



**CONTRACTORS STATE LICENSE BOARD
LICENSE EXAMINATION STUDY GUIDE**



BOILER, HOT-WATER HEATING AND STEAM FITTING (C-4)

Content of the Examination

The Boiler, Hot-Water Heating and Steam Fitting (C-4) Examination is divided into five major sections:

- 1. Planning and Estimation (19%)**
 - Plan boiler projects
 - Estimate boiler projects
- 2. Boiler System Removal, Preparation, and Installation (33%)**
 - Remove old boiler systems
 - Prepare job site for new boiler systems
 - Install new boiler systems
 - Test and complete boiler systems
- 3. Specialty Boiler Installation (11%)**
 - Commercial boiler systems
 - Industrial boiler systems
 - School and hospital boiler systems
 - Residential hydronic boiler systems
- 4. Boiler System Maintenance, Repair, and Retrofit (15%)**
 - Maintain boiler systems
 - Repair boiler systems
 - Retrofit boiler systems
- 5. Safety (22%)**
 - Personnel safety
 - Job site safety
 - Confined space work
 - Dangerous materials

Percentages are approximate

Test Site Policy

This is a closed-book examination. No reference materials may be used during the examination. All materials brought to the examination site must be left in an unmonitored area at your own risk.

Test Strategy

This is a multiple-choice examination with four choices per question. Examination questions are written to provide only one BEST answer. Some questions require mathematical computation. A calculator will be provided.

There is no penalty for guessing. If you are unsure about a particular question, it is better to try to answer the question than to leave the question blank.

Plenty of time is provided to answer all examination questions, so be sure to read each question and its four choices completely and carefully before selecting the BEST possible answer to the question.

Sample Questions

Below are three typical examination questions. The correct answer is underlined.

1. Which of the following conditions would probably cause foaming?
 - a. Turbulence in the water
 - b. Sludge or sediment in the check valve
 - c. A high concentration of liquids in the boiler chamber
 - d. A high concentration of solids in the boiler water

2. What type of cast iron fitting CANNOT be used on cast iron pipe?
 - a. Flanged
 - b. Mechanical
 - c. Welded
 - d. No hub

3. A boiler project costs \$35,400 for materials, \$7,500 for testing, and \$12,700 for commissioning. What amount is due if the contractor has been paid for 45% of these expenses already?
 - a. \$25,020
 - b. \$30,580
 - c. \$48,100
 - d. \$55,600

All questions are written and reviewed by licensed contractors who are actively working in the trade

Resources

*Publisher information for reference books and code is provided below. Other sources for reference books may be found online. **California code books can be viewed online: www.bsc.ca.gov***

2016 California Mechanical Code.

International Association of Plumbing and Mechanical Officials (IAPMO).
PHONE: (800) 854-2766
INTERNET: www.iapmo.org

2016 California Plumbing Code. International Association of Plumbing and Mechanical Officials (IAPMO).

PHONE: (800) 854-2766
INTERNET: www.iapmo.org

Boiler Operator's Guide. Anthony I. Kohan.

PHONE: (877) 833-5524
INTERNET: www.mhprofessional.com

Modern Hydronic Heating for Residential and Light Commercial Buildings. John Siegenthaler.

PHONE: (800) 354-9706
INTERNET: www.cengage.com

Radiant Floor Heating. R. Dodge Woodson.

PHONE: (877) 833-5524
INTERNET: www.mhprofessional.com

State of California General Industry & Electrical Safety Orders (Cal/OSHA) and State of California Construction & Electrical Safety Orders (Cal/OSHA). 2015. California Code of Regulations, Title 8. Mancomm.

PHONE: (877) 626-2666
INTERNET: www.mancomm.com
VIEW ONLINE:
www.dir.ca.gov/dosh/LawsAndRegulations.htm

Publisher information is current as of 7/17