

POWER BOILER
FIRST INSPECTION
GUIDE LIST

ADMINISTRATION

	Yes	No	N/A
1. Was an installation plan submitted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Was a registration number assigned? ME-_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are the following data reports available as applicable?			
• Boiler Manufacturers technical manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Form I-1 (NBIC boiler installation report)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Form CG-500 (Manufacturer's/Installing contractors report for ASME CSD-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Form P-2 (Manufacturers data report for all boilers except electric and watertube)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Form P-2A (Manufacturers data report for electric boilers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Form P-3 (Manufacturers data report for watertube boilers, superheaters, waterwalls and economizers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Form P-3A (Engineering-contractor data report for a complete boiler unit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Form P-4 (Manufacturers partial data report)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Form P-4A (Manufacturers data report for fabricated piping)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Form P-4B (Report of hydrostatic testing of field mechanical assembled piping)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Form P-5 (Summary data report process steam generators, waste heat type)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Form P-6 (Manufacturers data report supplementary report)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Form P-7 (Manufacturers data report for safety valves)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Does the facility have a licensed boiler operator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Review boiler operator attendance requirements with the boiler owner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Does the facility have an engineer in-charge regularly employed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Review operating logs and boiler water treatment program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Ensure that the boiler is stamped with the ME registration number.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GAGE GLASS / WATER COLUMNS

	Yes	No	N/A
1. Is a gage glass installed? (Note; Boilers with an MAWP above 400 PSI require 2 gage glasses, one of which may be a remote water level indicator. A gage glass is not required for forced flow and high temperature water boilers). PG-60.1/ 60.1.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the lowest visible water level at least 2 inches above the lowest permissible water level, per the boiler manufacturer? (Note; this distance shall be 3 inches for horizontal fire tube boilers. Miniature and electric boilers the lowest visible water level shall be at least 1 inch above the lowest permissible water level). PG-60.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. If multiple tubular sections are installed was there a minimum of 1 inch overlap? PG-60.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No	N/A
4. Did each gage glass have a drain cock or valve with an unrestricted drain opening of not less than ¼ inch? (Note; when boiler MAWP exceeds 100 PSI, the gage glass shall be furnished with a connection to install a valve drain to a point of safe discharge). PG-60.1.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Does each gage glass have a top and bottom cutout, of through-flow construction? PG-60.1.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is the bottom of the gage glass drain valve 7 feet above the floor or platform? If yes, the operating mechanism shall indicate by its position whether the valve is opened or closed. PG-60.1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is the temperature- pressure rating of the valves, fittings & piping at least equal to the boiler MAWP and corresponding saturated steam temperature? PG-601.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are gage glass guards installed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the gage glass free of defects, cracks and is the water level clearly visible?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is the water column furnished with a drain connection of at least NPS ¾ inch? PG-60.2.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Are the steam and water connections readily accessible for cleaning and inspection? PG-60.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Are shut-off valves installed in the pipe connections between a boiler and a water column? If yes, are the valves acceptable i.e., outside-screw-and-yoketype gate valve. PG-60.3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Is the valve size NPS 1 inch minimum? PG-60.3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Is the water level readily visible to the boiler operator in the area where the control actions are initiated? (Note; If 2 gage glasses are installed, either a fiber optical cable or mirror shall be installed to transfer the image of the water level to the control area). PG-60.1.1.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Is remote water level indicators installed? If yes, the indicator shall have clearly marked minimum water level reference at least 2 inch above the lowest permissible water level as determined by the boiler manufacturer. PG-601.1.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Are any outlet connections installed in the piping for remote water level indicators or water columns, for any function other than water level indication? If yes, they shall be removed. PG-60.3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GAGES

	Yes	No	N/A
1. Does the boiler have a pressure gage that is easily readable? (Note; in the case of high-temperature water boilers a temperature gage shall be located so that at all times it indicates in degrees Fahrenheit the water temperature at or near the boiler outlet connection). PG-60.6.1, 60.6.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the gage calibrated, and free of defects or damage? PG-60.6.3/ NBIC; RB-3161	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Does the gage have a valve or cock installed? (Note; a second valve may be located near the boiler provided it is sealed or locked). PG60.6.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is a siphon loop installed? If yes, is the size ¼ inch ID or larger? PG-60.6.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. If a siphon loop is not installed, is a suitable substitute installed? PG-60.6.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are the fittings suitable for the boiler MAWP & temperature? (Note; Brass and copper are prohibited above 250 PSI). PG-60.6.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No	N/A
7. Do the connections meet the following size requirements? PG-60.6.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Minimum ¼ Inch.			
• Minimum ½ Inch ID for steel or wrought iron piping.			
8. Is the dial of the pressure gage graduated to approximately double the pressure at which the safety relief valve is set, but in no case less than 1 ½ times this pressure? PG-60.6.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is a test connection provided with a connection size of at least NPS ¼? PG-60.6.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SAFETY AND SAFETY RELIEF VALVES

	Yes	No	N/A
1. Is at least 1 safety valve per 500 feet of water heating surface or 1100 KW of power input installed? PG-67.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the safety or safety relief valve(s) ASME/ NB approved type valves and suitable for the installed application? PG-67.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is the capacity of the valve(s) sufficient to prevent the pressure from rising more than 6 percent above the pressure setting of the valve(s) and in no case 6 percent above the boiler MAWP? PG-67.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is one or more of the safety relief valve(s) set pressure set at or below the boiler MAWP? PG-67.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is any of the safety relief valve(s) set higher than 3 percent above boiler MAWP? PG-67.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is the range of multiple safety relief valve settings within 10 percent of the highest valve setting? (Note; this does not apply to High Temperature Water Boilers). PG-67.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is the safety relief valve over NPS 3? If yes, shall have a flanged inlet connection or shall be welded. PG-67.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the safety relief valve connection a dedicated connection? PG-71.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the safety relief valve installed as close as possible to the steam flow path, without any unnecessary intervening piping or fittings? PG-71.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is the valves installed in an upright position? PG-71.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Is the outlet pipe free from unnecessary length and properly supported? PG-71.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Does the outlet pipe(s) have ample provision for gravity drain? Is the piping so arranged to prevent low points allowing collection of water? PG-71.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Does the safety relief valve(s) have an open gravity drain hole installed? (Note; for valves exceeding NPS 2 ½ inch drain hole shall be NPS 3/8 inch or larger, for valves NPS 2 ½ inch and smaller the drain hole shall not be less than ¼ inch). PG-71.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Is the outlet(s) piped to a safe direction? PG-71.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. If 2 valves are being used does the smaller of the 2 valves have at least 50 percent of the capacity of the larger valve? PG-71.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Are operating devices installed to allow remote lifting of the safety relief valve(s)? PG-73.1.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. If 2 safety relief valves share the same opening is the cross sectional area of the opening less than the cross sectional area of all the safety relief valves that are connected to that opening? PG-71.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Are the tamper proof seals in place? PG-73.1.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No	N/A
19. Is mufflers installed on the outlet of the safety relief valves? If yes, ensure that the construction in no way restricts the flow from the safety relief valve. (Note; Mufflers shall not be used on high temperature water boilers). PG-71.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Miniature boilers- Is the safety relief valve smaller than NPS ½ inch? PMB-15.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUPPORTS, FOUNDATIONS AND SETTINGS

	Yes	No	N/A
1. Is the boiler setting as per the manufacturers listing ? (Note; if not addressed by the manufacturer the NBIC calls for 36 inch on sides of single boiler install, battery calls for 48 inch clearance) NBIC; I-2330	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the boiler supported to allow at least 12 inch clearance between the metal surface of the Shell and the floor? NBIC; I-2330	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. HRT Boilers only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Is the boiler over 72 inches in diameter? If yes, is the boiler supported from steel hangers by the outside-suspension type setting independent of the furnace side walls. NBIC; I-3311	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Is the boiler 14 ft in length or longer, or over 54 inches and up to and including 72 inches in diameter? If yes, is the boiler supported by the outside-suspension type of setting. NBIC; I-3311	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Does the boiler have a top opening manway? If yes, is at least 84 inch of clearance available. (Note; Boilers with no manway require at least 36 inches or as per the manufacture) NBIC; I-2330	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Does the boiler installation allow for removal and installation of tubes? NBIC; I-2330	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is the boiler supported by structural steel? If yes, is the supporting members located or protected from heat from the furnace. NBIC; I-2320	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Does the boiler have a pitch of 1 inch per 10 feet of boiler length? (Note; Horizontal fire tube boilers only). Maine Rules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

LOW WATER CUT OFF

	Yes	No	N/A
1. Are two low water cut-off devices installed? (Note; except miniature boilers). CSD1; CW-120	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is one of the two low water cut-offs equipped with a manual reset? Preferably the lower of the two devices CSD1; CW-140	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is the installed piping sufficiently arranged to allow for proper cleaning and inspection? This includes cleanout's at all T connections. CSD1; CW-120	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is the piping, fittings and components rated for the boiler safety relief valve setting and boiler rated temperature? CSD1; CW-120	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the drain line piped to a safe point of discharge? CSD1; CW-120	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Do the low water cut-off have separate pipe connections below the waterline? (Note; a common steam side connection is permissible). CSD1; CW-120	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is the piping and fittings NPS 1 inch or greater? CSD1; CW-120	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the drain pipe and blow off valve NPS ¾ inch or greater? CSD1; CW-120	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Ensure no valves are installed between the boiler steam and water connections and the low water cutoffs? CSD1; CW-120	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PRESSURE CONTROLS

	Yes	No	N/A
1. Is at least one high pressure control installed? CSD1; CW-310	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is at least one high pressure limit installed? CSD1; CW-310 (Note; a manual reset is required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Verify that no valves of any type are installed between the boiler and the high-pressure limit control device or high pressure control? CSD1; CW-310	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Verify that each pressure device is protected with the use of a siphon? CSD1; CW-310	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Verify that the siphon is NPS ¼ inch or greater? CSD1; CW-310	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Verify that steam pressure supply connections are as follows; CSD1; CW-310	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Non-ferrous- Steam pressure supply connections to a single pressure control shall not be less than NPS ¼ inch for lengths up to and including 5 feet, and not less than NPS ½ inch for lengths over 5 feet?			
• Ferrous- Steam pressure supply connections to single pressure control shall not be less than NPS ½ inch for length up to and including 5 feet, and not less NPS 1 inch for lengths over 5 feet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Verify that manifolded controls are as follows; CSD1; CW-310	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Non Ferrous Pipe shall not be less than NPS ½ inch for lengths up to and including 5 feet and not less than NPS ¾ inch for lengths over 5 feet?			
• Ferrous Pipe shall not be less than NPS ¾ inch for lengths up to and including 5 feet and not less than NPS 1 ¼ inch for lengths over 5 feet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Verify that the upper set point limit of the pressure control does not exceed the boiler MAWP? CSD1; CW-310	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ELECTRICAL

	Yes	No	N/A
1. Does the boiler have a disconnecting means that is capable of being locked in the open position? CSD1; CE-110	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the boiler have a manual remote shut down located just outside of the boiler room? (Note; for exterior doors the switch may be located just inside the door additionally, each access door should have a switch). CSD1; CE-110	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are all electrical components installed in an approved enclosure? (Note; components subject to a drip must be drip tight). CSD1; CE-110	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are motors that are exposed to dripping or spraying of drip-proof construction? CSD1; CE-110	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are all motors fully guarded? CSD1; CE-110	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are electrical panels installed greater than 3 feet from the boiler and a minimum 5 feet separation is maintained from any unenclosed fuel oil tank? (NFPA 31, 4.3.6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FUEL TRAIN**GAS**

	Yes	No	N/A
1. Are manually operated main and pilot shutoff valves in sizes larger than NPS 2 or for pressures greater than ½ PSIG ball or lubricated plug type with stops? CSD1; CF-150	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are all manually operated valves lever handled type valves with lever permanently attached? CSD1; CF-150	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No	N/A
3. Do the handles clearly indicate “on” and “off”? CSD1; CF-150	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is a readily accessible manually operated valve provided upstream of all others main gas valves? (Note; the pilot valve shall be located upstream of this valve). CSD1; CF-150	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the manually operated main valve within 9 feet of the boiler and readily accessible from the boiler room floor? CSD1; CF-150	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is at least 1 gas-pressure regulator installed? (Note: if a pilot is used a second regulator is required). CSD1; CF-160	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are 2 gas pressure switches installed 1 HP and 1 LP? (Note; the low pressure switch must be located upstream of the safety shut off valve) CSD1; CF-162	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are vent lines piped to a safe point of discharge out/doors? CSD1; CF-190	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Do the vent lines have a means to prevent blockage from foreign matter? CSD1; CF-190	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Ensure atmospheric vent line are not connected to any other common or manifolded gas vent, bleed or relief lines? (Note; A gas bleed line from a diaphragm control valve or pressure regulator may vent to the pilot valve) CSD1; CF-190	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Is one leak test valve installed for each safety shutoff valve? CSD1; CF-180	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Is the gas piping operating pressure in excess of 5 psi? If so, is the piping welded? (NFPA a54, 5.5.1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Is all piping at least seed 40 and steel or wrought iron pipe? (NFPA 54, 5.6.2.2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Is an exterior emergency shutoff valve installed and clearly marked? (NFPA 54, 6.9.3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Was a satisfactory pressure test accomplished? (NFPA 54, 7.1.4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FUEL OIL

	Yes	No	N/A
1. Does the fuel system have safety relief valve installed? If yes, does the valve discharge to the return line, the oil tank or pump suction line. CSD, CF-440	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is a low oil pressure switch installed? CSD, CF-450	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is a low air/ steam atomization pressure switch installed? CSD, CF-450	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is a high oil temperature switch installed? CSD, CF-450	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is a low oil temperature switch installed? CSD, CF-450	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is 2 approved safety shut off valves or one safety shutoff valve and a nozzle cutoff integral to the fuel unit provided? (Note; it is recommended that a relief valve be installed between the 2 safety shut off valves). CSD, CF-460	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is a loss of flame control system installed? CSD, CF-510	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Two safety shutoff valves in series, each with proof of closure, shall be provided in the oil line to the main burner. (NFPA 85, 2.3.18)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Two safety shutoff valves in series, each with proof of closure, shall be provided in the gas line to the main burner. (NFPA 85, 2.3.2.3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is a drip leg installed in the gas piping? (NFPA 85, 2.3.2.5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Is a permanent means provided for making leakage-tightness tests of the main burner gas safety shutoff valves? (NFPA 85, 2.3.2.7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Two safety shutoff valves in series provided in the line to the gas igniter, an automatic vent valve shall be provided between the two valves? (NFPA 85, 2.3.4.13)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DRAINS

Yes No N/A

- 1. Is the boiler working pressure over 100 psi? If yes, the boiler shall be equipped with 2 valves in series? (Note; Each boiler shall have one drain pipe located at the lowest point of the boiler fitted with a stop valve. The valve shall have the capability of being locked in the closed position). NBIC; I-2531
- 2. Are drain pipes, valves and fittings within the same drain line the same size? NBIC; I-2531
- 3. Are the discharge from the drains piped to a safe location? NBIC; I-2531
- 4. Do the material ratings meet the following? NBIC; I-2532
 -
 - Boiler MAWP 100 psi or less, the drainpipe, valves and fittings shall be rated for at least 100 PSI and 220 degrees F.
 - Boiler MAWP exceeds 100 psi the drain pipe, valves and fittings shall be rated for the MAWP.

PIPING

Yes No N/A

N/A

GENERAL

Yes No N/A

- 1. Is all piping properly supported? NBIC; I-2630
- 2. Does all bolts, studs and nuts properly marked and fully engaged?

FEEDWATER

Yes No N/A

- 1. Is the feedwater introduced to the boiler in such a manner to prevent thermal shock of metal surfaces? (note; Boilers operating over 400 psi shall be fitted with shields, sleeves or other suitable means to reduce temperature differentials). NBIC; I-2412
- 2. Does the boiler exceed 500 square feet of heating surface? If yes, are 2 means of supplying feedwater available? (Note; for solid fuel and wood boilers whose setting can continue to provide a heat source to cause damage to the boiler in the event that the feed source is interrupted, one such means of the feed source shall not be susceptible to the same interruption as the other). NBIC; I-2412
- 3. Do feedwater connections meet the following; NBIC; I-2412
 -
 - Up to and including 100 square feet of heating surface require NPS ½ inch or larger connections?
 - Over 100 square feet of heating surface require NPS ¾ inch or larger connections?
 - Miniature boilers- Is the connection no smaller than NPS ½ inch for iron and steel pipe and NPS ¼ inch for brass or copper? PMB-11.1
 - Electric boilers- Is the connection no smaller than NPS ½ inch? PEB-11.1
- 4. Is the feedwater pumps capable of providing feedwater at a pressure at least 3 percent higher than any safety relief valve setting? NBIC; I-2413
- 5. Is the boiler fitted with a check valve and stop valve? (Note; the check valve shall be located between the boiler and the stop valve, a combination stop-and-check valve is considered to be a stop valve only). NBIC; I-2414

Yes No N/A

6. Are 2 or more boilers fed from a common source? If yes, a globe or regulating valve shall be located between the check valve and the feed source. NBIC; I-2414

STEAM SUPPLY

Yes No N/A

1. Are the stop valves and fittings rated for at least 100 psi and the expected steam temperature at the valve or the boiler MAWP? NBIC; I-2630

2. Are the stop valves and fittings constructed from austenitic stainless steel on any water wetted surfaces? NBIC; I-2630

3. Are ample gravity drains installed if stop valves are installed that would allow the accumulation of water or condensate in the piping? NBIC; I-2531

4. Is 2 or more boilers with a manhole opening connected to common header? If yes, the boiler shall have 2 stop valves fitted with ample free blow drain between them. (Note; The discharge of the drain shall be visible to the operator, The stop valves shall consist of 1 automatic non-return valve next to the boiler and a second valve of the outside-screw-and-yoke type, or 2 screw-and-yoke type). NBIC; I-2630

BLOWOFF

Yes No N/A

1. Is a blowoff pipe with a stop valve fitted to the boiler? (Note; If boiler MAWP exceeds 100 PSI 2 stop valves are required. Electric boilers with normal water content not exceeding 100 gallons requires only one valve). NBIC; I-2650

2. Is the first stop valve of the slow opening type? (Note; the second valve if installed may also be of the slow opening type. On boilers with multiple blowoff pipes, a single master stop valve may be placed on the common blowoff pipe from the boiler and one stop valve on each individual blowoff). NBIC; I-2650

3. Are straight run globe or valves that would allow the accumulation of sediment used? NBIC; I-2650

4. Is the blowoff valve(s), pipe and fittings minimum of NPS 3/4 inch and a maximum of NPS 2 1/2 inch and rated for the MAWP and temperature of the boiler? (Note; bushings and reducers shall not be used. Electric boiler pipes and fittings shall be NPS 1 inch, except for boilers with a rating of 200kw or less). NBIC; I-2650

5. Are the fittings, valves or piping made from austenitic steel or malleable steel? NBIC; I-2650

6. Does the piping meet the following pressure ratings? NBIC; I-2650

- Boiler MAWP exceeds 100 PSI the blow off piping shall be at least extra strong and the valves shall be rated for at least 1.25 times the MAWP.
- Boiler MAWP exceeds 900 PSI blow off piping shall be at least extra strong and the valves shall be rated for the MAWP plus 225 PSI.

7. Is the blowoff piping properly protected if it is exposed to furnace heat? NBIC; I-2650

8. Is the blowoff pipe discharge constructed to prevent injury to personnel? NBIC; I-2650

9. Is the blowoff pipe directly discharging into the sewer? NBIC; I-2650

10. Is the blowoff tank installed underground? If yes, it shall be enclosed in a concrete or brick pit with a removable cover to allow inspection of the entire shell and heads of the tank. NBIC; I-2650

Yes No N/A

- 11. Is galvanized pipe used in the blow off system? NBIC; I-2650
- 12. Does the blow down piping contain connections used for continuous blowdown?
If yes, the connections shall not exceed NPS 2 ½ inch. NBIC; I-2650

VENTILATION AND COMBUSTION AIR

Yes No N/A

- 1. Is the boiler room provided with unobstructed air openings of at least 1 square inch free area per 2000 Btu/hr maximum fuel input of the combined burners?
NBIC; I-2440
- 2. Are screens used in louvers or grills not smaller than ¼” mesh and are accessible for cleaning (NFPA 31, 5.6.2)
- 3. Is the ventilator fans sized on the basis of .2 CFM per minute for each 1000 Btu/hr of maximum fuel input of the combined burners for all boilers and water heaters installed? NBIC; I-2440
- 4. Are interlocks provided to prevent burner operation without adequate ventilators/fans being in operation? NBIC; I-2440
- 5. Are the boiler room air supply openings clear from debris? NBIC; I-2440
- 6. Are fully closeable manual dampers installed? NBIC; I-2440

BOILER ROOM

Yes No N/A

- 1. Does the boiler room exceed 500 square feet floor area, with a fuel capacity of 1,000,000 Btu/hr or greater? If yes, 2 means of exit are required, each elevation should be provided with at least 2 means of egress, remotely located from the other.
NBIC; I-2341
- 2. Do all walkways, runways and platforms meet the following; NBIC; I-2342
 - Metal construction?
 - Are provided between or over the top of boilers which are more than 8 feet above the operating floor?
 - Suitable tread or grating material?
 - Exceed 30 Inch in diameter?
 - Equipped with handrails at least 42 inch high?
 - Stairways that serve as means of access to walkways, runways, or platforms exceed an angle of 45 degrees?
 - Are ladders at least 18 inches wide?
 - Do ladder rungs extend through the side members and permanently secured?
 - Does the ladder have not less than 30 inch clearance from the front rungs to the nearest permanent object in front of the ladder?
 - Does the ladder have a clearance of 6 ½ inch from the back of the rungs to the nearest permanent object?
 - Does the ladder have a clearance width of at least 15 inch from the center of the ladder on either side across the front of the ladder?
- 3. Is at least one floor drain installed? NBIC; I-2343
- 4. Is a convenient water supply available for cleaning and maintenance? NBIC; I-2344
- 5. Are flammables and combustible materials properly stored?

