All Performance Tests conducted by
THE FROST RESEARCH LABORATORY,
Norristown, Pa., U. S. A.

WORKING PRESSURES
15 lbs. Steam **30 lbs. Water**

B. T. U. per lb. of Oil 19400
Wht. of Oil, 7.2 lbs. per gal. at 70°

RATINGS—KNOWLTON WATERTOOB BOILERS

Boiler Number	20	21	22	23	24	25	26½	27	27½	28	29	30	31	32	33	34
Output at Boiler Outlet.....Thousands B.t.u. per hour	204	288	360	528	638	765	947	1130	1290	1450	1651	1993	2337	2737	2977	3160
Output at Boiler Outlet, Guaranteed Designed Loads (Steam), sq. ft.	850	1200	1500	2200	2660	3185	3945	4710	5370	6040	6880	8300	9720	11400	12400	13160
Output at Boiler Outlet, Guaranteed Designed Loads (Water), sq. ft.	1360	1920	2400	3520	4257	5100	6310	7530	8600	9680	11000	13280	15550	18240	19850	21070
Recommended Max. Net Loads, Steam, sq. ft. in 70°F	630	890	1110	1695	2050	2450	3035	3625	4135	4650	5500	6640	7775	9120	9920	10530
Recommended Max. Net Loads, Water, sq. ft. in 70°F	1010	1425	1775	2710	3280	3920	4855	5800	6615	7440	8800	10625	12440	14590	15870	16850
Output at Boiler Outlet.....Lbs. Steam per hour	210	297	371	544	658	788	976	1162	1328	1492	1702	2050	2410	2815	3068	3257
Gallons Oil burned.....per hour	1.8	2.55	3.22	4.68	5.72	6.77	8.45	10.0	11.5	13.0	14.9	18.0	21.0	25.0	27.1	28.7
Water Evaporation per lb. of Oil.....lbs.	16.2	16.2	16.0	16.1	16.0	16.2	16.0	16.2	16.0	16.0	15.9	15.8	15.95	15.6	15.7	15.7
Boiler Efficiency.....per cent	80.9	80.9	80.4	80.7	80.0	81.1	80.0	80.9	80.3	80.0	79.6	79.3	79.9	78.4	78.8	78.8
Flue Gas Temperature.....degrees	441	480	523	572	597	535	570	565	595	615	620	627	613	625	640	634
Draft at Smoke Outlet.....Inches Water	0.02	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.06	0.08	0.16	0.22	0.20
Size of Chimney—One Boiler.....	8x12 x30	8x12 x30	12x12 x30	12x12 x30	12x16 x30	12x16 x30	16x16 x30	16x20 x30	12x16 x30	12x16 x30	16x20 x30	20x20 x35	20x20 x35	20x20 x40	24x24 x60	24x24 x60
Size of Chimney—Two Boilers.....	12x12 x30	12x16 x30	12x16 x30	12x16 x30	16x16 x30	16x16 x30	16x20 x30	20x20 x30	20x20 x30	20x20 x30	20x24 x30	24x24 x35	24x24 x35	24x24 x40	24x30 x60	24x30 x60
Combustion Area.....sq. ft.	2.50	3.83	4.80	6.50	7.58	8.45	9.67	11.27	12.09	12.88	14.11	16.90	19.98	22.51	25.0	25.0

The Titusville Iron Works Company
Titusville, Pennsylvania

Manufacturers of Riveted and Welded Steel Fire-Tube Boilers for Power and Heating; Fronts, Grates, Castings, Smoke Stacks, Tanks and Oil Field Boilers; Steam, Gas, Oil and Gasoline Engines; Pumping Powers and Oil Well Machinery

NEW YORK.....285 Madison Ave.
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Facilities—Titusville Iron Works Company maintains one of the largest and best equipped boiler shops in the country. Every practicable mechanical provision is made for the bending, flanging, riveting, and electric welding so essential to high-grade products.

Construction—In addition to being thorough in engineering design, Titusville Boilers are built by men experienced in every detail of their particular operations.

All riveting is done by competent steel workers and all welding is done exclusively by experts who do nothing but welding. Wherever possible Titusville Welded Boilers are welded *inside* as well as outside. All workmanship and materials are guaranteed first class.

A. S. M. E. Code—Our boilers are built in strict accordance with the latest *A. S. M. E.* Boiler Code Standards and to local requirements when specified.

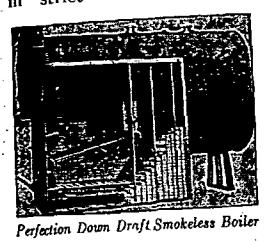
Inspection and Test—Titusville Boilers are continually inspected during construction by a resident representative of the Hartford Steam Boiler Inspection and Insurance Company, Hydrostatic tests are made upon completion. Insurance company certificate furnished free of charge on request.

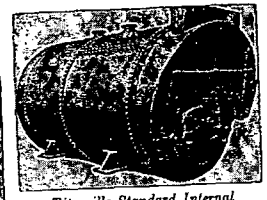
Working Pressures—Our boilers are built in two-pressure ranges, i.e., 100–350 lb. working pressure, *A. S. M. E.* Code, for power and high-pressure service, and in 15 lb. working pressure *A. S. M. E.* Code, for heating service.

Grates, Stacks, Etc.—All boilers are provided with complete sets of doors, fronts, castings, etc., as illustrated and of the types which are standard for our boilers. Special grates furnished on request.

This company also offers its facilities for the construction of stacks, breechings and steel plate work.

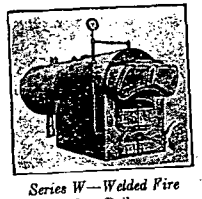
Catalogs—Descriptive catalogs of our boilers and equipment will be sent upon request.

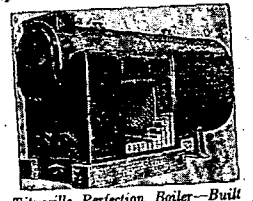

Perfection Down Draft Smokeless Boiler

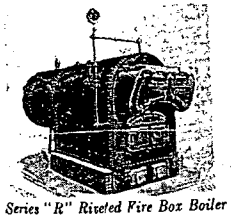

Titusville Standard Internal Fired Scotch Type Boiler

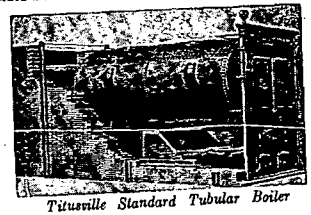

Titusville Vertical Tubular Boiler


Series SR—Compact Type Welded Boiler


Series W—Welded Fire Box Boiler


Titusville Perfection Boiler—Built in Sizes 25 H. P. to 200 H. P. from 15 to lbs. 150 lbs. Working Pressure


Series "R" Riveted Fire Box Boiler


Titusville Standard Tubular Boiler


Series "R.S." Smokeless Riveted Boiler