

## License Information

**Scope** – Tests a candidate's knowledge of the design, installation, maintenance, repair, alteration, and extension of air conditioning, refrigeration, warm air heating, low and high pressure boilers, ventilation systems, duct systems, unfired pressure vessels, fuel transmission lines, and related appurtenances.

## Examination Outline

### Open Book

**120 Questions – 4-1/2 hour time limit**

**70% Correct required to pass**

Exam Topic	%
HARV General	21
Low and High Pressure Boilers	12
Warm Air Heating	8
Fuel Gas Systems	13
HARV Controls	12
Piping	8
Load Calculations	4
Insulation	4
Ventilation	13
Safety	4

## References

The following references **are allowed** in the testing center.

1. *Code of Federal Regulations, Title 29, Part 1926 (OSHA)*, Revised July 1, 2008, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, [www.access.gpo.gov](http://www.access.gpo.gov).
2. *International Fuel Gas Code*, 2006, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, [www.iccsafe.org](http://www.iccsafe.org).
3. *International Mechanical Code*, 2006, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, [www.iccsafe.org](http://www.iccsafe.org).
4. *NFPA 31 – Standard for the Installation of Oil Burning Equipment*, 2006 Edition, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, [www.nfpa.org](http://www.nfpa.org).
5. *NFPA 58 – Standard for the Storage and Handling of Liquefied Petroleum Gases (LP Gas Code)*, 2008 Edition, National Fire Protection Association, 1 Batterymarch Park, PO Box 9101, Quincy, MA, 02269-9101, [www.nfpa.org](http://www.nfpa.org).

6. *Manual N – Commercial Load Calculation*, Fifth Edition, 2008, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, [www.acca.org](http://www.acca.org).
7. *ACCA Duct Slide Rule*, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, [www.acca.org](http://www.acca.org).
8. *Pipefitters Handbook*, Third Edition, 1967, Industrial Press, Inc., 989 Avenue of the Americas, New York, NY 10018, [www.industrialpress.com](http://www.industrialpress.com).

The following references were used to create exam questions but **are not allowed** in the testing center.

1. *High Pressure Boilers*, Third Edition, 2003, American Technical Publishers (ATP), 1155 West 175<sup>th</sup> Street, Homewood, IL 60430-4600, [www.go2atp.com](http://www.go2atp.com)
2. *Low Pressure Boilers*, Third Edition, 2008, American Technical Publishers (ATP), 1155 West 175<sup>th</sup> Street, Homewood, IL 60430-4600, [www.go2atp.com](http://www.go2atp.com).
3. *Modern Refrigeration and Air Conditioning*, 18th Edition, 2004, Goodheart-Willcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243, [www.g-w.com](http://www.g-w.com).

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