

# 2019

# PORT OF SAN FRANCISCO MECHANICAL CODE

Based on the 2019 California  
Mechanical Code



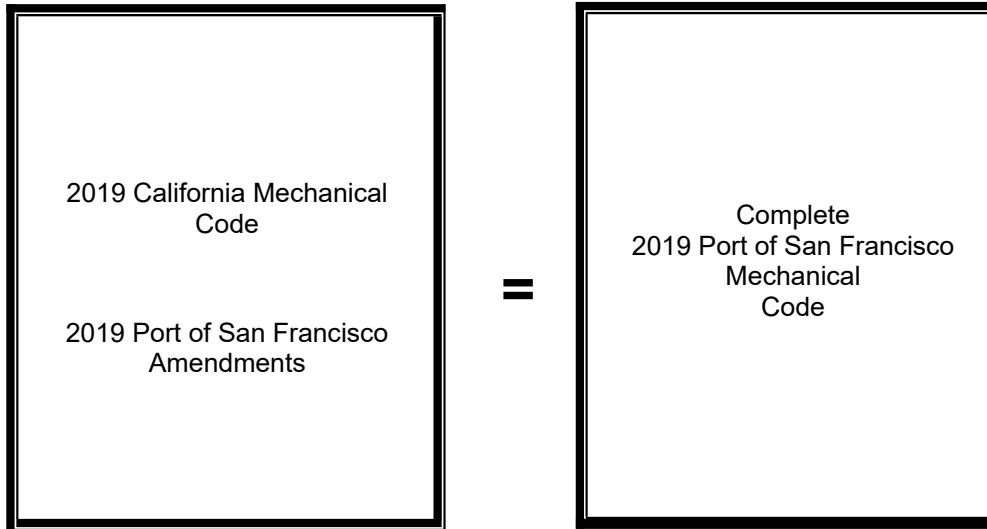




## 2019 Port of San Francisco Mechanical Code

The complete 2019 Port of San Francisco Mechanical Code adopts and amends the 2019 edition of the California Mechanical Code

**Effective Date: January 1, 2020**



### PUBLISHERS NOTE

To simplify the use of the Port of San Francisco amendments with corresponding sections of the 2019 California Codes, explanatory remarks appearing in *italics* are provided at the beginning of each amendment indicating whether the Port of San Francisco Amendments to the 2019 California Codes are adding, revising, *moving*, *renumbering* or replacing a section or portion of a section.

Should you find publication (e.g. typographical) errors or inconsistencies in this code or wish to offer comments toward improving its format, please address your comments to:

Port of San Francisco Engineering Division -  
Building Permit Group Pier 1, The  
Embarcadero  
San Francisco, CA 94111

Phone: (414) 274-0564

*This page is intentionally blank*

**TABLE OF CONTENTS**

**CHAPTER 1 ADMINISTRATION ..... 1**

**DIVISION I CALIFORNIA ADMINISTRATION ..... 1**

**DIVISION II ADMINISTRATION ..... 3**

**PART 1 General. .... 3**

        101.1 Title. .... 3

        103.2 Modifications..... 3

**PART II- Organization and Enforcement..... 3**

        106.10 The Chief Harbor Engineer May Adopt Rules and Regulations..... 3

        107.0 Board of Appeals. .... 3

**CHAPTER 2 DEFINITIONS..... 5**

    204.0 –B– ..... 5

*Building Code.*..... 5

    207.0 –E– ..... 5

*Electrical Code.*..... 5

    208.0 –F–..... 5

*Fire Code.* ..... 5

    218.0 –P– ..... 5

*Plumbing Code.* ..... 5

**CHAPTER 3 GENERAL REQUIREMENTS ..... 7**

**CHAPTER 4 VENTILATION AIR ..... 9**

**CHAPTER 5 EXHAUST SYSTEMS ..... 11**

**CHAPTER 6 DUCT SYSTEMS ..... 13**

**CHAPTER 7 COMBUSTION AIR ..... 15**

**CHAPTER 8 CHIMNEYS AND VENTS ..... 17**

**CHAPTER 9 INSTALLATION OF SPECIFIC APPLIANCES..... 19**

    926.0 Incinerators and Crematories. .... 19

**CHAPTER 10 BOILERS AND PRESSURE VESSELS..... 21**

    1013.0 Inspections and Tests..... 21

    1013.2 Operating Permit. .... 21

    1013.3 Maintenance Inspection..... 21

    1013.7 Unfired Pressure Vessels. .... 22

**CHAPTER 11 REFRIGERATION ..... 23**

**CHAPTER 12 HYDRONICS..... 25**

**CHAPTER 13 FUEL GAS PIPING..... 27**

    1308.5.6.1 Fish Processing Facilities. .... 27

**CHAPTER 14 PROCESS PIPING ..... 29**

**CHAPTER 15 SOLAR ENERGY SYSTEMS ..... 31**

**CHAPTER 16 STATIONARY POWER PLANTS..... 33**

**CHAPTER 17 REFERENCED STANDARDS..... 35**

**APPENDIX A RESIDENTIAL PLAN EXAMINER REVIEW FORM FOR HVAC SYSTEM DESIGN ..... 37**

**APPENDIX B PROCEDURES TO BE FOLLOWED TO PLACE GAS EQUIPMENT IN OPERATION..... 39**

<b>APPENDIX C INSTALLATION AND TESTING OF OIL (LIQUID) FUEL-FIRED EQUIPMENT.....</b>	<b>41</b>
<b>APPENDIX D FUEL SUPPLY: MANUFACTURED/MOBILE HOME PARKS AND RECREATIONAL VEHICLE PARKS.....</b>	<b>43</b>
<b>APPENDIX E SUSTAINABLE PRACTICES .....</b>	<b>45</b>
<b>APPENDIX F SIZING OF VENTING SYSTEMS AND OUTDOOR COMBUSTION AND VENTILATION OPENING DESIGN .....</b>	<b>47</b>
<b>APPENDIX G EXAMPLE CALCULATION OF OUTDOOR AIR RATE .....</b>	<b>49</b>

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 1 ADMINISTRATION**

**DIVISION I CALIFORNIA ADMINISTRATION**

See Division II Administration for Port of San Francisco Mechanical Code administrative provisions.

*No Port of San Francisco Mechanical Code Amendments.*



*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**DIVISION II ADMINISTRATION**

**PART 1 General.**

*101.0 Revise this section to read as follows:*

**101.1 Title.** These regulations shall be known as the 2016 Port of San Francisco Mechanical Code, may be cited as such, and will be referred to herein as "this code."

*103.1 Add paragraph to the end of this section to read as follows:*

See Port of San Francisco Building Code Section 104A.2.8

*103.2 Add the following new section:*

**103.2 Modifications** See Port of San Francisco Building Code Section 104A.2.7 for modifications.

**PART II- Organization and Enforcement.**

*106.10 Add the following new section:*

**106.10 The Chief Harbor Engineer May Adopt Rules and Regulations.** See Building Code Section 104A.2.1.

*107.0 Replace this section to read as follows:*

**107.0 Board of Appeals.**

For appeals see *Port* Building Code Section 105A Appeals.

*This page is intentionally blank*

CHAPTER 2 DEFINITIONS

**204.0 –B–**

**Building Code.** Add the following sentence at the end of the paragraph:

For the purpose of the Port of San Francisco Mechanical Code, “Building Code” shall be the most recent edition of the Port of San Francisco Building Code.

**207.0 –E–**

**Electrical Code.** Add a sentence at the end of the paragraph as follows:

For the purpose of the Port of San Francisco Mechanical Code, “Electrical Code” shall be the most recent edition of the Port of San Francisco Electrical Code.

**208.0 –F–**

**Fire Code.** Add the following sentence at the end of the paragraph:

For the purpose of the Port of San Francisco Mechanical Code, “Fire Code” shall be the Fire Code currently adopted by the State Fire Marshal and amended as San Francisco Fire Code.

**218.0 –P–**

**Plumbing Code.** Add the following sentence at the end of the paragraph:

For the purpose of the Port of San Francisco Mechanical Code, “Plumbing Code” shall be the most recent edition of the Port of San Francisco Plumbing Code.

*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 3 GENERAL REQUIREMENTS**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 4 VENTILATION AIR**

*No Port of San Francisco Mechanical Code Amendments.*



*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 5 EXHAUST SYSTEMS**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 6 DUCT SYSTEMS**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 7 COMBUSTION AIR**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 8 CHIMNEYS AND VENTS**

*No Port of San Francisco Mechanical Code Amendments.*



*This page is intentionally blank*

**CHAPTER 9 INSTALLATION OF SPECIFIC APPLIANCES**

*926.0 Add the following sentence as the second paragraph of this section:*

**926.0 Incinerators and Crematories.**

The operation and installation of incinerators shall also comply with the regulations of the Bay Area Air Quality Management District.

*This page is intentionally blank*

**CHAPTER 10 BOILERS AND PRESSURE VESSELS**

*1013.0 Revise this section to read as follows:*

**1013.0 Inspections and Tests.**

An installation for which a permit is required shall not be put into service until it has been certified by a licensed boiler contractor or inspected by an approved insuring company inspector and an operating permit has been issued.

It shall be the duty of the owner or his authorized representative to notify the Chief Harbor Engineer that the installation has been certified or inspected. It also shall be the duty of the owner or their authorized representative to post in a conspicuous position on the installation, a notice in (substantially) the following form:

“Warning! This installation has not been inspected and approved by the Authority Having Jurisdiction and shall not be covered or concealed until so inspected and approved,” and it shall be a violation of this code for anyone other than the Authority Having Jurisdiction to remove such notice. The Authority Having Jurisdiction shall require such tests as it deems necessary to determine that the installation complies with the provision of this section. Such test shall be made by the owner or his authorized representative in the presence of the Authority Having Jurisdiction.

EXCEPTION: On installations designed and supervised by a registered professional engineer, the Chief Harbor Engineer shall have the authority to permit inspection and testing by such engineer.

*1013.2 Revise this section to read as follows:*

**1013.2 Operating Permit.**

It shall be a violation of this code to operate a boiler or pressure vessel without first obtaining a valid operating permit to do so from the Authority Having Jurisdiction. Such permit shall be displayed in a conspicuous place adjacent to the boiler or vessel. The operating permit shall not be issued until the equipment has been certified as complying with State of California Building Safety Orders by a licensed boiler contractor, by employees of an approved insuring company holding commissions from the National Board of Boiler and Pressure Vessel Inspectors or by a registered professional engineer.

EXCEPTION: The operation only of steam-heating boilers, low-pressure hot-water- heating boilers, hot-water supply boilers and pressure vessels in Group R Occupancies of less than six dwelling units and in Group U Occupancies.

*1013.3 Revise the first paragraph of this section to read as follows:*

**1013.3 Maintenance Inspection.**

The Chief Harbor Engineer shall require an inspection of boilers and pressure vessels operated under permit at such intervals as deemed necessary, but not less frequently than noted below:

*1013.7 Revise the second paragraph of this section as follows:*

**1013.7 Unfired Pressure Vessels.**

Inspection of boilers and pressure vessels may be made by licensed C-4 Boiler Contractors and, when covered by insurance, may be made by employees of the insuring company holding commissions from the National Board of Boiler and Pressure Vessel Inspectors, subject to approval of the Authority Having Jurisdiction. Approved inspectors shall make reports on prescribed forms on inspections authorized by the Authority Having Jurisdiction. The reports shall be filed in the Authority Having Jurisdiction office. Inspectors shall notify the Authority Having Jurisdiction of suspension of insurance because of dangerous conditions, new insurance in effect, discontinuance of insurance coverage, or any unsafe conditions requiring correction.

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 11 REFRIGERATION**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 12 HYDRONICS**

*No Port of San Francisco Mechanical Code Amendments.*



*This page is intentionally blank*

**CHAPTER 13 FUEL GAS PIPING**

*1308.5.6.1 Add the following section:*

**1308.5.6.1 Fish Processing Facilities.** In portions of fish processing facilities, canneries and other indoor wet locations, and in locations where walls are frequently washed or subject to sea air, ferrous gas piping shall be protected as required by Section 1308.5.6

*1311.2.3 Add the following second sentence to the first paragraph:*

Unless specifically approved by the Chief Harbor Engineer, gas piping shall be prohibited underneath piers, docks or wharfs.

*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 14 PROCESS PIPING**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 15 SOLAR ENERGY SYSTEMS**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 16 STATIONARY POWER PLANTS**

*No Port of San Francisco Mechanical Code Amendments.*



*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**CHAPTER 17 REFERENCED STANDARDS**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**APPENDIX A  
RESIDENTIAL PLAN EXAMINER REVIEW FORM FOR HVAC SYSTEM DESIGN**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**APPENDIX B  
PROCEDURES TO BE FOLLOWED TO PLACE GAS EQUIPMENT IN OPERATION**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**APPENDIX C  
INSTALLATION AND TESTING OF OIL (LIQUID) FUEL-FIRED EQUIPMENT**

*No Port of San Francisco Mechanical Code Amendments.*



*This page is intentionally blank*

**APPENDIX D**  
**FUEL SUPPLY: MANUFACTURED/MOBILE HOME PARKS AND RECREATIONAL VEHICLE**  
**PARKS**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**2019 Port of San Francisco Mechanical Code**

**APPENDIX E  
SUSTAINABLE PRACTICES**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**APPENDIX F  
SIZING OF VENTING SYSTEMS AND OUTDOOR COMBUSTION AND VENTILATION  
OPENING DESIGN**

*No Port of San Francisco Mechanical Code Amendments.*

*This page is intentionally blank*

**APPENDIX G  
EXAMPLE CALCULATION OF OUTDOOR AIR RATE**

*No Port of San Francisco Mechanical Code Amendments.*



*This page is intentionally blank*