Performance Verification Packet

Petrochemical Boilermaker V3

This performance verification is designed as one method to evaluate job skills and safe work habits of a participant. The performance of the participant must be evaluated by an NCCER certified evaluator, at an NCCER authorized assessment site and be approved by an NCCER accredited assessment center. For a Certified Plus credential, the version of the assessment and performance verification must be the same.

Last Updated: August 2012

NCCER
13614 Progress Blvd • Alachua, FL 32615
Telephone 888.622.3720 • Fax 386.518.6255

Participant

1) Print your last name, first name, and social security number.
2) Print your company name, current employer, and the state where your employer's main office is located.
3) In the space provided for "Participant Signature," sign your name and enter the date you signed the form.

Performance Evaluator

1) In the space provided for "Site Code," enter the postal zip code of the location where the performance verification is being conducted.
2) In the column provided for "Date," enter the date the participant completed each of the tasks. This date is important because there may be times a participant does not complete the performance verification in one day.
3) In the space provided for "Performance Evaluator," sign your name.
4) In the space provided for "Date," next to your signature, list the date the participant successfully completed all of the tasks.

Administrator

1) In the space provided for "Administrator," sign your name. Your signature indicates that the performance evaluator is certified to conduct this performance verification and that it was conducted within the guidelines of the NCCER. Do not use a signature stamp.
2) In the space provided for "Date", next to your signature, list the date that this performance verification form is being sent to the NCCER for entry into the National Registry.
3) In the space provided for "Accredited Assessment Center," print the name of the accredited assessment center that is conducting this performance verification.

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National Craft Assessment and Certification Program
Performance Verification Candidate Information

Petrochemical Boilermaker V3
PVRBLMK34_03

Focus Statement

A journey level petrochemical boilermaker is skilled in tower and exchanger assembly and maintenance including welding, pipe fabrication, and stress relieving. A boilermaker is also knowledgeable in oxyfuel cutting, identifying and installing valves, pipe hangers and supports, rigging, and able to read boiler drawings and detail sheets.

Performance Verification Task References:

Module Number	Module Name
00101-09	Basic Safety
34102-10	Boilermaking Safety
34103-10	Boilermaking Tools
34202-10	Identifying & Installing Valves
34307-11	Towers & Exchangers
34308-12	Testing Piping Systems & Equipment
34411-12	Advanced Exchangers
34412-12	Advanced Towers

Time Required:
18 hours

Materials/Equipment
All materials and equipment will be provided during the performance verification, unless otherwise specified by the testing center.

Study Material
All NCCER performance verifications are referenced to the NCCER curriculum listed in the content. You may order modules from Pearson (800.922.0579) or from NCCER's Online Catalog at www.nccer.org.

Development
All performance verifications have been developed and approved by subject matter experts from the respective craft.

Credentials
NCCER will send appropriate credentials to the assessment center upon successful completion of the performance verification.

Certified Plus
A Certified Plus Designation may be achieved using this performance verification in conjunction with the Petrochemical Boilermaker V3, RBLMK34_03.

National Registry
Assessment and performance verification results will be maintained in NCCER's National Registry and become a part of each candidate's training records. These records are stored and become a portable record of the candidate's training and assessment achievements.

NCCER Performance Evaluator Checklist
Petrochemical Boilermaker

PVRBLMK34_03

Objective

The candidate will demonstrate the ability to safely remove and install tower trays, pull an exchanger bundle, remove and install valves, identify valve types, install and remove blinds, and perform hydro-tests.

Scope

This Performance Verification provides a means to observe and evaluate competencies in the following areas:

- Tower tray removal and installation
- Remove and install a bundle within an exchanger
- Remove, install, handle, and identify valves
- Install and remove blinds
- Perform a hydro-test

Materials Required

- Wedges
- Line-up pins
- Gasket scrapers (normal trade hands and power tools)
- Job site specific equipment based on equipment type and procedures

Time Required

To be determined based on job site

NCCER Performance Evaluator Checklist
Petrochemical Boilermaker

PVRBLMK34_03

Date Completed	Task to Perform

___-___-___1. **Safety**

- Used PPE
- Obtained proper permits
- Used proper and safe rigging
- Followed safety checklists
- Practiced safety procedures in use of tools and equipment
- Identified on site safety procedures

___-___-___ 2. **Blind Installation and Removal**

Installation

- Correctly identified reason for 'blinding'
- Properly confirmed the location to install "blind"
- Selected material of proper size and type
- Obtained and properly used tools, material and safety equipment
- Verified line was empty and de-pressurized
- Followed "first break" procedure with NO errors
- Used proper procedure in breaking remaining bolts
- Correctly selected and used proper tool for separating flange
- Removed bolts (checked threads and bolt condition) and old gasket
- Inspected flange face
- Notified proper personnel of any defects or damage as required by company procedure
- Installed blind and gaskets to specification
- Prepared bolts for installation and ensured proper length with blind installed
- Aligned flanges to specification before tightening
- Followed proper procedure while tightening bolts (star or crisscross)
- Cleaned tools and work area

Removal of blind and return to operations

- Verified line was empty and de-pressurized
- Followed "first break" procedure with NO errors
- Used proper procedure in breaking remaining bolts
- Correctly selected and used correct tool for separating flange
- Removed bolts, blinds and old gaskets
- Inspected flange face

- Notified proper personnel of any defects or damage as required by company procedure
- Installed gaskets to specification
- Prepared bolts for installation, ensure proper length
- Aligned flanges to specification before tightening
- Followed proper procedure while tightening bolts (star or crisscross)
- Cleaned tools and work area

___-___-___ 3. **Valve Removal / Identification**

Removal

- Verified equipment is cleared and depressurized
- Properly "ID" before removal
- Followed removal and handling procedures with NO errors
- Proper installation
- Verified proper valve identification
- Installed following correct procedure

Identification

- Properly identified type of valve and direction of flow of at least six (6) of the following types of valves with NO errors:
  - Gate
  - Globe
  - Check
  - Y-Pattern
  - Butterfly
  - Ball
  - Plug & Control
  - PSV

___-___-___ 4. **Exchangers**

- Correctly identified type of exchanger and its components
- Marked heads (match marks correctly)
- Properly removed associated piping
- Removed head (according to site procedure)
- Pulled bundle and make required repairs
- Selected proper gasket(s) type and material
- Clean, inspect and prepare for assembly
- Pressure tested as required per site procedure

___-___-___ 5. **Hydro-Testing**

- Proper tested specifications acquired from responsible personnel
- Selected proper tools, material and equipment (eg. Pumps, gauges, hand tools hoses and water source and water quality if water to be used as test medium)
- Verified proper "blinding" is completed
- Located and opened high point bleeder
- Installed test tee, gauges and hoses (and a pump if required)
- Filled with water or specified test medium to specification
- Closed high point bleeder at proper time
- Blocked water (or specified test medium) and pulled hoses (if pump is used, the candidate followed the proper procedures)
- Pressure system was set to required pressure in specifications
- Correctly closed proper valve(s) to maintain system pressure
- Shut down pump as necessary
- Correctly monitored system gauge(s) to ensure pressure is maintained at specified level
- Visually inspected system for any leaks and recorded per company procedures
- Opened high point bleeder as first step before draining system
- Drained system according to the site's procedure

___-___-___ 6. **Tower Tray Removal & Installation**

- Identified internal manways
- Identified the proper sequence for removal of all internal components
- Inspected and/or repaired as required including hardware such as rings, nozzles, etc.
- Shake-out and pre-assemble

PERFORMANCE VERIFICATION FORM

PETROCHEMICAL BOILERMAKER – PVRBLMK34_03

Candidate information		
Last Name	First Name	SSN or SGN
Employer/Company Name	State	Code
Evaluator		
Last Name	First Name	SSN or SGN

Task Number	TASK	DATE (MM/DD/YY)	START TIME	END TIME
01	Safety (00101-09, 34102-10)			
02	Blind installation & removal (34102-10, 34103-10, 34307-11)			
03	Valve removal, installation, & identification (34102-10, 34103-10, 34202-10)			
04	Exchangers (34102-10, 34103-10, 34307-11, 34411-12)			
05	Hydro-test (34102-10, 34103-10, 34308-11)			
06	Tower tray removal & installation (34102-10, 34103-10, 34307-11, 34412-12)			

Consent/Release: I, the undersigned, do hereby authorize the National Center for Construction Education and Research (NCCER) to release the information and results attained through the administration of the National Craft Assessment and Certification Program (NCACP) to the organization referenced below, and acknowledge that the employer noted above is my present employer.

Accredited Assessment Center: _____

Participant: _____ **Date**: _____

Performance Evaluator: _____ **Date**: _____

Administrator: _____ **Date:** _____

Return Completed Form To:
NCCER Registry
13614 Progress Blvd • Alachua, FL 32615
1-888-622-3720