

Department of Human Resources & Examinations

Louisiana State Licensing Board for Contractors

LSLBC

Mechanical Work (Statewide)

Classification Description

Refers to hydraulic and pneumatic systems, including such components as heating, ventilation, air conditioning, refrigeration, hydronic and steam systems, pressure vessels, plumbing, gas piping, process piping, mechanical equipment, air and process heaters and seals, and air vacuums and filters. Also includes mechanical work for marine vessels.

Legal Definition of a Mechanical Contractor

Under the Contractors' Licensing Law (La. R.S. 37: 2150-2192), a mechanical contractor is defined as "any person who undertakes to, attempts to, or submits a price or bid or offers to construct, supervise, superintend, oversee, direct, or in any manner assume charge of the construction, alteration, repair, improvement, movement, demolition, putting up, tearing down, or furnishing labor, or furnishing labor together with material and equipment, or installing the same for the construction, installation, maintenance, testing, and repair of air conditioning, refrigeration, heating systems, and plumbing for all residential, commercial, and industrial applications as well as ventilation systems, mechanical work controls, boilers and other pressure vessels, steam and hot water systems and piping, gas piping and fuel storage, and chilled water and condensing water systems and piping, including but not limited to any type of industrial process piping and related valves, fittings and components, when the cost of the undertaking exceeds the sum of ten thousand dollars."

Introduction



Mechanical Work (Statewide) is a *closed book* examination with 100 multiple-choice questions and a minimum passing score of 70. You will have *four hours* to complete this examination.

This bulletin contains only a representative sample of the many good references available on the subject at the time the list was compiled. It is not a comprehensive listing. Please note that it is not necessary to read all of the books in order to pass the examination. Rather, this list is intended to suggest what types of references might be useful in helping to acquire the basic knowledge needed to perform this type of work. Often the best preparation is training through a mentor or through a company or organizational training program, or a higher educational or vocational educational training program, etc., along with actual experience.

We try to keep this list current with books in print, but some books go out of print from time to time. These books may be available in your local library's collection or through the services of Inter-Library Loan. If still in print, these books may also be available through your local bookstore or by contacting the publisher. All references available via the internet are followed by the appropriate website address for obtaining the reference. From time to time, website addresses may change and no longer be available. In such cases, please search for the appropriate new website address or contact the publisher or a library to obtain a copy.

Differences in Mechanical Work Classifications

Mechanical Work (Statewide)

May bid, contract and perform any kind of mechanical work without limit anywhere throughout the state. Exempt from any local licensing exam. Local license must still be obtained as required. Employees not required to hold a separate license to perform mechanical work or pull permits. Exempt from all Fire Marshal licensing requirements for piping for fire sprinkler systems.

*Mechanical Work (Restricted)

May bid, contract and perform any kind of mechanical work without limit anywhere throughout the state. Must take any local licensing exam required for any local license and obtain local license as required. Employees can be required to obtain separate local license and/or take separate local exam.

*Mechanical Work (Act 725 – Restricted)

May bid, contract and perform any kind of mechanical work without limit but only within the parishes stated on the license. Exempt from any local licensing exam. Local license must still be obtained as required. Employees not required to hold a separate license to perform mechanical work or pull permits.

*Electrical Work (Bidding Only)

May bid and contract a mechanical work job, but must use a properly licensed mechanical contractor to perform the work.

** These classifications are no longer available to new applicants. New applicants who have never held this classification must take Mechanical Work (Statewide).*

Content Outline

Content Domain	%
Plumbing and Gas Piping	20
Project Management, Estimating and Plan Reading	15
HVAC and Refrigeration Systems	19
Air Distribution Systems and Ventilation	15
Piping Systems and Hydronics (Commercial, Residential and Industrial)	19
Instrumentation (Controls, Balancing)	9
Solar and Alternative-Energy Systems	3

Additional Licensure Requirements from Other Agencies

Mechanical Work contractors who perform plumbing jobs must also possess a Master Plumber License with the State Plumbing Board of Louisiana or use someone who has a master plumber license to perform plumbing jobs. Mechanical Work contractors who perform gas piping jobs for buildings and residences must also possess a Master Gas Fitter's license with the State Plumbing Board of Louisiana or use someone who has a Master Gas Fitter's License to perform gas piping jobs; however, Mechanical Work contractors may make gas piping connections, disconnections, or reconnections from the outlet side of the appliance shutoff valve to the appliance inlet without a Gas Fitter's License.

Mechanical Work contractors installing, moving, or reinstalling boilers or other pressure vessels may be subject to licensure with the Louisiana Office of State Fire Marshal.

Exam Preparation and References

The examination for Mechanical Work (Statewide) is set at the level of knowledge, skill, and abilities expected for individuals entering the field as Mechanical Work contractors. Often the best preparation is training through an apprenticeship, or through a technical community college or a company or organization training program, etc., along with actual experience. Below is only a representative sample of the many good courses and books available on this subject at the time this list was compiled. It is ***not*** necessary to read all books and/or to take all courses in this list in order to pass the examination.

Free Courses/Learning Aids

On HVAC Systems:

YouTube HVAC Training Videos, Geovanny Alcides

https://www.youtube.com/playlist?list=PLKbpIO2bx4hWqfOs1gmAjr9Y3do-7Kt_8

On Hydronic and Refrigeration Systems:

Armstrong University Online- A one-time free registration is required to access these courses. www.armstronginternational.com/knowledge/armstrong-university-online

On Industrial Piping Systems:

Piping Library <https://blog.projectmaterials.com/category/technical-library/>

On Solar Thermal Systems

RE100: Introduction to Renewable Energy Solar Energy International

<https://www.solarenergy.org/courses/introduction-to-renewable-energy/>

On Electric Motors:

Nidec Motor Corporation Training <http://www.nidecmotorpro.com/>

Books

Modern Refrigeration and Air Conditioning; Althouse, A. D., et al; GoodheartWillcox Publisher; Tinley Park, IL. <https://www.g-w.com/modern-refrigeration-airconditioning-2017#li>

AHRI Fundamentals of HVAC/R; Stanfield, Carter and Skaves, David; AHRI Air-Conditioning, Heating, and Refrigeration Institute; Prentice-Hall, Pearson Education, Inc.; Upper Saddle River, NJ; 2010

<http://www.mypearsonstore.com/bookstore/fundamentals-of-hvacr9780134016160?xid=PSED>

Trane Air Conditioning Manual; The Trane Company; La Crosse, WI. May be found at: http://www.trane.com/content/dam/Trane/Commercial/global/productssystems/education-training/EM_ADV1.pdf

2012 International Mechanical Code; International Code Council; Country Club Hills, IL; 2011.

Books Continued

[Managing the Construction Process](#), Fourth Edition; Gould, Frederick; Prentice-Hall, Pearson Education, Inc.; Upper Saddle River, NJ; 2011.

[Solar Water Heating Systems: Fundamentals and Installation](#); International Pipe Trades Joint Training Committee, Inc.; American Technical Publishers; Annapolis, MD; 2013.

[Basic Plumbing with Illustrations](#), Revised Edition; Massey, Howard C.; Craftsman Book Company; Carlsbad, CA; 1997.

[Project Management in Construction](#), Seventh Edition; Levy, Sidney M.; McGraw-Hill Education; New York; 2018.

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