

Power Generation Maintenance Mechanic PGMM52

Updated November 2024

Focus Statement

A Power Generation Maintenance Mechanic must be able to safely use hand and power tools; work safely in accordance with regulatory and industry standards; perform advanced rigging and mathematical calculations; interpret construction drawings; identify, inspect, troubleshoot, maintain, and replace pumps, drivers, compressors, pulverizers, gearboxes, valves, and other major mechanical equipment; prepare and assemble piping components to include threading, cutting, and joining; remove, install, and troubleshoot bearings, mechanical seals, and couplings, and perform machinery alignments; troubleshoot and repair equipment; and have a basic working knowledge of turbines, hydraulics, pneumatics, and motor-operated valves.

Overview

- Two-hour closed-book examination
- May use a basic function, non-printing calculator
- No extra papers, books, notes or study materials are allowed

Minimum passing score is 75.

Performance Verification

A corresponding hands-on Performance Verification is available.

NCCER Curriculum

All NCCER knowledge assessments are referenced to NCCER's curriculum modules as listed on this specification sheet. This assessment is referenced to NCCER's 1st edition of the Power Generation Maintenance Mechanic curriculum. You may order books and modules from Pearson by visiting www.nccer.org/order-books-modules/

Assessment Development

All questions are developed and approved by subject matter experts under the direction of NCCER.

Credentials

Upon successful completion of the knowledge assessment or performance verification, credentials can be viewed and printed by the individual or assessment program through their NCCER Account.

Score Report and Training Prescription

Each candidate will have online access to their assessment results including their overall score and recommended training through their NCCER Account.

Written Assessment Contents:

| Module ID | Content Domain/Module Title | Number of Items |
|-----------|-----------------------------|-----------------|
| 00101 | Basic Safety | 1 |
| 00106 | Basic Rigging | 1 |
| 32103 | Fasteners and Anchors | 4 |
| 32104 | Oxyfuel Cutting | 4 |
| 32105 | Gaskets and Packing | 3 |
| 32107 | Construction Drawings | 4 |
| 32108 | Pumps and Drivers | 4 |

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Written Assessment Contents:

| Module ID | Content Domain/Module Title | Number of Items |
|------------------|---|------------------------|
| 32109 | Valves | 4 |
| 32112 | Mobile and Support Equipment | 4 |
| 32113 | Lubrication | 4 |
| 32302 | Precision Measuring Tools | 4 |
| 32207 | Introduction to Bearings | 4 |
| 32303 | Installing Bearings | 4 |
| 32304 | Installing Couplings | 4 |
| 32308 | Installing Mechanical Seals | 4 |
| 32306 | Conventional Alignment | 4 |
| 32404 | Reverse Alignment | 4 |
| 32307 | Installing Belt and Chain Drives | 3 |
| 32204 | Introduction to Ferrous Metal Piping Practices | 4 |
| 32205 | Identify, Install and Maintain Valves | 4 |
| 32208 | Low-Pressure Steam Systems | 4 |
| 32209 | High-Pressure Steam Systems and Auxiliaries | 4 |
| 32211 | Heaters, Furnaces, Heat Exchangers, Cooling Towers, and Fin Fans | 3 |
| 15401 | Conveyors | 2 |
| 15409 | Basic Hydraulic Systems | 4 |
| 15410 | Troubleshooting and Repairing Hydraulic Systems | 3 |
| 52401 | Vibration and Balancing | 4 |
| 52402 | Fuel Preparation and Delivery Equipment | 4 |

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Written Assessment Contents:

| Module ID | Content Domain/Module Title | Number of Items |
|-----------|---|-----------------|
| 32403 | Compressors and Pneumatic Systems | 4 |
| 32407 | Troubleshooting and Repairing Pumps | 4 |
| 32408 | Troubleshooting and Repairing Gearboxes | 3 |
| 15505 | Turbines | 4 |
| 15506 | Maintaining and Repairing Turbines | 4 |

Total Number of Items

119