

Institutional Power Plants: 200 Psi and Above

Air-heater kw. per boiler, 1000 sq.	All-weather type	Dust collectors	F-D FANS		I-D FANS		Firing	FUEL		FEED PUMPS		TURBINES					CONDENSERS			Total boiler capacity incl new units, 1000 lb	Total generator capacity incl new units, 1000 kw		
			Drive	Air-volume control	Drive	Gas-volume control		Type	Heating value, 1000 Btu per lb	Ash-fusion temperature, F	Drive	Flow control	Capacity, 1000 kw	Speed, rpm	Manufacturer	Backpressure, psi	No. of bleed jets	Generator cooling	Surface, 1000 sq ft	No. water passes	Tube material		
100.0	Tu	.....	D	V	S	O.G. ¹	G	90	.....	2 T	S	60	3600	GE	1.0	5	A	55.0	2	Ad	650	60	
46.1	Tu	.....	D	V	D	O.G. ²	C	18.2	2200	2 M	R	30	3600	AC	1.0	5	A	27.5	2	Ad	560	50	
.....								13.0					5.0	3600	GE	1.0	1	A					
.....								6.8		2M, 1T	R		5.0	3600	GE	1.0	1	A	5.0	2	Ad	700	17.5
.....								17.5		2 Du	R		7.5	3600	GE	40.0	1	A					
4.1	Tu	O	V	T	V	O	O	.....	.....	2 T	S, R	.....	.....	.....	.....	.....	.....	.....	.....	.....	456	0	
21.2	Tu	O	V	T	S	O	O	18.4	2060	1M, 1T	R	5.0	3600	Ge	140	1	A	.....	.....	.....	400	14	
.....	Tu	Me	V	D	N	D	C	10.5	.....	1M, 2T	R	.....	.....	.....	.....	.....	.....	.....	.....	355	12		
43.2	Pl	.....	D	V	V	P.O	C	11.1	2000	2 T	S	5.0	3600	GE	50	.....	A	4.5	2	Ad	.....	.....	
6.9	.....	.....	.....	.....	.....	SS (214)	O, G, An	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	O	Me	V	D	V	SS (145)	C	10.6	1900	1M, 1T	R	2.0	3600	GE	35	1	A	2.0	2	PAd	150	4.0	
.....	Tu	O	V	D	V	O, BL	BL	6.5	.....	2 T	S, R	1.0	3600	WE	175	.....	A	.....	.....	.....	100	3.5	
38.5	Tu	O	T	S	T	O, G ¹	G	90	.....	1M, 3T	S, R	.....	.....	.....	.....	.....	.....	.....	.....	.....	2000	145	
9.9	Tu	O	T	S	T	O, G	G	1.3	.....	1M, 2T	S, R	8.0	3600	WE	190	.....	A	.....	.....	.....	450	10	
.....																							
21.9	Tu	.....	.....	.....	.....	O, G	O	18.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
11.2	Tu	E	V	T	S	BL	BL	6.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	429	15	
.....	Tu	Me	V	D	M	SS (189)	C	12.0	2250	1M, 2T	R	5.0	3600	GE	50	.....	A	.....	.....	.....	175	3.0	
7.5	.....	Me	V	Ma	V	SS (212)	C	12.5	.....	1 T	R	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
75.0	Tu	O	T	S, V	T	P, G ¹	G	90	.....	3 T	S, R	.....	.....	.....	.....	.....	.....	.....	.....	.....	1650	62	
6.4	.....	.....	.....	.....	.....	G	G	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
4.7	.....	.....	.....	.....	.....	SS	WW	4.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
13.2	.....	.....	.....	.....	.....	C	O	18.5	.....	.....	.....	.....	7.5	3600	GE	1.0	2	.....	.....	.....	252	7.5	
.....	.....	.....	.....	.....	.....	BL	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	Me	T	.....	.....	.....	SS (282)	C	.....	.....	1 T	S, R	6.0	1800	GE	1.0	1	A	6.6	2	.....	1842	43.5	
21.6	Tu	.....	D	M	D	P, O	C	11.1	2000	2 T	S, R	5.0	3600	GE	0.75	2	A	4.5	2	Ad	340	8.0	
13.2	Tu	Me	V	T	S	SS	WW	8.0	.....	1M, 1T	S	4.5	3600	.....	150	.....	A	.....	.....	.....	200	4.5	
.....	Me	V	T	S	D	SS (516)	C, O	12.5	2200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
11.1	Tu	E	M	D	T	BL	BL	4.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1400	.....	
11.1	Tu	E	M	D	T	BL	BL	4.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
1.1	Tu	E	M	D	T	BL	BL	4.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	925	.....	
.....																							
21.0	Tu	O	V	D	V	SS (347)	C, G	12.0	2100	1 T	S, R	.....	.....	.....	.....	.....	.....	.....	.....	.....	770	85	
6.6	Tu	.....	D	V	D	O	G	1.0	.....	1M	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2000	97	
6.6	Tu	.....	D	V	D	SS	WW	17.7	.....	1M, 2T, 1Du	R	7.5	3600	GE	1.25	2	A	5.0	2	Ad	500	15	
.....	.....	.....	.....	.....	.....	BL	BL	5.0	.....	1M, 1T	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	700	11	
.....	O	Me	V	M	D	SS (154)	C, O	12.0	2200	1M, 2T	.....	1.5	3600	WE	10	1	A	.....	.....	.....	204	3.0	
.....	.....	.....	.....	.....	.....	SS	G ¹¹	.....	.....	2M	S	0.3	3600	GE	25	1	A	1.25	2	Ad	38	1.3	
.....	Tu	.....	D	.....	.....	O, G	G	1.0	.....	2T	Hy	1.0	5000	GE	25	1	A	.....	.....	.....	68	.....	
.....	.....	.....	.....	.....	.....	SS	WW	4.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
6.5	Tu	Me	V	M	Hy	SS (183)	C	11.0	2000	1M, 1T	S	5.4	3600	GE	.....	4	A	5.4	2	Ad	260	10	
7.0	Tu	E	M	Hy	M	BL	BL, O, G	3.0	.....	2M, 1T	S, R	6.0	3600	WE	0.5	1	A	7.0	2	Ad	475	14.5	
.....	Tu	O	M	D	M	P, O	C	14.4	2400	2M, 3T	S	0.75	3600	GE	100	1	.....	.....	.....	.....	160	1.75	
.....	Me	MT	V	MT	D, Hy	TG (330)	An	12.1	2900	1M, 1T	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	380	15	
3.1	Tu	Me	V	T	S, D	SS (117)	C, O	12.1	2000	1M, 1T	S, R	2.5	3600	WE	15	1	A	.....	.....	.....	125	3.0	
.....	.....	.....	.....	.....	.....	G	G	1.1	.....	1M, 1T	R	.....	.....	.....	.....	.....	.....	.....	.....	.....	120	1.5	
.....	O	Me	T	S	T	SS (212)	C	12.5	2400	1M, 1T	S	.....	.....	.....	.....	.....	.....	.....	.....	.....	325	10.8	
.....	.....	.....	.....	.....	.....	O	O	.....	.....	1M, 1T	S, R	2.0	3600	E	130	.....	A	.....	.....	.....	80	2.0	
10.8	Tu	.....	V	T	D	BL	BL	6.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42	.....	
25.5	Tu	Me	T	D	S	SS (398)	WW, O	18.4	.....	2T	R	.....	.....	.....	.....	.....	.....	.....	.....	.....	500	15	
14.0	Tu	.....	D	T	S	G	G	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1500	30	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1655	32.5	
12.9	Tu	Me	V	MT	D, Hy	C, G	G	1.1	.....	2T	R	1.2	4800	GE	.....	.....	.....	.....	.....	.....	50	1.2	
.....	.....	.....	.....	.....	.....	P, O, G	BL	.....	.....	1M, 2T	S	.....	.....	.....	.....	.....	.....	.....	.....	.....	300	.....	
6.0	Re	Me	T	T	S	BL	BL	.....	.....	1M	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	300	10	
.....	.....	.....	.....	.....	.....	P	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	200	.....	
10.4	Tu	Me	V	MT	D	TG (149)	C	13.3	2110	2Du	S	.....	.....	.....	.....	.....	.....	.....	.....	.....	190	.....	
21.5	Re	O	MT	V	D	O, G	C	14.0	2600	3M, 1Du	S, R	7.0	3600	GE	40	.....	A	.....	.....	.....	290	7.0	
.....	.....	Me	V	V	D	SS	C	18.5	.....	2M, 1T	.....	3.0	3600	WE	60	.....	A	.....	.....	.....	680	5.2	
.....	C	.....	D, V	.....	.....	UF (50)	C	14.0	2650	4Du	R	0.2	.....	SE	2	.....	A	.....	.....	.....	.....	.....	
6.6	Tu	Me	T	S	M	SS (111)	C	11.6	.....	1M, 1T	.....	2.5	.....	EI	2.0	1	A	2.5	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	P, O	C	13.5	2600	1M	R	.....	.....	.....	.....	.....	.....	.....	.....	.....	150	2.8	
.....	.....	.....	.....	.....	.....	TG (174)	C	.....	.....	1M, 1T	R	1.5	3600	WE	20	1	A	.....	.....	.....	55	1.5	
.....	.....	.....	.....	.....	.....	UF (130)	C	13.0	2000	2M, 1T	S, R	.....	.....	.....	.....	.....	.....	.....	.....	.....	100	.....	
.....	C	.....	.....	.....	.....	SS (190)	C	14.0	.....	2Du	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34	12	
.....	Tu	C	V	.....	.....	C	G	90	.....	1M, 2T	R	10.0	1800	WE	1.0	1	A	.....	.....	.....	400	17.5	
.....	Tu	O	V	.....	.....	G	G	90	.....	.....	.....	7.5	1800	GE	1.0	1	A	45.0	2	Mu	.....	.....	

Oe - Maschinen Fabrik Oerlikon
 P - Pulverized-fuel firing
 Pl - Plate
 R - Regulator
 R - Riley Stoker Corp.
 S - Speed control
 SE - Skinner Engine Co.
 SS - Spreader stoker
 ST - Slag Tap

T - Turbine drive
 Tr - Terry Steam Turbine Co.
 Tu - Tubular
 UF - Underfeed stoker
 U - Union Iron Works
 V - Vane control
 V - Vane control
 V - Vane control
 V - Vane control

W - Wm. Bras. Boiler & Mfg. Co.
 WE - Westinghouse Electric Corp.
 W - Wickes Boiler Co.
 W - Worthington Pump & Machy Corp.
 W - Moore Steam Turbine Division
 W - Wood waste
 W - Blast-furnace gas
 W - Future coal
 W - Flit grate
 W - Steam-heated

W - Gas-air heater
 W - Blast-furnace, natural and coke-oven
 W - Bagasse
 W - Pitch
 W - Steam engines
 W - Coke breeze
 W - From zinc-concentrator roasting
 W - Stoker grate area, sq ft

1950 Design Survey of Typical Industrial and

Compiled by J C McCabe, Associate Editor

Compiled by J C McCabe, Associate Editor			First operation, new units	Nominal pressure, psi	Nominal steam temperature, F	BOILERS			Furnace volume, 1000 cu ft	Heat release, 1000 Btu per cu ft per hr	Furnace bottom	Economizer surface, per boiler, 1000 sq ft	
Company	Location	Consulting Engineers				Number	Capacity, each, 1000 lb per hr	Manufacturer					Heating surface, 1000 sq ft
600 PSI AND ABOVE													
Carnegie-Illinois Steel Corp.	Chicago, Ill.	United Engrs & Constr Corp.	1951	1025	900	1	650	RS	75.1	49.0	17.5	DB 12.0	
Imperial Irrigation Distr.	El Centro, Calif.	Gibbs & Hill	1952	960	900	2	300	BW	28.4	11.1	34.3	DB	
Macon Kraft Co.	Macon, Ga.		1949	850	750	2	150	CE			19.8	DB	
						2	100	CE					
						2	150	CE					
Mack Molding Co.	Arlington, Vt.		1949	800	518	1	12	BW	2.0				
Gulf Oil Corp.	Toledo, Ohio		1948	725	605	2	70	BW	7.4				
Pacific Mills, Ltd.	Ocean Falls, B. C.		1948	725	750	1	175	BWG	15.6	7.0	19.7	DB 0	
Fraser Paper, Ltd.	Madawaska, Me.	Stone & Webster	5-50	700	750	1	150	CE		9.3	19.0		
American Boxboard Co.	Filer City, Mich.	Carroll, Bechtel & Langtry	5-50	675	750	1	125	BW	11.8			DB	
American Cyanamid Co.	Pearl River, N. Y.		1950	675	750	1	85	FW	14.1	5.3	22.7		
Central Soya Co.	Decatur, Indiana	Sargent & Lundy	1950	675	760	1	90	BW	7.9	3.4	27.3	5.2	
National Container Corp.	Ontonagon, Mich.	Helmick, Edeskuty & Lutz	1949	675	700	1	47	CE	13.9			1.7	
Carnegie-Illinois Steel Corp.	Gary, Indiana	United Engrs & Constr Corp.	9-49	650	825	3	250	RS	79.6	18.0	19.9	DB 4.7	
Continental Cit Co.	Ponca City, Okla.		1-50	650	750	1	90	Vo	9.8	4.8	27.9	0	
Fibreboard Products, Inc.	East Antioch, Calif.	Leland S. Rosener	1949	650	750	2	160	BW	15.2			DB	
						2	109	BW	23.2			4.6	
H. J. Heinz Co.	Pittsburgh, Pa.		1950	650	730	2	70	CE	7.8	3.0		2.9	
Thilmann Pulp & Paper Co.	Kaukauna, Wis.	Pfeifer & Schultz	1949	650	700	1	90	BW	3.3	4.5	24.0	2.2	
Carnegie-Illinois Steel Corp.	Rankin, Pa.		4-50	625	750	1	300	RS	119.3	23.0	19.9	DB 0	
Jefferson Chemical Co.	Port Neches, Texas		1949	625	760	3	85	FW	12.1	4.8	23.7	DB 0	
						1	52	CE					
Riegel Paper Co.	Acme, N. C.	J. E. Sirrene	1951	625	725	1	100	CE					
						1	100	CE					
Tennessee Eastman Corp.	Kingsport, Tenn.		1949	620	710	3	150	BW	18.8	8.1	26.4	7.3	
American Boxboard Co.	Filer City, Mich.	Carroll, Bechtel & Langtry	5-50	615	750	1	125	BW	11.8		21.5	DB	
Medford Corp.	Medford, Oregon		1950	600	680	1	100	RS	18.5	9.7	18.2	0	
			1950	600	700	1	325	FW	26.6	17.5	26.0	DB 22.8	
West Virginia Pulp & Paper	Charleston, S. C.		1949	600	700	1	103	BW	22.5			5.2	
			1950	600	700	1	103	BW	22.5			5.2	
West Virginia Pulp & Paper	Luke, Md.		1950	600	700	1	103	BW	22.5	15.2		ST 5.2	
300 - 599 PSI													
Minneapolis Street Rwy.	Minneapolis, Minn.		1949	525	850	1	160	BW	17.7	9.1	26.2	8.4	
Dow Chemical Co.	Freeport, Texas		1-51	500	750	1	250	RS	24.6	11.0	34.2	0	
Hudson Pulp & Paper Corp.	Palatka, Fla.	J. E. Sirrene	1951	500	750	1	60	BW	3.4	2.5		DB	
						1	60	BW	3.4	2.5		DB	
New York & Pennsylvania Co.	Johnsonburg, Pa.		1950	500	547	1	85	CE					
Pabst Brewing Co.	Milwaukee, Wis.	Stone & Webster	1-50	500	575	3	68	EW	12.7	3.2	26.9	DB 3.9	
St. Joseph Lead Co.	Josephtown, Pa.		1950	500	700	3	8	BW					
Tulsa Water Works	Tulsa, Okla.	G. F. Phillips & Assoc.	4-50	500	750	1	34	UI	4.7		28.0	0	
T. Carter & Brother, Lumber	Camden, Texas	H. E. Bayay, Jr.	1950	475	580	2	35	Vo	5.4		18.7		
J. I. Case Co.	Racine, Wis.		1949	475	750	1	100	MI	7.9		35.5	3.7	
Crossett Paper Mills	Crossett, Ark.			475	700	1	89	CE	22.1			ST 2.8	
Florida State Hospital	Charlottesville, Fla.	Reynolds, Smith & Hills	3-50	475	575	1	60	BW					
International Paper Co.	Carlin, N. Y.		1950	475	700	1	80	CE	11.3	3.1	33.8	DB 4.9	
Miller Brewing Co.	Milwaukee, Wis.	A. G. Behling	1950	475	700	2	40	Wi	7.0	2.7	22.0	DB	
Stratford Oil & Gas Co.	Andrews County, Texas		1949	475	712	3	40	BW					
Sumterland Paper Co.	Kalamazoo, Mich.		1950	475	650	1	100	Wi	11.5	5.3	24.6	DB 6.4	
Lee Rubber & Tire Co.	Conshohocken, Pa.		1950	460	700								
Harvard Brewing Co.	Lowell, Mass.	C. T. Main, Inc.	1949	450	353	2	21	BW	2.8				
Hudson Pulp & Paper Corp.	Palatka, Fla.	J. E. Sirrene	1951	450	725	1	113	BW	13.7			ST 4.9	
International Paper Co.	Georgetown, S. C.		1949	450	675	1	200	BW	17.6	13.0	20.0	2.9	
Magnolia Petroleum Co.	Beaumont, Texas		9-50	450	575	1	175	CE	15.9	8.4	27.8	DB	
Magnolia Petroleum Co.	Rush Springs, Okla.		1950	450	570	2	25	Vo					
John Morrell Co.	Sioux Falls, S. D.	Helmick, Edeskuty & Lutz	1950	450	700	1	100	BW	10.4	9.2			
National Container Corp.	Jacksonville, Fla.		4-50	450	700	1	75	CE	20.0			2.3	
Niagara Alkali Co.	Niagara Falls, N. Y.		1950	450	421	1	65	BW	9.3				
Quaker State Oil Refining	Emmerton, Pa.		1950	450	525	1	60	BW		2.5		DB	
Riegel Textile Corp.	Free Shoals, S. C.		1950	450	535	1	120	RS	16.8	7.3		DB 0	
Granville Sugar Co.	Granville, Calif.		7-50	450	600	1	175	CE	15.3	7.3	30.0		
Celina Sulfuric Acid Co.	Celina, Ohio		1948	425	541	1	12	BW					
Fletcher Paper Co.	Alpena, Mich.	Cummins & Barnard		425	700	1	45	Wi	6.2	2.4	26.7	DB 3.6	
Longview-Norm Inc.	Kearny, N. J.		1949	420	710	1	60	BW	7.0	2.7	30.0	DB	
American Coating Mills	Wadsworth, Ohio	B. M. Baxter	1949	400	600	1	55	BW	6.1			3.6	
Dept. of Public Works	Chicago, Ill.		1952	400	648	4	45	EW	7.5	2.3		0	
Liberty Powder Co.	Mt. Broadacre, Pa.		1949	400	371	2	17	BW		2.8		DB 0	
				400	750	1	100	RS				DB	
Lone Star Steel Co.	East Texas, Texas		✓ 400	750	3	100	BW		50.0	25.0		DB	

1 - Air-cooled
1Ad - Arsenical Admiralty
1C - Allis-Chalmers Mfg Co
1xCu - Arsenical copper
1d - Admiralty
1f - Ames Iron Works
1n - Anthracite
Bt - Bagshaw Co
BL - Black liquor
Br - Brass

BW - Babcock & Wilcox Co
BWG - Babcock & Wilcox, Goldie - McCullough
C - Coal, bituminous
CB - Cleaver-Brooks Co
CE - Combustion Engineering - Super-heater, Inc.
C.N. - Copper-nickel
Ct - Canadian Vickers, Ltd
D - Damper

DB - Dry bottom
DL - DeLaval Steam Turbine Co
Du - Duplex pump
E - Electrostatic
EC - Erie City Iron Wks
EI - Elliott Co
EW - Edge Moor Iron Wks, Inc
FT - Foster Wheeler Corp
G - Gas
GE - General Electric Co

H - Hydrogen cooled
HF - Haged Fuel
Hy - Hydraulic coupling
K - E Keeler Co
M - Motor drive
Mc - Magnetic coupling
Me - Mechanical
MT - One motor, one turbine per fan
Mu - Muntz metal
O - Oil

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Company	Location	Consulting Engineers	First operation, new units	Nominal pressure, psi	Nominal steam temperature, F	BOILERS				Furnace volume, 1000 cu ft	Heat release, 1000 Btu per cu ft per hr	Furnace bottom	Economiser surface, per boiler, 1000 sq ft
						Number	Capacity, each, 1000 lb per hr	Manufacturer	Heating surface, 1000 sq ft				
Sonoco Products Co.	Hartsville, S. C.			400									
Canadian National Rwy.	Montreal, Que.		1949	380	493	1	15	FW	2.4	0.9	27.6	DB	
Carthage Fabrics Corp.	Carthage, N. C.		1950	375	410	1	3.6	CE	0.25				
Pure Oil Co.	Warland, Wyo.		11-49	375	Sat	3	24	EC	3.5	1.0	32.5	DB	
Southwest Gas Producing Co.	Dubach, La.		1949	360	536	3	60	Vo					
Marinette Paper Co.	Marinette, Wis.		1950	350	500	1	50	BW	7.9	2.6			
Sarco Co.	Bethlehem, Pa.		1949	350	Sat	1	3.5	IB	0.4	0.1	38.0	DB	
Gypsum Lime & Alabastine Ltd.	Winnipeg, Man.	W. M. Bird	2-50	325	400	1	30	FW	4.6	1.6	26.2		
American Seating Co.	Grand Rapids, Mich.	Hamilton, Wheeler & Ward	1950	300	600	1	60	W	8.1	3.0	25.4		3.2
Connecticut State Hospital.	Middletown, Conn.	Fletcher Thompson	5-51	300	455	4	40	BI	6.1	1.8	29.0		
Cooperative Refinery Assn.	Coffeyville, Kan.		1950	300	464	1	50	EC	6.9	2.4	28.0	DB	
Great Falls Bleachery & Dye Wks.	Somersworth, N. H.		4-50	300		3	25	Wi	2.5	0.6	55.7		
Mansfield State Training.	Mansfield, Conn.	Hurley & Capocceale	11-50	300	456	3	30	Bi	4.3	1.4	28.0		
Shell Oil Co.	Elk City, Okla.		1950	300	406	3	18.5	Vo	3.2	1.1	22.5		
P. Stevens & Co.	Cheraw, S. C.	J. E. Sirrine	1950	300	Sat	1	80	CE	9.4				
Texas Gulf Sulphur Co.	Warland, Wyo.		1950	300	403	3	50	BW	6.0				
Torrance State Hospital.	Torrance, Pa.	H. F. Lenz	1950	300	366	1	45	BW	6.9	1.9	24.5		0
United States Rubber Co.	Los Angeles, Calif.		8-50	300	Sat	1	70	BW	7.4	3.2	28.0		
Univ. of Oklahoma.	Oklahoma City, Okla.	Collins	1949	300		2	10	MI					
Walker Bros.	Conshohocken, Pa.		1950	300	Sat	1	14	FW	1.7				
250 TO 299 PSI													
Bethlehem Steel Co.	Steelton, Pa.		4-50	275	500	1	150	EC	21.1	13.5	14.8	DB	
California Co.	Hico, La.		1949	275	406	2	33	BW					
Macfarland State Hospital.	Macedonia, Ohio	Beiswinger & Hoch	5-50	275	401	2	30	BW					
Indiana Farm Bureau Refinery.	McVernon, Ind.		1950	275	406	1	22	Vo	3.2				0.4
Liquid Carbonic Co.	Cincinnati, Ohio		6-50	275	475	1	17	EC	3.1	1.0	32.5	DB	
Mudbaker Corp.	South Bend, Ind.		1948	275	520	1	210	FW	22.3	9.7	29.1		4.6
Texas State College for Women	Denton, Texas		1-49	275	509	2	32	Vo	5.6				
Univ. of Connecticut.	Storrs, Conn.	Hubbard, Lawless & Blakely	1950	275	Sat	2	35	Bi	5.0	1.9	24.0		
Liquid Carbonic Co.	Indianapolis, Ind.		1950	270	480	1	15	CE					
Hughes Tool Co.	Houston, Texas	Strauss, Frank Co.	1950	255	474	2	21	BW	2.9				
American Can Co.	Milwaukee, Wis.		6-50	250	Sat	2	50	EC	6.9	2.3	30.0	DB	
American Hide & Felt Co.	Newark, N. J.	Geo. London	1950	250	Sat	1	45	CE	6.2	1.8	30.7	DB	0
Armco Steel Co.	Ashland, Ky.		1950	250	488	3	70	BW	10.0		25.0		
Atlanta Water Wks.	Atlanta, Ga.		1949	250	538	1	44	BW					
Aurora Gasoline	Detroit, Mich.		10-50	250	Sat	1	35	Bi	5.0	1.8	26.0		
P. Ballantine & Sons	Newark, N. J.		1949	250	366	1	60	BW	7.8				
Barton Salt Co.	Hutchinson, Kan.		1951	250	500	1	39	BW	6.2				
Beaver Wood Fibre Co. Ltd.	Thorold, Ont.		1-51	250	Sat	2	65	FW					
Burkhardt Brewery	Akron, Ohio	R. W. Berger	1949	250		2	27	Vo	4.4	1.5		DB	0
Certain-Teed Products Corp.	York, Pa.		1948	250	Sat	1	50	EC					
Consumers Heating Co.	Klamath Falls, Ore.		1-50	250	Sat	1	25	RS	3.6	1.9	19.7	DB	0.6
Cranston Print Wks.	Fletcher, N. C.	J. E. Sirrine	1-50	250	500	1	50	BW	6.8	2.3			
Du Quoin Packing Co.	Du Quoin, Ill.	Farris & Hamig	10-49	250	500	1	17	EC	3.0	0.7	35.0	DB	
Farmer Union Central Excn.	Laurel, Mont.		1950	250	Sat	1	75	Vo	10.1	4.1	21.8		
Field Packing Co.	Owensboro, Ky.	A. M. Kinney	1949	250	416	1	27	CE					
Ford Motor Co.	Hamburg, N. Y.	Fairbrother & Mehls	1950	250	Sat	3	40	CE	6.1	1.7	30.9	DB	0
Gonic Mfg. Co.	Gonic, N. H.	Harrison G. White	1948	250	500	1	30	BW	4.4				
Great Northern RR.	Grand Forks, N. D.		5-50	250	381	1	29	WB	4.0	1.1	35		
Hackensack Water Co.	Orange, N. J.		1951	250	507	2	30	CE	5.8	1.7	24.0		3.9
Hanes Dye & Finishing Co.	Winston-Salem, N. C.	W. O. Sprinkle	7-48	250	Sat	1	40	BW	7.1				
Johns Manville Prod. Corp.	Richmond, Ind.		1950	250	Sat	1	18	CE	3.2	0.7		DB	
Juice Industries Div.	Dunedin, Fla.	B. C. Skinner	1950	250	Sat	1	60	CE					
Kalamazoo Vegetable Parchment	Espanola, Ont.		2-50	250	450	1	100	CE	11.1				
Kansas State College.	Mannhattan, Kan.		1950	250	500	2	50	CE	6.8	1.7	40.5	DB	0
Kerr Bleaching & Finishing Wks.	Concord, N. C.		1949	250	397	1	60	BW	7.9	2.4	30.0		0
Kingdon & Co.	Richmond, Va.	Allen J. Saville, Inc.	1950	250	324	1	33	BW	4.8	1.1	29.7		
Charles Lachman Co.	Phoenixville, Pa.	C. T. Main	1950	250	Sat	3	22	CE	3.9				
Lima-Hamilton Corp.	Lima, Ohio		1950	250	Sat	2	75	CE	8.9	3.7	25.7		0
Long Lac Pulp & Paper Co.	Terrace Bay, Ont.	Stadler, Hunter & Co.	1948	250	Sat	3	85	FW	12.4	5.6	16.1	DB	
Lukens Steel Co.	Coatesville, Pa.		1950	250	500	2	23	FW				ST	
Lula Factory Inc.	Belle Rose, La.		10-50	250	490	1	43	CE	5.9	1.5			
Lynchburg State Colony	Colony, Va.		1950	250	Sat	1	21	CE					
Manson State Hospital.	Palmer, Mass.	E. C. Brown Co.	5-50	250	Sat	1	36	EC	4.3	0.9	53.0	DB	
National Vulcanized Fibre Co.	Newark, Del.		1949	250	Sat	1	27	CE	4.0	1.0	35.0		
National Waterproof Papers	Canaan, N. Y.		1950	250	Sat	1	21.6	CE	3.2				
Neville Co.	Pittsburgh, Pa.		1949	250	400	1	16	CB					
N. Y. Butchers Dressed Meat	New York, N. Y.		7-50	250	Sat	2	50	CE	6.8		31.3		0
N. Y. Central System	Elkhart, Ind.		1948	250	Sat	1	17.3	CE	3.1				
						1	24.7	BW	4.0				

4 - Air cooled
 AAd - Arsenical Admiralty
 AC - Allis-Chalmers Mfg Co
 AsCu - Arsenical copper
 Ad - Admiralty
 Al - Ames Iron Works
 An - Anthracite
 Bi - Bigelow Co
 BL - Black liquor
 Br - Brass

BB - Babcock & Wilcox Co
 BBG - Babcock & Wilcox, Goldie
 McCullough
 C - Coal, bituminous
 CB - Cleaver-Brooks Co
 CE - Combustion-Engineering-Super-heater, Inc
 CuNi - Copper-nickel
 CF - Canadian Vickers, Ltd
 D - Damper

DB - Dry bottom
 DL - DeLaval Steam Turbine Co
 Du - Duplex pump
 E - Electrostatic
 EC - Erie City Iron Wks
 El - Elliott Co
 FW - Edge Moor Iron Wks, Inc
 FF - Foster Wheeler Corp
 G - Gas
 GE - General Electric Co

H - Hydrogen cooled
 HF - Hogged Fuel
 Hy - Hydraulic coupling
 Ke - E. Keeler Co
 M - Motor drive
 Ma - Magnetic coupling
 Me - Mechanical
 MT - One motor, one turbine per fan
 Mu - Muntz metal
 O - Oil

INDUSTRIAL POWER PLANTS: 200 HP AND ABOVE

hp boiler, 1000 sq ft	Air-heater type	Dust collectors	F-D FANS		I-D FANS		Firing	FUEL		FEED PUMPS		TURBINES					CONDENSERS			Total boiler capacity incl new units, 1000 lb	Total generator capacity incl new units, 1000 kw		
			Drive	Air-volume control	Drive	Gas-volume control		Type	Heating value, 1000 Btu per lb	Ash-fusion temperature, F	Drive	Flow control	Capacity, 1000 kw	Speed, rpm	Manufacturer	Backpressure, psia	No. of bleed pits	Generator cooling	Surface, 1000 sq ft	No. water passes	Tube material		
1.4	Tu	Me	M	D	M	D	O	O	13.3	1970	1M, 1T	R	10.0	3600	GE	35	1	A				285	14
1.5	Tu	Me	M	D	M	D	O	O	13.3	1970	1M, 1T	R										105	
			M	D, Hy	T	T, S	O, G	O, G	19.0														
			M	D	T	D	O, G	O, G	1.0		1M, 1T	S, R	0.7	3600	GE			A				180	1.4
			Me	M		M	SS(153)	O, G	13.0	2800	2M, 1T	S										115	
				D	M	D	O	O	16.5														
2.5	Tu	Me	M	V	M	D	O	O	7.1	2200	2M	P										30	
			Me	M	V	S, D	SS(125)	O	13.6	2600	1T	S, R										145	3.0
			T	S	T	D	O, G	O	17.5		1M, 1T	R				25			1.6	2	Ad	400	
			M	D			O	O	18.3		1M, 1T		0.9	327	SE	18		A				75	0.9
					T		O, G	O, G															
2.1	Tu	Me	M	V	M	D	SS(196)	C	13.5	2150	1M, 1T	R										80	
			O	T	D		WH		1.1		3T	S										230	
3		O	MT	S, D			UF(128)	C	12.8	2300	3T	S, R	0.5		SE	5						120	0.5
4.7	Tu		MT	V	MT	V	O, G	O, G	18.5		1M, 1T	S, R										150	
					Ma		G	G	1.0		2T	S, R										20	
			M				O	O			1M											14	
17.5	Tu						G ¹ , O	G ¹ , O	1.0		2T	S										66	
	Pl		T	D	T	D	SS	C	10.8	2350	2M, 1MT	S	0.5	5000	Wo	5		A				105	1.0
			M	V			O, G	O, G			1M, 1T											50	
			T	D	T	D	O, G	O, G															
			Me	MT	V	MT	SS(384)	O, G	11.0	2200												1,050	16
							O, G	O	1.0		2M		1.0	3600	MI		1	A	1.3	2	Cu	64	2.5
							O	O															
			M	V			O	O	1.0		2M	R										15	
				D	M	D	O	O			1M, 2T	S, R										42	
6			MT	D	O	D	O, G	O	18.4		1M, 1Du	R										100	
			T				O, G ¹	O														746	
			T	Hy	T	Hy	UF	C, O, G			1T	R											
			T	D		D	O	O														150	0.5
			T		T		O, G	G	1.0		2T											99	
0		Me	MT	D	MT	D	SS(154)	C	12.0		1M, 1T, 1Du	S, R		3600	WE							54	
3.1	Tu	Me	T	D	T	D	SS(110)	C														80	
3.5	Tu	Me	M	D	M	D	HF, O	HF	4.5		1M, 2Du	S, R											
			M	V			SS(157)	O	13.5		1M, 1T	R										50	
			T	D	T	D	TC	O															
							O, G	O	17.9														
1.7		M	D	M	D		SS	O					0.4		El							37	
		MT			MT		O	O			1M, 1T		0.8	3600	GE	10	0	A				65	1.9
2.6	Tu		T	D	T	S, D	SS	O, L	6.7	2050												120	
		Me	M	V	M	D	SS(128)	C	18.5														
	Tu	Me	M	D	M	D	SS(61)	C	12.8	2808	1M, 1Du	R										88	
	O	O	M	S, D	M	S, D	O	O	11.6		1Du	R										70	
	Pl		V	Hy	M	D	P	C	14.0	2400	M, T	R	1.3	5000	Wo	3.5	1	A				150	2.0
0		M	D				O, G	G	1.0		1M, 2T	R	2.0	3600	WE	5	0	A				250	5.1
4.8	Tu	Me	M	V	2Mo	D	SS(174)	C, O	13.5	2500	2M	R										228	3.8
			M	D		D	UF(88)	C	12.8	2400	2Du	R										90	
		MT	Hy	MT	D, Hy		UF	C			1M, 2Du	R		1750	Te							50	
0			M	V	V	D, Hy	SS(198)	C			1M, 1T	R										300	1.8
0.5	Tu	E	V	D	T	S, D	P	C, WW			2M, 1T	P											
			T	S, D			SS(85)	G ¹	4.1		3T	S, R										125	
							SS	C															
			T				UF	C															
			M		M	D	O	O	18.5														
			M				O	O	18.4		2Du											21.5	
			M				O, G	O, G	1.0		2Du											20	
0							O	O	16.9		1M, 1T, 1Du	R										100	
			T				SS	C			3Du	P										47.5	

Oe - Maschinen Fabrik Oerlikon
 P - Pulverized-fuel firing
 Pl - Plate
 R - Regulator
 RS - Riley Stoker Corp
 S - Speed control
 SE - Skinner Engine Co
 SS - Sprosser stoker
 ST - Slag Tap

T - Turbine drive
 Te - Terry Steam Turbine Co
 Tu - Tubular
 UF - Underfeed stoker
 UH - Union Iron Works
 V - Vane control
 V - Henry Vogt Machine Co
 W - Wood
 WH - Waste heat

WB - Wm Bras Boiler & Mfg Co
 WE - Westinghouse Electric Corp
 W - Wickes Boiler Co
 Wo - Worthington Pump & Machy Corp,
 Moore Steam Turbine Division
 WT - Wood waste
 1 - Blast-furnace gas
 2 - Future coal
 3 - Flat grate
 4 - Steam-heated

5 - Gas-air heater
 6 - Blast-furnace, natural and coke-oven
 gases
 7 - Bagasse
 8 - Pitch
 9 - Steam engines
 10 - Coke breeze
 11 - From zinc-concentrator roasting
 (150) - Stoker grate area, sq ft

1950 Design Survey of Typical Industrial and

Compiled by J C McCabe, Associate Editor

Company	Location	Consulting Engineers	First operation, new units	Nominal pressure, psi	Nominal steam temperature, F	BOILERS				Furnace volume, 1000 cu ft	Heat release, 1000 Btu per cu ft per hr	Furnace bottom	Economiser surface, per boiler, 1000 sq ft
						Number	Capacity, each, 1000 lb per hr	Manufacturer	Heating surface, 1000 sq ft				
Northampton State Hospital.....	Northampton, Mass.....	E C Brown Co.....	5-50	250	Sat	1	35	EC	4.6	0.9		DB	
✓ Owens-Corning Fiberglas.....	Newark, Ohio.....		1949	250	482	1	40	CE	6.8				
L & Packard Co.....	Ashland, N.H.....	G H Perkins.....	11-49	250	Sat	1	30	Bi	5.0	1.6	25.0		
✓ Pure Carbonic Inc.....	Chicago, Ill.....	R N Palmaquist.....	1948	250	Sat	1	30	CE					
✓ Raleigh State Hospital.....	Raleigh, N.C.....	Wiley & Wilson.....	1951	250	501	2	50	BW	16.3		30.0	DB	0
✓ Remington Arms Co.....	Ilion, N.Y.....		1948	250		2	25	CE				DB	0
✓ Revere Copper & Brass.....	Detroit, Mich.....			250		2	22	CE	7.9				
✓ Rockford Drop Forge.....	Rockford, Ill.....	Lockwood Greene.....	1950	250		2	30	CE					
Safety Car Mfg & Ltg Co.....	New Haven, Conn.....		1949	250	Sat	1	5	Bi					
✓ Shellmar Products Co.....	Mt Vernon, Ohio.....	Ralph Spengle.....	1948	250	366	1	30	BW	3.9	1.2	33.6	DB	0
✓ Spaulding Fibre Co.....	Tonawanda, N.Y.....		1949	250	Sat	2	32.5	CE					
✓ Sprague Electric Co.....	North Adams, Mass.....	F P Sheldon & Sons.....	1949	250	397	3	25	BW					
Standard-Coosa-Thatcher Co.....	Rossville, Ga.....		1-50	250	Sat	1	15	CE					
✓ Susquehanna Mills, Inc.....	Sunbury, Pa.....	Franklin Engrg.....	1948	250	Sat	2	35	CE	5.5		25.0	DB	
✓ United Chemical & Organic Products.....	Calumet City, Ill.....		1949	250	371	1	40	BW	6.2				0
✓ United Rayon Mills.....	Elkhart, Ind.....		1949	250	Sat	1	20	CE					
✓ United States Fibber Co.....	Naugatuck, Conn.....		1949	250	266	3	35	W	5.5	1.6	26.5		0
✓ U S Vanadium Corp.....	Rifle, Colo.....			250	Sat	1	15	RS					
✓ Univ of Florida.....	Tallahassee, Fla.....		1948	250	Sat	1	31	BW	3.9				
✓ Univ of Houston.....	Houston, Texas.....		1950	250	Sat	2	27	CE	3.9				
✓ Univ of Kentucky.....	Lexington, Ky.....	Proctor & Ingles.....	1950	250	477	2	60	BW	7.3	2.7			
✓ Univ of Maryland.....	College Park, Md.....	Egli & Gompf.....	1948	250	Sat	1	100	RS	12.4	5.4	22.0	DB	
✓ Univ of Oregon.....	Eugene, Ore.....	J. Donald Kroeker.....	10-50	250	500	3	35	CE	6.9	1.9	22.7		
✓ Upper Snake River Valley Dairy Assn.....	Idaho Falls, Idaho.....	Power Engrg Co.....	1948	250	350	1	23	CE	3.9				0
✓ Western Gypsum Co.....	Sigurd, Utah.....		1948	250	396	1	40	BW	5.7				
200 TO 249 PSI													
Brown Knitting Co.....	Warsaw, N.Y.....		1949	240	353	1	22	WB	2.6	0.9	27.6		
✓ Ross & Roberts, Inc.....	Stratford, Conn.....		11-49	230		1	5	Bi					
✓ Buld Co.....	Detroit, Mich.....		1949	225	366	1	120	BW	11.5	6.3			
✓ Cornell Duplicator Elec Corp.....	New Bedford, Mass.....		1949	225	388	1	15	BW	2.4				
✓ Dan River Mills.....	Danville, Va.....	United Engrs & Constr Corp.....	9-50	225	500	1	100	CE	14.5	7.1	17.5	DB	
✓ Essex Standard Oil Co.....	Everett, Mass.....		1950	225	485	3	80	RS	8.6	4.0	25.0	DB	0.3
Massachusetts Inst of Tech.....	Cambridge, Mass.....	Jackson & Moreland.....	11-50	225	490	2	70	W	8.4	3.1	28.6		2.6
✓ McCarthy Chemical Co.....	Winnie, Texas.....		1948	225	387	3	70	UI					
✓ Minnesota State Hospital.....	Fergus Falls, Minn.....		1950	225	Sat	1	28	RS	4.0	1.4			
✓ Ohio State Univ.....	Columbus, Ohio.....	Sargent & Lundy.....	1951	225	615	1	80	BW	6.7	4.4	24.3	DB	3.0
✓ Villanova College.....	Villanova, Pa.....	Gilboy & O'Malley.....		220		2	30	CE	5.5	1.5	28.5		0
✓ Dominion Alkali & Chem Co.....	Beauharnois, Quebec.....		1949	213	360	2	18	CB	2.5				
✓ Howard Smith Paper Mills, Ltd.....	Montreal, Quebec.....		1948	213	Sat	1	15	CB					
American Forge Co.....	Niles, Calif.....		1948	200	Sat	1	24.6	EC					
✓ Balcher Oil Co.....	Miami, Fla.....		1949	200	Sat	1	17	CB	2.1				
Bowser, Inc.....	Fort Wayne, Ind.....		1949	200	Sat	2	25	EC	3.9		30.0		
✓ Briggs Mfg Co.....	Youngstown, Ohio.....		1950	200	366	1	74	BW	7.6	2.7			
✓ Buffalo State Hospital.....	Buffalo, N.Y.....		1950	200	364	4	53.5	BW	8.3				
✓ Canadian Pacific Rwy.....	Montreal, Que.....		1950	200	495	2	20	FW					
✓ Celina Stearic Acid Co.....	Celina, Ohio.....			200	Sat	1	18	W					
✓ Crown Zellerbach Co.....	West Linn, Oregon.....			200	500	2	170	BW	10.0	5.0	33.5		0
✓ Dalhousie Univ.....	Halifax, Nova Scotia.....	Engrg Serv Co.....	1950	200	Sat	2	15	FW	13.6	6.0	33.6		0
✓ D Norman Beatty Memorial Hosp.....	Westville, Ind.....		1950	200	366	3	40	UI	6.0	1.8			
✓ Foster Mineral Co.....	Eston, Pa.....		10-49	200	Sat	1	21	EC	3.5	1.0	26.0	DB	
✓ Fuller Carbonizing Co.....	Lowell, Mass.....		1948	200	Sat	2	17	CB					
✓ Girard College.....	Philadelphia, Pa.....		1949	200	366	1	12	BW	2.5				
						1	28	BW	5.0				
Hotel Dennis.....	Atlantic City, N.J.....	Pennell & Wiltburger.....	9-50	200	Sat	1	14	Bi					
International Harvesters Co.....	West Pullman, Ill.....	E K Moore.....	1950	200	377	1	60	W	8.4	2.4	31.0		
Winnepois-Moline Co.....	Moline, Ill.....		1948	200	370	2	25	UI	4.0				
✓ Moose Lake State Hospital.....	Moose Lake, Minn.....	Toltz, King & Day.....	1950	200	278	1	24	UI	3.5	1.1	27.5		0
✓ Morgan Dyeing & Bleaching Co.....	Rochelle, Ill.....	E H Casson.....	1949	200	366	1	30	BW					
✓ New York & Pennsylvania Co.....	Lock Haven, Pa.....		1949	200	500	1	70	EC	8.5	3.2	30.9		
✓ New York & Pennsylvania Co.....	Willsboro, N.Y.....		3-50	200	Sat	2	8	EC	4.1				
✓ Oswego Falls Corp.....	Fulton, N.Y.....	Burns & Roe.....	1950	200	415	3	50	RS	6.9	2.2	18.1	DB	1.1
✓ Paraffine Co.....	Metuchen, N.J.....		1950	200	365	2	40	BW					
✓ Reeves Mfg Co.....	Dover, Ohio.....	Paul Prince & Assoc.....	1949	200	Sat	2	40	EC	5.8	1.3	29.0	DB	
✓ Rock Island Refining Corp.....	Rock Island, Ind.....		1950	200	470	1	36	W	5.3	2.1	25.0		
✓ St Joseph's Hospital.....	Lancaster, Pa.....		9-50	200	253	2	13.5	BW	2.5	0.5			
✓ St Peter State Hospital.....	St Peter, Minn.....	Toltz, King & Day, Inc.....	1-50	200	Sat	1	28	EC	5.0	1.3	28.0	DB	
✓ Sears Roebuck & Co.....	Seattle, Wash.....	H W Beecher.....		200	Sat	2	22	BW	9.5				
✓ A J Spaulding & Bros, Inc.....	Chicopee, Mass.....		11-50	200	Sat	1	16	Bi					
State Penitentiary.....	Jefferson City, Mo.....	Fitzpatrick & Nash.....	2-50	200	Sat	2	28	W	2.8	0.7	51.5	DB	0
✓ Stauffer Chemical Co.....	Niagara Falls, N.Y.....		1949	200	366	1	45	BW	6.8				
✓ Sun-Citrus Products Co.....	Haines City, Fla.....			200		1	25	EC					
✓ S Dept of Interior.....	Rifle, Colo.....		1950	200	385	1	15	UI	2.5	0.7	29.0		
✓ S Tobacco Co.....	Chicago, Ill.....		1948	200	378	1	40	BW	6.3				
✓ Univ of Alberta.....	Edmonton, Alta.....		1950	200	382	2	50	FW					
✓ Univ of Toronto.....	Toronto, Ont.....	H G Acres.....	1951	200	387	2	75	UI	8.0	4.1	21.7		
✓ Walla Walla College.....	Walla Walla, Wash.....	E F Cross.....	1949	200	Sat	2	20	EC	6.2	0.6		DB	
✓ Weiss Lumber Supply Co.....	Springfield, Mass.....		1948	200	Sat	1	22	RS	3.3				
✓ Western Milk Corp.....	Rochester, N.Y.....		1949	200		1	4	CB					
✓ Westinghouse Elec Corp.....	Hyde Park, Mass.....		1950	200	371	2	30	BW	3.7	1.0			0

INDUSTRIAL POWER PLANTS, 200 HP AND ABOVE

Air-heater surface, per boiler, 1000 sq ft	Air-heater type	Dust collectors	F-D FANS		I-D FANS		Firing	Type	FUEL		FEED PUMPS		TURBINES					CONDENSERS			Total boiler capacity incl new units, 1000 lb	Total generator capacity incl new units, 1000 kw	
			Drive	Air-volume control	Drive	Gas-volume control			Heating value, 1000 Btu per lb	Ash-fusion temperature, F	Drive	Flow control	Capacity, 1000 kw	Speed, rpm	Manufacturer	Backpressure, psia	No. of bleed pts	Generator cooling	Surface, 1000 sq ft	No. water passes	Tube material		
		Me	MT	S, V	MT	S, D	UF	C	14.0														
		Me	MT	S, V	MT	S, D	SS(137)	C	11.5		1M, 1T	S, R										165	
		Me	M	D	M	D	OG	C															
0	Tu	Me	M	D	M	Hy	TG	C	13.7	2400	3M, 1T											80	
		Me	M	D	M	Hy	SS(306)	C			2M, 1T	Hy	1.0	5000	Wo	4.7	0	A				125	1.0
		Me	M	D	M	D	SS	C	12.7		1M, 1T	R										44	
	Tu	Me	M	D	M	D	UF(70)	C			2M, 1T	R										90	
		Me	M	D	M	D	OG	C	12.0	2200	3Du	R										45	
		Me	M	D	M	D	UF	C			2Du	R										140	
		Me	T	S	T	S, D	SS	C	13.3	2100	1M, 1Du, 1MT	R										90	
		Me	M	D	M	D	UF	C	13.5		2M, 1T											45	
		Me	M	D	M	D	TG(180)	An	11.0		1M, 1T	R										70	
		Me	M	Hy	M	Hy	SS(50)	C			3T	S, R	0.2	3600	MI	4	1					85.6	1.5
		Me	M	V	M	D	OG	C	18.3		1M, 1T	R										24	
		Me	M	V	M	D	OG	C	12.0		1M, 1T	R										105	
		Me	M	D	M	D	OG	C	1.0		2T											13	
		Me	M	D	M	D	OG	C			2Du	S, R										111	
		Me	M	D	M	D	G	G			1M, 2T	Hy										54	
		Me	T	S	T	S	SS(152)	C	13.5	2400	4T	R										269	
		Me	T	S	T	S	G	C	1.1														
11.5	Tu	Me	MT		MT	D	P	C, O	13.5		2M, 2T	R										200	
		Me	M	S	M	S	HF	HF, O	4.5		1M, 2T		1.5	3600	Wo	1.0	1	A	1.7	2	Ad	105	3.0
		Me	M	V	M		SS(108)	C	12.5	2500	2Du	R										23	
		Me	M	D	M		SS	C	13.2	2240	1T, 1Du	S, R										40	
							SS	C	13.5														
15.9	Tu	Me	MT	D	T		P	C	14.0	2700	1M, 3T	R										250	
		Me	M	V	M	D	UF	C	14.5	2900	2Du	R											
8.6	Tu	Me	M	V	M	D	P	C	14.2	2700												428	12.9
6.6	Tu	Me	M	V	M	D	O	C			1M, 2T											240	
		Me	M	V	M	D	O	C	18.1		1M, 3T	S										190	2.7
		Me	M	V	M	D	O	C	1.0		3T	S										210	
		Me	M	V	M	D	SS	C	13.8		1Du, 1M, 1T		0.9	1200	MI	5	1	A				48	0.9
0		Me	M	D	M	D	SS(182)	C	12.0	2200	1T	R	5.0	3600	GE		1	A	6.0	2	Mu	465	14
0		Me	M	V	M	D	TG(179)	An	11.7		2Du	R										60	
		Me	M	V	M	D	UF(26)	C	14.0		1M, 1Du	S, R										36	
		Me	M	D	M	D	OG	C															
		Me	M	D	M	D	OG	C			1M											38	
		Me	M	D	M	D	OG	C	14.0	2800	1M, 1T	R										50	
		Me	M	D	M	D	OG	C			1M, 1T	R										74	
		Me	M	D	M	D	OG	C	18.0		2T, 1Du		1.3	3600		10		A				214	1.3
		Me	M	D, V	M	D	OG	C														280	
15.0	Tu	Me	T	S	T	S	WH, O	HF	4-8.0		3T	S										410	
		Me	M	D, V	M	D	WH, O	HF	4-8.0													30	
		Me	M	D, V	M	D	OG	C			3M	R										120	1.2
		Me	M	D, V	M	D	TG(128)	C			2M	R										60	
		Me	M	D, V	M	D	OG	C	12.5	2800	2T, 1Du	R										96	
		Me	M	D, V	M	D	TG(71)	An	12.5	2800													
		Me	M	D, V	M	D	TG(154)	An															
		Me	M	D	M	D	OG	C	11.5	2250	1M, 2T	R										135	
		Me	M	D	M	D	TG(168)	C	11.5	2000	2T	R										48	
		Me	M	D	M	D	SS(94)	C	13.0	2400	2T	R	0.7	4500	MI	5.0	1	A	1.0	2	Br	72	1.1
		Me	M	D	M	D	UF(68)	C			1M											45	1.1
		Me	M	V	M	V	OG	C, G	12.5	2800	2M, 2T	S, R										570	1.7
		Me	M	V	M	V	SS	C															
		Me	M	V	M	V	WH	WH	13.5	2400	2M											150	1.0
		Me	M	V	M	D	SS(144)	C			4M, 1T	R											
		Me	M	V	M	D	OG	C	11.0		1M, 1Du	R										65	
		Me	M	V	M	D	OG	C	14.2	2800	2M, 1T	R											
		Me	M	D	M	D	OG	C			M	R											
		Me	M	D	M	D	SS	C															
		Me	M	D	M	D	WH, O	C, G			2M	R										56	
		Me	M	D	M	D	OG	C			1M, 1T	R										90	
		Me	M	D	M	D	OG	C															
		Me	M	D	M	D	OG	C	18.0														
		Me	M	D	M	D	TG(144)	C			1T, 2Du	R										88	1.3
		Me	M	D	M	D	OG	C	12.0	2000												172	0.6
		Me	M	D	M	D	OG	C	12.0		2Du	S, R										150	
		Me	M	D	M	D	OG	C	16.5		2Du	S, R	0.3	400	AI	3.5						40	0.5
		Me	M	D	M	D	OG	C														22	0.5
18	Tu	Me	M	V	M	V	C	C	15.4		2M, 1T	R										60	

1950 Design Survey of Typical Industrial and

Compiled by J. C. McCabe, Associate Editor

Company	Location	Consulting Engineers	First operation new units	Nominal pressure, psi	Nominal steam temperature, F	BOILERS			Firing	TURBINES					Total boiler capacity incl new units 1000 lb	Total generator capacity incl new units 1000 kw
						Number	Capacity, each 1000 lb per hr	Manufacturing		Capacity 1000 kw	Speed, rpm	Manufacturer	Back pressure psi	No. of bleed pits		
161 TO 199 PSI																
Westmoreland Hospital Assn.	Greensburg, Pa.	E. D. Tucker	1950	196	338	1	11	UI	UF(56)						24	
Canadian National Ry.	No. Battleford, Sask.		1949	192	327	1	6									
Canadian National Ry.	Hudson Bay Junction, Sask.		1949	192	327	1	6									
Canadian National Ry.	Drumheller, Alta.		1949	192	327	1	6									
York Knitting Mills	Woodstock, Ont.		1950	192	353	2	6	CV	UF							
U.S. Penitentiary	McNeil Island, Wash.		1949	185	480	1	13.8	Ke	An	1.0	4500	W	1.0	1	44.9	2.1
Crane Co.	Chicago, Ill.	Sargent & Lundy	1949	180	373	1	75	BW	SS(166)							
Flintkote Co.	East Rutherford, N. J.	R. R. Imsande	1950	180	440	1	30	RS								
Roanoke Mills Co.	Roanoke Rapids, N. C.		180	Sat	2	40	RW	SS							80	
U.S. Veterans Administration	Sawtelle, Calif.		2-50	180	375	2	50	UI	O,G						117	
Zion's Canoe Mercantile Inst.	Salt Lake City, Utah		180	460	1	13.5	UI	C,G		1.0	200	SE	6.0		50	1.0
Delaware, Lockawanna & Western RR	Hoboken, N. J.		1950	175	378	1	50	FW	O						240	
Native Luce Co.	Dallas, Pa.		1948	175	Sat	1	18	IB	TG							
Noranda Mines	Noranda, Que.		10-51	175	525	1	22.5	JI	WH							
U.S. Plywood Corp.	Orangeburg, S. C.	Lockwood Greene	175	Sat	1	17	BW	WW								
W. J. Jette Co.	Montreal, Que.		1950	171	Sat	2	18	CV	O							
Esso-Canadian Corp.	Ottawa, Ont.		1950	170	Sat	2	24	CV	O							
Shupe & Donnie Inc.	North Wales, Pa.		1950	170	Sat	2	40	CE	O							
National Institutes of Health	Bethesda, Md.		1952	165		3	150	EM	O						450	
151 TO 160 PSI																
Acton Rubber Co.	Actonville, Que.		160	Sat	1	15	CV	UF								
Adelphi Academy	Holly, Mich.	R. Cole	1949	160	363	1	12.5	WB	C						25	
Allied Kid Co.	Wilmington, Del.		1949	160	331	1	17	BW	C							
Allis Chalmers Mfg. Co.	West Allis, Wis.	F. G. Schmid	160	470	1	175	RS	P		7.4	3600	AC			672	12
Arkport Dairies	Arkport, N. Y.		1950	160	Sat	1	20	EC	O							
Aron Canning Co.	Stockton, Calif.		1949	160	Sat	1	30	EC	O							
Babcock & Wilcox Co.	Alliance, Ohio		1949	160	353	2	25	BW	UF						50	
Bailey Meter Co.	Cleveland, Ohio		1948	160		1	10	BW	UF							
Ballantine Brewing Co.	Newark, N. J.		1949	160	350	2	35	BW	O						90	
Beecher Falls Mfg. Corp.	Beecher Falls, Vt.		1951	160	Sat	2	23	W	W	0.2	200	SE	12		23	0.9
Bon Secours Hospital	Grasse Point, Mich.		1950	160	Sat	1	11	EC	O							
Brighton Young Univ.	Provo, Utah	Earl Gritton	2-50	160		1	21	UI	P							
Brown & Williamson Tobacco Corp.	Petersburg, Va.		2-50	160	Sat	1	20	RS	TG							
Butler Cnty. Memorial Hospital	Butler, Pa.	Fosdick-Helmer	1950	160	338	2	20	BW	UF						40	
Butler & Ullman, Inc.	Hadley, Mass.		1948	160	324	1	16.5	BW	UF							
H. F. Byrd, Inc.	Berryville, Va.		1949	160	Sat	1	16	EC	O							
Carlisle Tire & Rubber Co.	Carlisle, Pa.		1950	160	Sat	1	16	EC	SS						26	
Chicago Natural History Museum	Chicago, Ill.		1950	160	338	2	20	BW	TG						50	
Chicago Pneumatic Tool Co.	Franklin, N. Y.		1949	160	338	3	20	BW	SS						60	
Chicago Screw Co.	Belvidere, Ill.		1949	160	338	3	16.5	BW	O						49.5	
City of Baltimore Airport	Baltimore, Md.		1949	160	Sat	2	25	EC	O						50	
City of Chicago	Chicago, Ill.		7-50	160	347	3	29	WB								
Coca Cola Co.	Baltimore, Md.		1949	160	338	1	16	BW	O							
Concord Steam Corp.	Concord, N. H.		1-50	160	Sat	1	25	RS	O						60	
Corps of Engineers	Albuquerque, N. M.	Black & Veatch	1949	160	338	2	33	BW	O,G							
Cuyahoga Soap Co.	Cleveland, Ohio		160	338	1	7	BW	UF								
Davidson College	Davidson, N. C.	Wm. Wallace II	1950	160	Sat	1	20.8	CE	UF							
Denver Sewer Pipe & Clay Co.	Denver, Colo.		160	358	1	27	BW	SS								
DeWitt Co.	Aurora, Ill.		1949	160	353	1	15	BW	O,G							
Diamond Pwr. Specialty Co.	Lancaster, Ohio	Austin Co.	1950	160	338	2	5	BW	UF						12	0
Doctors' Hospital	New York, N. Y.		1949	160	338	2	17	BW	O						56	
Durham High School	Durham, N. C.		1950	160	353	1	15	BW	UF							
Euclid Road Machinery Co.	Euclid, Ohio	Mayer & Valentine	1950	160	Sat	2	20	EC	UF						40	
Export Leaf Tobacco Co.	Pittsford, Va.		1948	160	Sat	1	36	EC	O						90	
Export Leaf Tobacco Co.	Wilson, N. C.		1950	160	Sat	2	14	EC	O							
Forest Products Treating Co.	Three Oaks, Mich.		1949	160	353	1	13	BW	UF							
Gallo Winery	Dallas, Ore.		1949	160	Sat	2	16	EC	SS						32	
General Electric Co.	Madison, Calif.	G. E. Rahm	9-50	160	Sat	1	26	BW	O,G						20	
General Electric Co.	Bridgeville, Pa.		1949	160	338	1	12	EC	UF						50	
General Electric Co.	Cincinnati, Ohio		1949	160	Sat	2	25	EC	O							
Glen Raven Cotton Mills	Glen Raven, N. C.		1949	160	Sat	1	20	EC	O							
Gladstone Sash & Door Co.	Leavenworth, Kan.		1949	160	353	1	10	BW	WW						10	
Greenwood Mills	Greenwood, S. C.	McPherson & Co.	1950	160	344	2	10	BW	UF							
Grinnell Corp.	Providence, R. I.		1949	150	312	1	20	BW	O							
Gross & Co.	Newark, N. J.		1949	150	Sat	1	35	RS	SS						75	
Hamilton Mfg. Co.	Calumet, Ind.		1950	160		1	24	Vs	TG							
Harvard Carbons, Ltd.	Granville, Ont.		10-50	160	125	1	15	FW	UF						30	
Hawthorne-Nelson Corp.	Derby, N. Y.		1949	160	338	2	15	BW	O,G						56	
Heidelberg Beverage Corp.	Burlingame, N. Y.		3-50	150	Sat	2	21	UI	SS						42	
Hiach Sun Co. Inc.	Hiach, N. Y.		1950	160	320	1	10	EC	O						32	
Kraft Foods, Inc.	Kendallville, Ind.		1949	150	Sat	2	16	EC	UF							
Lancaster General Hospital	Lancaster, Pa.		1949	150	Sat	2	15	EC	SS						40	
Land O Lakes Creamery	Marshfield, Wis.		1949	150	Sat	2	20	EC	SS						22	
Land O Lakes Creamery	Whiteland, Pa.		1949	150	Sat	2	11	UI	TG							
Lanigan Valley Farmers Coop	Aberdeen, Pa.		1948	150	350	2	11	UI	TG							
Labor-McNeil-Libby	Orndev, Calif.		1949	150	Sat	1	32	EC	O							

1U - Allis-Chalmers Mfg Co
An - Anthracite
Bt - Brierley
BL - Black liquor
B# - Babcock & Wilcox Co

C - Coal, bituminous
CB - Cleaver-Brooks Co
CE - Combustion Engineering
Superheater Inc
CK - Canadian Vickers Ltd

D - Damper
DL - DeLaval Steam Turbine Co
E - Erie City Iron Works
EL - Elliott Co
EM - Edge Moor Iron Works Inc

FW - Foster Wheeler Corp
G - Gas
GE - General Electric Co
HF - Hogged Fuel
IB - International Boiler Works

JI - John Inglis Co Ltd
JL - James Leffel & Co
Ke - E Keeler
KS - Kewanee Boiler Corp
MI - Murray Iron Works Co

INSTITUTIONAL POWER PLANTS: BELOW 200 PSI

Compiled by J C McCabe, Associate Editor

Company	Location	Consulting Engineers	First operation, new units	Nominal pressure, psi	Nominal steam temperature, F	BOILERS		Firing	TURBINES					Total boiler capacity incl new units, 1000 lb incl new units, 1000 lb
						Number	Capacity, each, 1000 lb per hr		Capacity, 1000 kw	Speed, rpm	Manufacturer	Backpressure, psia	No of bleed pts	
Libby-McNeil-Libby	Sunnyvale, Calif.		1948	160	Sat	1	18	EC						59.7
Liberty Hosiery Mills, Inc.	Gibsonville, N.C.		1949	160	Sat	1	10	EC						10
Liebherr Brewery, Inc.	Brooklyn, N.Y.		1949	160	450	1	50	EC	UF					120
Lincoln Electric Co.	Euclyd, Ohio		1950	160	Sat	2	36	EC	SS					45
Loose Insulator Corp.	Baltimore, Md.		1949	160	353	1	25	EC	SS					26
Lovola Univ.	Chicago, Ill.		1949	160	338	1	25	EC	SS					36
Lucky Lager Brewing Co.	Aruga, Calif.		1950	160	353	2	18	EC	SS					27
Manning, Maxwell & Moore	Stratford, Conn.		1949	160	358	1	16	EC	SS					62
Marymount Hospital	Garfield Heights, Ohio		1949	160	353	2	13.5	EC	SS					34.6
McClouth Steel Co.	Trenton, Mich.		1949	160	353	2	31	EC	SS					38
Memorial Hospital	Houston, Texas		1950	160	Sat	1	17.3	EC	SS					55
Mills College	Oakland, Calif.	Hudson & Grady	1950	160	338	1	25	EC	SS					50
Mohawk Paper Mills	Cahoes, N.Y.		1949	160	Sat	1	25	EC	SS					20
Monarch Laundry	Chicago, Ill.	E. Cassan	1949	160	Sat	1	30	EC	SS					36
St. Mary's Hospital	Niagara Falls, N.Y.	J. Fruchtbau	1949	160	Sat	2	20	EC	SS					25
St. Sinai Hospital	Minneapolis, Minn.		1950	160	Sat	2	20	EC	SS					30
Victor Managham Co.	Greenville, S.C.	J. P. Stevens & Co.	1949	160	Sat	2	18	EC	SS					40
Moore Bath Hotel	Waukesha, Wis.		1950	160	344	1	13	EC	SS					11
Niles Glass Works	Niles, Ohio		1949	160	353	1	36	EC	SS					420
North Carolina College	Durham, N.C.		1950	160	Sat	2	30	EC	SS					30
North Texas State College	Denton, Texas	Yandell, Cowan, Love Engr. Co.	1949	160	Sat	2	9	EC	SS					67
Northwest State Hospital	Northwalk, Calif.		1949	160	Sat	1	33	EC	SS					27
Oakland County Service Ctr.	Farmington, Mich.	Hyde & Babbio	1950	160	Sat	3	22	EC	SS					78.5
Ohio Rubber Co.	Long Beach, Calif.		4-50	160	Sat	1	20	EC	SS					40
Oregon State Hospital	Salem, Ore.	Thos. Taylor	1950	160	353	3	26	EC	SS					11
Pacific Colony State Hospital	Spadra, Calif.		1950	160	320	1	20	EC	SS					420
Pacific Lumber Agency	Sumner, Wash.		1949	160	Sat	1	6	EC	SS					30
Pacific States Cast Iron Pipe Co.	Provo, Utah		1949	160	Sat	2	10	EC	SS					46
Peralta Hospital	Oakland, Calif.	Garthorne, Buonaccorsi, Murry	1950	160	Sat	2	14	EC	SS					240
Pesco Products Co.	Bedford, Ohio		1950	160	Sat	2	40	EC	SS					15
Peter Paul Inc.	Naugatuck, Conn.		11-50	160	Sat	2	9	EC	SS					28.5
Pilgrim State Hospital	Brennwood, N.Y.		1949	160	370	1	70	EC	SS					30
Polyclinic Hospital	Cleveland, Ohio		1949	160	Sat	2	8	EC	SS					15
Providence Memorial Hospital	El Paso, Texas		1950	160	Sat	2	10	EC	SS					240
Quaker Maid Co.	Rioomdale, Ohio		1949	160	Sat	1	27	EC	SS					15
Revere Copper & Brass	Baltimore, Md.		1949	160	353	2	15	EC	SS					240
Revere Copper & Brass	Rome, N.Y.		1-50	160	353	1	38	EC	SS					30
Rich Ladder Mfg. Co.	Cincinnati, Ohio		1949	160	338	2	10	EC	SS					15
Rockwell Mfg. Co.	Freeport, Ill.		1949	160	344	2	10	EC	SS					15
Rosedale Knitting Co.	Reading, Pa.	Wertz Engrg.	1948	160	350	2	18	EC	SS					46
St. Francis Convent	Mishawaka, Ind.		1950	160	338	2	17.5	EC	SS					15
St. John's Hospital	Brooklyn, N.Y.	Eade, Freund & Campbell	1949	160	Sat	1	14	EC	SS					15
St. Joseph Hospital	Memphis, Tenn.	T. J. O'Brien	1949	160	344	2	15	EC	SS					15
St. Vincent's Hospital	Birmingham, Ala.	J. A. Evans	1950	160	Sat	2	8	EC	SS					15
San Bernardino County Hospital	San Bernardino, Calif.	Stockley & Bamford	1949	160	344	3	15	EC	SS					15
San Jacinto Ordnance	Houston, Texas		1949	160	Sat	2	20	EC	SS					15
San Lorenzo Nurseries	Los Angeles, Calif.		1949	160	Sat	1	30	EC	SS					15
Seelbach Hotel	Louisville, Ky.		1950	160	Sat	1	30	EC	SS					15
Self Memorial Hospital	Greenwood, S.C.		1950	160	344	2	10	EC	SS					15
Show Univ.	Raleigh, N.C.		1949	160	Sat	2	12	EC	SS					15
T. S. Simms & Co., Ltd.	St. John, New Brunswick		10-50	160	Sat	1	11.5	EC	SS					15
Southern Baptist Theological Seminary	Louisville, Ky.		1950	160	Sat	1	15	EC	SS					15
Spaulding Laundry Dry Cleaning	Louisville, Ky.		1948	160	366	1	28.5	EC	SS					15
Spartan Mills	Spartanburg, S.C.		1949	160	352	2	13.8	EC	SS					15
Stanford Univ.	Stanford, Calif.	G. E. Rahm	1949	160	Sat	1	36	EC	SS					15
Texas Prison System	Huntsville, Texas		1950	160	Sat	2	20	EC	SS					15
Tutwiler Hotel	Birmingham, Ala.		1948	160	Sat	1	5.2	EC	SS					15
U. S. Atomic Energy Comm.	Albuquerque, N.M.	Black & Veatch	1950	160	350	4	60	EC	SS					15
U. S. Veterans Admin.	Altoona, Pa.		1949	160	353	3	13.6	EC	SS					15
U. S. Veterans Admin.	Fort Wayne, Ind.		1949	160	Sat	3	27	EC	SS					15
U. S. Veterans Admin.	Hot Springs, S.D.		5-50	160	338	1	25	EC	SS					15
U. S. Veterans Admin.	Iowa City, Ia.		1950	160	Sat	3	16	EC	SS					15
U. S. Veterans Admin.	Lexington, Ky.		1950	160	Sat	3	26.4	EC	SS					15
U. S. Veterans Admin.	Little Rock, Ark.		1950	160	Sat	3	5.4	EC	SS					15
U. S. Veterans Admin.	Manchester, N.H.		1949	160	Sat	3	17	EC	SS					15
U. S. Veterans Admin.	Omaha, Neb.		1950	160	Sat	3	6.9	EC	SS					15
U. S. Veterans Admin.	Phoenix, Ariz.		1950	160	Sat	3	10	EC	SS					15
U. S. Veterans Admin.	Poplar Bluff, Mo.		1950	160	Sat	1	8	EC	SS					15
U. S. Veterans Admin.	Portland, Ore.		1950	160	Sat	3	15	EC	SS					15
U. S. Veterans Admin.	St. Cloud, Minn.		1-50	160	337	2	26	EC	SS					15
U. S. Veterans Admin.	Spokane, Wash.		1949	160	338	3	11	EC	SS					15
U. S. Veterans Admin.	Walla Walla, Wash.		1950	160	Sat	3	12	EC	SS					15
Univ. of Alabama	University, Alabama		1949	160	Sat	1	27.5	EC	SS					15
Univ. of Idaho	Idaho Falls, Idaho	Earl Grison	1948	160	253	2	10	EC	SS					15
Univ. of Maryland	Princess Anne, Md.	James Fossey	1950	160	Sat	3	13.5	EC	SS					15
Utah Canning Co.	Coden, Utah		1950	160	353	1	12	EC	SS					15
Washington State Pen.	Walla Walla, Wash.	C. C. Moore	1949	160	347	1	16	EC	SS					15
Wilberforce College	Wilberforce, Ohio	R. S. Curl & Assoc.	10-50	160	350	1	20	EC	SS					15

150 TO 159 PSI
 Evenson Estate, Boston, Mass. 11-49 155 Sat 1 15 EC G
 Abbott Dairies, Philadelphia, Pa. 8-50 150 Sat 2 6 EC G
 Allied Mills, Inc. Portsmouth, Va. 1945 150 Sat 1 5 EC G

O - Oil
 P - Pulverized-fuel firing
 R - Regulator
 RS - Riley Stoker Corp
 S - Speed control

SE - Skinner Engine Co
 SS - Spreader stoker
 T - Turbine drive
 TG - Traveling-grate stoker
 Tr - Titusville Iron Works Div

UF - Underfeed stoker
 UI - Union Iron Works
 V - Vane control
 VK - Vickers Keeler Co
 W - Henry Vogt Machine Co

W - Wood
 WH - Waste Heat
 WB - Wm Bras Boiler & Mfg Co
 WE - Westinghouse Electric Corp
 W - Wickes Boiler Co

W - Worthington Pump & Machy Corp, Moore Steam Turbine Division
 W - Wood waste
 (150) - Stoker grate area, sq ft
 (1) - Gas-engine driven

Industrials and Institutionals: Below 200 Psi

Compiled by J C McCabe, Associate Editor

Company	Location	Consulting Engineers	First operation new units	Nominal pressure, psi	Nominal steam temperature, F	BOILERS		Firing	TURBINES					Total boiler capacity incl new units 1000 lb	Total generator capacity incl new units 1000 kw
						Number	Capacity, each, 1000 lb per hr		Capacity	Speed, rpm	Manufacturer	Backpressure psi	No. of bleed pts		
✓ Balentine Packing Co.	Greenville, S. C.		1950	150		2	5.3	CS	O						
Balling Oil Co.	Wethersfield, Conn.		2-50	150	Sat	1	5.0	BI	O						
* B. Beach	Petersburg, Va.		9-50	150	Sat	1	9.5	BI	O						
✓ Breyer Ice Cream Co.	Long Island City, N. Y.		1949	150		1	8.5	CB	O						
Bridgeport Industrial Serv.	Shelton, Conn.		10-50	150	Sat	1	5.0	BI	O						
Brown & Williamson Tobacco	Lexington, Ky.		12-48	150	36	1	9.0	CB	O,G						
Benrus Watch	Waterbury, Conn.		7-49	150	Sat	2	7	BI	O						
✓ Burney Bros. Bakery	Chicago, Ill.		1950	150		3	5.3	CB	O,G						
✓ Canadian Car & Foundry Co.	Montreal, Canada		1950	150		1	40	FW	SS					94	
Canadian Car & Foundry Co.	Montreal, Canada		1949	150	Sat	1	40	FW	SS						
Canadian Pacific Pwys.	Winnipeg, Manitoba		1950	150	466	2	25	JI	SS					100	
Capital Record, Inc.	Los Angeles, Calif.		1950	350		1	6.9		O						
Carleton Co.	Sherbrooke, Que.		1950	150		1	36	CV	C						
✓ Chrysler Corp.	Detroit, Mich.		1950	150		1	5	CB	O						
Commercial Solvents Corp.	Terre Haute, Ind.		1950	Sat	2	25	W	O							
✓ Congoleum-Nairn Co.	Cedarhurst, Md.		1950	360		3	35	RS	SS					135	
✓ Crawley's Milk Co.	Paterson, N. J.		1948	150		1	5.2	CB	O						
Dept. of Justice	Kingston, Ontario		1950	150	465	1	21	JI	UF						
✓ Dickinson County Hosp.	Iron Mountain, Mich.		1950	150		2	5.8	CB	O						
✓ Doernbecher Mfg. Co.	Portland, Ore.		1950	358		1	45	RS	C,HF	0.5	3600	AC 5		100	0.5
✓ Dolly Madison Dairies	Eau Claire, Wis.		1948	150		1	5.2	CB	O						
Elliott Hospital	Manchester, N. H.	R. D. Kimball	11-49	150	Sat	1	3.0	BI	O						
✓ Elmira Reformatory	Elmira, N. Y.		1949	150	366	4	16	BW	UF(96)	1.0	4500	W 4	0	64	1.6
✓ Falstaff Brewing Corp.	St. Louis, Mo.		1949	150	Sat	1	48	BW	TC(110)						
✓ Falls City Creamery Co.	Falls City, Nebr.		1948	150		1	5.2	CB	O						
✓ Fitkin Hospital	Neptune, N. J.		11-49	150	Sat	1	7.5	BI	O						
✓ Florida Tar & Creosote Corp.	Tampa, Fla.		1948	150	356	1	4.3	CB	O						
Ford Motor Co.	Cleveland, Ohio	Fairbrother, Miehl	1951	150	Sat	1	60	W	TC					360	0
Ford Motor Co.	Cincinnati, Ohio	Fairbrother, Miehl	1950	150	Sat	3	100	W	TC						
✓ Gladding, McBean & Co.	Glendale, Calif.		1948	150	Sat	1	17	CB	O,G					75	0
✓ Interlake Tissue Mills Co.	Merritt, Ont.		1949	150	416	1	33	FW							
✓ Joliet Arsenal	Joliet, Ill.		1950	150		2	5.8	CB	O						
✓ Keeler State Street Restaurant	Albany, N. Y.	A. E. Offner	1-51	150	Sat	2	4	BI	O						
Lone Star Brewing Co.	San Antonio, Tex.		1949	150	Sat	1	16	EC	O,G						
✓ Martin Rockwell Corp.	Plainville, Conn.		8-50	150	Sat	1	14	BI	O						
H. McLachlan & Co.	Danbury, Conn.		11-49	150	Sat	1	7.5	BI	O						
Michigan Milk Producers	Imity City, Mich.		5-50	150	Sat	2	12	BI	C						
✓ Mohican Hotel	New London, Conn.		8-49	150	Sat	1	4	BI	O						
✓ Neo-Gravure Printing Co.	Weehawken, N. J.		1950	150		3	8.7	CB	O						
✓ Northern Engraving & Mfg.	La Crosse, Wis.		1950	150		4	5.3	CB	O						
✓ Nottage Laundry	Brooklyn, N. Y.		9-50	150	Sat	1	8.5	BI	C						
✓ Perkins Institution	Watertown, Mass.	Hollis French	8-50	150	Sat	4	8.5	BI	O						
✓ Power & Combustion Inc.	Baltimore, Md.		6-50	150	Sat	1	4	BI	O						
✓ Reilly Tar & Chemical Co.	Fairmont, W. Va.	H. R. Horner	1949	150	Sat	1	17	CB	G						
✓ Ridgeview Farms Dairy	Chicago, Ill.		1949	150	Sat	1	6.9	CB	O,G					9	
✓ St. Joseph's Hospital	St. Joseph, Mich.		1950	150		3	7	CB	O						
✓ St. Lawrence State Hosp.	Ogdenburg, N. Y.		9-51	150	365	4	40	T	SS	1.0	1200	W 4		160	1.0
✓ Schartz Memorial Hospital	Waterloo, Iowa		1950	150		2	7	CB	O						
✓ Skelley Foods, Inc.	Indianapolis, Ind.		1949	150	Sat	1	50	RS	SS(126)						
✓ Sweeney American Hospital	Rockford, Ill.		1950	150		2	8.7	CB	O						
✓ Truett Hospital, Baylor Univ.	Dallas, Texas		1950	150	Sat	2	5	EC	G						
United Shoe Machy. Corp.	South Middletown, Mass.		9-50	150	Sat	1	11	BI	O						
✓ United States Rubber Co.	Manchester, N. H.		1949	150	365	2	2	CB	O						
✓ Van Roolie Co., Inc.	Bryson City, N. C.		1950	Sat	1	8	EC	C							
✓ Verano Chemical Co.	Newark, N. J.		1950	150	Sat	2	5.8	CB	O						
✓ Winnebago State Hospital	Winnebago, Wis.	Gates, Moe & Weiss	11-50	150	Sat	3	12	UI	UF						
R. L. Ziegler, Inc.	Tuscaloosa, Ala.		7-50	150	Sat	1	7.5	BI	O						
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✓ Beatty Bros. Ltd.	Fergus, Ont.	Taylor Engrg.	12-49	145	355	1	40	FW	SS(129)						
✓ Van Roolie, Inc.	Athens, Tenn.		1949	140	Sat	1	5	CE	SS(130)						
✓ All Steel Equipment, Inc.	Aurora, Ill.		1949	125		1	12	CB	O,G						
✓ Alloy Metal Sales, Ltd.	Toronto, Ont.		1949	125		1	4	JI	UF						
American Can Co.	Chatham, Ont.		11-50	125	Sat	1	20	JI	O						
✓ Canadian National Rwy.	Marneville, Ontario		1950	125	Sat	1	7		SS						
✓ Carol-May Finishing Co.	Concord, N. C.		1948	125	Sat	1	4.3	CB	O						
✓ Dayton State Hospital	Dayton, Ohio	Carl Lorimer	1950	125	Sat	1	17.5	UI	UF						
✓ Dept. of Public Wks.	Smith Falls, Ont.		1950	125	Sat	3	25	JI	SS						
✓ Hancock Falls Cream Prod.	Hancock Falls, N. Y.		1950	125	Sat	1	5	CB	O						
✓ Johnson Steel & Wire Co.	Worcester, Mass.		1948	125		1	5.2	CB	O					15	
H. E. Koontz Creamery, Inc.	Baltimore, Md.	Lester Gardner	1948	125		1	5	BI	O						
✓ Reliance Electric & Engrg. Co.	Ashtabula, Ohio		1948	125	Sat	1	10.5	CB	O						
✓ Southern Cotton Oil Co.	Memphis, Tenn.		1950	125	Sat	3	23	CE	G						
✓ U. S. Veterans Admin.	Rutland Heights, Mass.		1948	125		1	4.3	CB	O					25	
Thomas Young Greenhouses	Bound Brook, N. J.	P. H. Goppenheimer	1949	125	Sat	3	5		UF						
✓ Slattery Rock State Parks, Calif.	Slattery Rock, Pa.	Rust Engrg.	1951	120	Sat	2	20		UF						
✓ Bridgeport Pipe & Engrg. Co.	Bridgeport, Conn.	Fletcher Thompson	11-50	100	Sat	4	6.5	BI	O						
✓ Canadian Car & Foundry	Montreal, Canada		1-50	100	Sat	1	15	JI	O					18	
✓ Cravenette Co. of U.S.A.	Hoboken, N. J.		1950	350		1	16	CB	O						
✓ Cyclo Weld Cement Prod.	Trenton, Mich.	Steffers & Gilet	1949	292		2	10.5	CB	O						
✓ Douglas & Lamson Co.	Detroit, Mich.	C. S. Harrison	1949	100	Sat	1	20	FW	UF						
✓ Hollinger Gold Mines	Timmins, Ont.		1949	100	248	1	20	FW	UF						
✓ De Anne Electric & Engrg. Co.	Ashtabula, Ohio		1948	100	Sat	1	7	CB	O						
✓ Green Petroleum Co.	Waukegan, Ill.	Cresser Engrg.	12-47	100		1	7	CB	O						