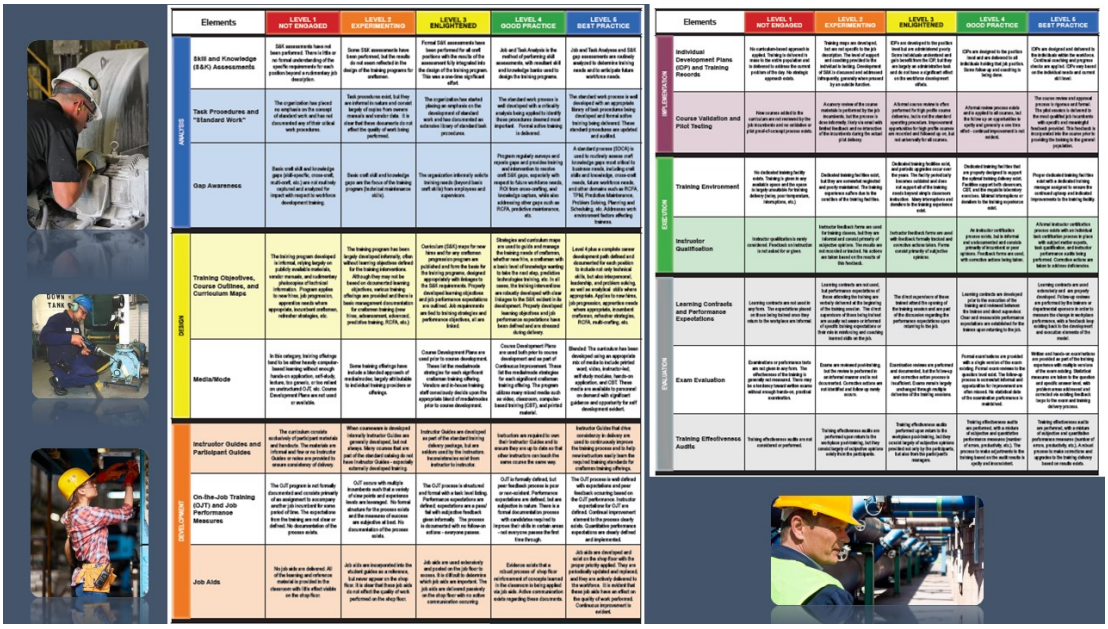
MAINTENANCE TECHNICIAN SKILLS

BY RICKY SMITH CMRP, CMRT



A Maintenance Skills Assessment is a valuable tool in determining the strengths and weaknesses of a given group of employees to design a high impact training program which targets those documented needs. Maintenance personnel have often found it difficult to upgrade their technical skills because much that is available is redundant or does not take their current skill level into consideration. The assessment is designed to eliminate those problems by facilitating the construction of customized training paths for either individuals or the group based upon demonstrated existing knowledge and skills. When used in conjunction with a job task analysis, a gap analysis can be performed to determine both what skills are needed in order to perform the job effectively and what skills the workforce presently has. Gap analysis also ensures that training is EEOC compliant.

The Maintenance Skills Assessment consists of a series of written tests, performance exercises, and identification activities selected from a matrix of mechanical, electrical, and instrumentation topics as well as basic skills. The selection process allows a client to tailor the assessment to meet specific needs. The written tests, administered in multiple choice format, examine an employee's knowledge of the subject. Theories, principles, fundamentals, vocabulary, and calculation are among the skills tested. In the performance component, employees carry out typical maintenance tasks in accordance with generally accepted work standards. Some skill areas also include oral identification activities in which an employee is asked to name a component and state its use. Components are generally recommended and/or provided by the host organization to ensure relevance.

The written and performance portions of the assessment should be proctor by a local technical college.

The resulting data is analyzed and compiled into a series of reports which depict scores in three ways: the company summary, a composite of all personnel tested; test subject results, scores of all personnel tested by subject area; and individual test results, scores of all personnel tested by person. A representative from the Technical College reviews and explains the reports with management and also with the individuals tested.

After completion of the assessment process, the Technical College can help establish performance standards for each employee or for the group, develop a training plan to address the identified needs, develop curriculum to meet those training goals, or deliver training in the targeted skills. The assessment report becomes a benchmark study on the status of your existing maintenance workforce which is useful as the tool against which to measure progress or as the profile against which to hire new employees to round out the department to become more effective and efficient.

Increasing pressure to improve productivity and reduce cost has forced organizations to search for innovative solutions. The Maintenance Skills Assessment has a proven track record as an effective tool providing solid documentation in a quick and easy-to-read format. Targeted training is both effective and efficient regardless of whether the goal is to design a full apprentice- to-journeyman program or just identify skills for high impact brushing up.

EXAMPLE SUBJECTS COVERED A TYPICAL SKILLS ASSESSMENT

ELECTRICAL SKILLS ASSESSMENT SUBJECT MATRIX				
	SUBJECT	WRITTEN	PERFORMANCE	IDENTIFICATION
01	Fundamentals Of Elect	YES		
02	Motors	YES	YES	
03	Control Devices	YES	YES	YES
04	Programmable LogicControllers	YES	YES	
05	Instrumentation	YES		
06	AC Drives	YES	YES	
07	DC Drives	YES		
08	Power Distribution	YES	YES	
09	Test Equipment	YES	YES	
10	Electrical Devices	YES		YES
11	Electrical Schematics	YES		

GENERAL SKILLS ASSESSMENT SUBJECT MATRIX				
	SUBJECT	WRITTEN	PERFORMANCE	IDENTIFICATION
01	Safety	YES		
02	Mathematics	YES		
03	Rigging	YES		

MECHANICAL SKILLS ASSESSMENT SUBJECT MATRIX				
	SUBJECT	WRITTEN	PERFORMANCE	IDENTIFICATION
01	Bearings	YES	YES	YES
02	Fasteners	YES		YES
03	Lubrication	YES		
04	Hydraulics	YES	YES	YES
05	Pneumatics	YES		
06	Mechanical Principles	YES		
07	Blueprint Reading	YES		
08	Mechanical Drives	YES	YES	YES
09	Torque		YES	
10	Benchwork		YES	
11	Welding	YES	YES	
12	Oxy - Acetylene		YES	
13	Piping	YES	YES	YES
14	Plumbing	YES	YES	
15	Coupling/Alignment	YES	YES	YES
16	Pumps	YES		

Join Ricky Smith CMRP, CMRT for this great workshop.

"Virtual via Zoom" (Internet)

Course Objectives

- To enhance communication between Maintenance / Reliability /Production / Plant Leadership and Maintenance Technicians
- To provide the vision of Proactive and Maintenance to all Maintenance Technicians
- To increase knowledge and skills for Maintenance Technician through education and knowledge sharing
- To define Roles and Responsibilities between technicians and management
- To reduced turnover of Maintenance technicians because of lack of understanding between management and hourly technicians

Course Outline

- Benefits of the CMRT Exam and Certification
- Review of Certified Maintenance & Reliability Technician – CMRT - Candidate Guide for Certification and Recertification
- Definition of Maintenance of Reliability Best Practices
- SMRP Body of Knowledge and the Relationship to
- Definition of Maintenance and Reliability "Best Repair" Practices
- Causes of Equipment Failures
  - Inconsistent Execution of Work
  - Lack of effective Processes
  - Lack of Knowledge
  - Lack of Repeatability
  - Lack of proper aligned Leading and Lagging KPIs
- Preventive Maintenance / Prediction Maintenance
- Maintenance Planning and Scheduling

.... And so much more

If you are interested in hosting this training workshop at your site, send your request to rsmith@worldclassmaintenance.org