McDonnell & Miller, Inc.

Safety Devices for Steam and Hot Water Heating Boilers . . . Liquid Level Controls

3500 North Spaulding Ave., **Chicago 18, Illinois**

Doing One Thing Well

The McDonnell line consists of (1) boiler water feeders, low water fuel cut-offs and combined feeders and cut-offs for low pressure steam boilers of all sizes and types, hand-fired or automatically fired; (2) pump controls, low water fuel cut-offs and low water alarms for steam boilers of any size or type with pressures up to 150 lbs; (3) safety relief valves (Btu-rated) for hot water heating boilers and domestic hot water heaters; boiler water feeders and low water fuel cut-offs for hot water heating boilers; (4) make-up water feeders for receiving tanks and other liquid level controls for special applications; (5) water level controls for humidity pans of warm air furnaces.

The selection of controls for usual applications is shown in the following service recommendation. Most of these products are described in the following three pages.

Service Recommendations

(1) STEAM BOILERS

Boiler Size	Maximum Steam Pressure	McDonnell product to use
HAND FIRED JOBS		
Up to 5000 sq ft	25 lbs	No. 47 Boiler Water Feeder
Above 5000 sq ft	35 lbs	No. 51 Boiler Water Feeder
Any size	75 lbs	No. 53 Boiler Water Feeder
AUTOMATICALLY FIRED JOBS		
Boiler Water Feeder—Low Water Cut-off Combinations		
Up to 5000 sq ft	25 lbs	No. 47-2 Feeder Cut-off Combination
Up to 5000 sq ft	20 lbs	No. 67-101 Electric Cut-off Combination
Above 5000 sq ft	35 lbs	No. 51-2 Feeder Cut-off Combination
Any size	75 lbs	No. 53-2 Feeder Cut-off Combination
LOW WATER FUEL CUT-OFFS		
Any size	20 lbs	No. 67 Low Water Fuel Cut-off
Any size	50 lbs (Steam or water)	No. 63 Low Water Fuel Cut-off
Any size	150 lbs	No. 150 Low Water Fuel Cut-off

(Industrial or Process boilers—Specific recommendations on receipt of complete data.)

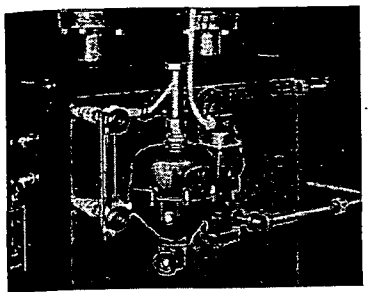
(2) HOT WATER HEATING BOILERS

No. 33 Safety Relief Valve, for boilers up to 242,900 Btu per hour gross output; opening pressure 30 lbs.

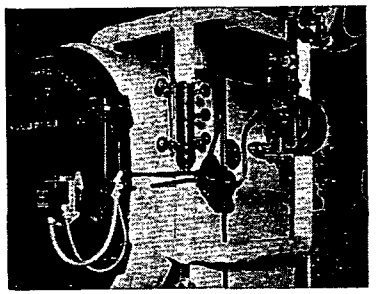
(3) DOMESTIC HOT WATER TANKS AND HEATERS

Opening Pressure	Btu per Hour Capacity	McDonnell Product to use
45 pounds	321,300	No. 3345 Safety Relief Valve
75 pounds	308,700	No. 3375 Safety Relief Valve
100 pounds	423,900	No. 33100 Safety Relief Valve
125 pounds	513,900	No. 33125 Safety Relief Valve
150 pounds	605,700	No. 33150 Safety Relief Valve

Boiler water feeders, feeder-cut-off combinations, and low water cut-offs . . . for low and moderate pressure steam boilers



McDonnell No. 47-2 for heating boilers under 5000 sq ft capacity. Maximum steam pressure, 25 lbs.



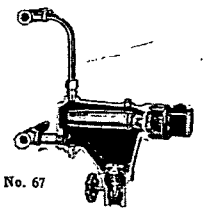
McDonnell No. 51-2 for heating boilers over 5000 sq ft capacity. Maximum steam pressure, 35 lbs.

McDonnell No. 47-2, shown installed above, maintains a safe water level in boiler by feeding water whenever necessary. If emergencies such as priming or foaming permit water to fall to ½ in. in gauge glass, cut-off switch cuts current to burner until emergency has passed. Has "Quick-Hook-Up" for fast, accurate installation right in gauge glass tappings; "cool" feed valve; extra-deep sediment chamber; *ASME*-approved blow-off valve. Also available for hand fired boilers without No. 2 switch, as No. 47 Feeder.

McDonnell No. 51-2, shown installed above, is same as No. 47-2 described at left, except it has greater feeding capacity for larger boilers, and is installed with 1 in. equalizing pipes instead of "Quick-Hook-Up." Also available for hand fired boilers without No. 2 switch, as No. 51 Feeder.

For boilers operating at higher pressures, from 35 to 75 lbs, use McDonnell No. 53-2 (or No. 53, without switch.)

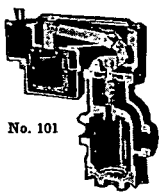
McDonnell No. 67 Low Water Cut-off
For automatically fired steam boilers of any size
Maximum steam pressure, 20 lbs.



No. 67

Has the McDonnell "Quick-Hook-Up" for quick, easy and trouble-proof installation in gauge glass tappings; deep sediment chamber with large quick-opening blow-off; packless, non-binding construction; adjustable terminal box to make wiring neat and easy; dependable snap-action twin switches. One switch can be used to sound low water alarm, or control McDonnell No. 101 Electric Water Feeder described below. Second switch cuts current to burner if water level drops to ½ in. in gauge glass.

McDonnell No. 101 Electric Boiler Water Feeder
For boilers up to 5000 sq ft capacity



No. 101

For use with No. 67 Low Water Cut-off or with McDonnell "built-in" Low Water Cut-offs which are standard equipment on many modern heating boilers. It converts the cut-off into a feeder cut-off combination as described at top of this page.