

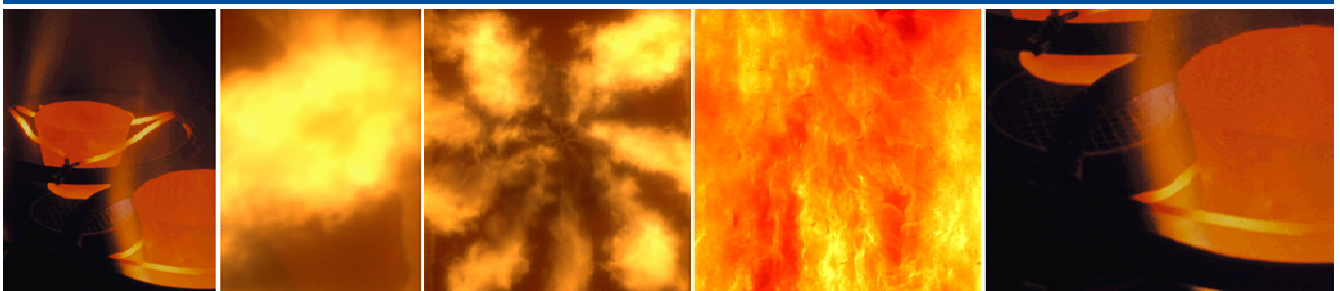


JFE Engineering Group
Standardkessel
Baumgarte

List of References

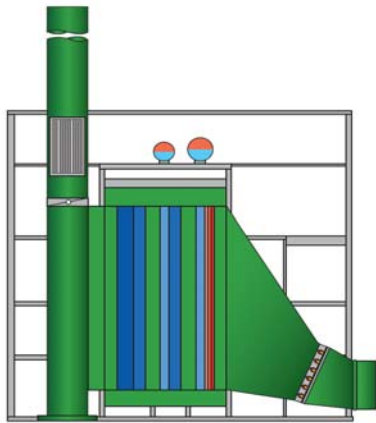
Heat Recovery Boiler Plants

Standardkessel GmbH



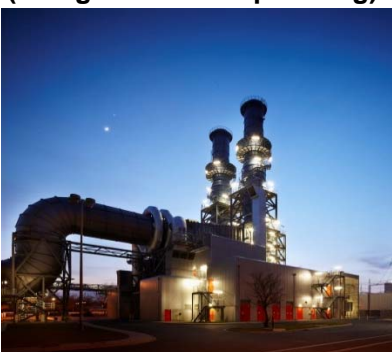
Extraction from our list of Reference
Heat Recovery Boiler Plants
Total Number of References: 102

Stadtwerke Flensburg, Germany



Gas turbine	:		SGT-800
Gas turbine output	:	1 x 47	MW _{el}
Steam capacity	:	HP:	t/h
		LP:	
Design pressure	:	HP:	bar
		LP:	
Superheated steam temperature	:	HP:	°C
		LP:	
District Heating Exchanger Part:	:		
Thermal Input		13	MW
Design pressure		40	bar g
Allowable Operation Temperature		130	°C
Flying take-over	:		no
Auxiliary fuel	:		Natural gas
Scope	:		Boiler Island
Year of commissioning	:		2015

Gas Power Plant Emsland, Lingen, Germany
(Design and detail planning)



Gas turbine	:		Trent 60 WLE
Gas turbine output	:	2 x 2 à 58	MW _{el}
Steam capacity	:	2 x 1140	t/h
Design pressure	:	187.6	bar
Superheated steam temperature	:	535	°C
Flying take-over	:		no
Auxiliary fuel	:		Natural gas
Scope	:		EPC
Year of commissioning	:		2012

E.ON for K+S Hattorf, Germany



Gas turbine	:		SGT-700B
Gas turbine output	:	32	MW _{el}
Steam capacity	:	80	t/h
Design pressure	:	70	bar
Superheated steam temperature	:	500	°C
Flying take-over	:		no
Auxiliary fuel	:		Natural gas
Scope	:		EPC
Year of commissioning	:		2012

Stadtwerke Hannover Linden, Germany



Gas turbine	:		GE PG 6111 FA
Gas turbine output	:	77	MW _{el}
Steam capacity	:	HP 93 MP 13 RH 104	t/h
Design pressure	:	HP 128 MP 38 RH 36,5	bar
Superheated steam temperature	:	HP 540 MP 351 RH 545	°C
Flying take-over	:		no
Auxiliary fuel	:		no
Scope	:		Boiler Island
Year of commissioning	:		2012

Kraftwerk Plattling GmbH (E.ON), Plattling, Germany



Gas turbine	:	PG 6111FA	
Gas turbine output	:	77	MW _{el}
Steam capacity	:	201	t/h
Design pressure	:	108	bar
Superheated steam temperature	:	532	°C
Flying take-over	:	no	
Auxiliary fuel	:	Natural gas	
Scope	:	Boiler Island	
Year of commissioning	:	2010	

Vattenfall Europe Hamburg AG for GuD Tiefstack, Hamburg, Germany



Gas turbine	:	Trent 60 DLE	
Gas turbine output	:	2 x 51,9	MW _{el}
Steam capacity	:	2 x 112	t/h
Design pressure	:	51	bar
Superheated steam temperature	:	400	°C
Flying take-over	:	no	
Auxiliary fuel	:	Natural gas	
Scope	:	Boiler Island	
Year of commissioning	:	2007	

Stadtwerke Münster, Heizkraftwerk Hafen, Germany



Gas turbine	:		RB 211
Gas turbine output	:	2 x 34,15	MW _{el}
Steam capacity	:	2 x 81,5	t/h
Design pressure	:	92	bar
Superheated steam temperature	:	525	°C
Flying take-over	:		yes
Auxiliary fuel	:		Natural gas / light fuel oil
Scope	:		Boiler Island
Year of commissioning	:		2005

Electrabel Deutschland for Heating Power Station Römerbrücke, Germany



Gas turbine	:		GE-LM 6000
Gas turbine output	:	1 x 42	MW _{el}
Steam capacity	:	1 x 115	t/h
Design pressure	:	115	bar
Superheated steam temperature	:	535	°C
Flying take-over	:		yes
Auxiliary fuel	:		Natural gas
Scope	:		Boiler Island
Year of commissioning	:		2005

Alstom Power for Dunkerque, France



Gas turbine	:	Alstom-GT 13 E		
Gas turbine output	:	2 x 160		MW _{el}
Steam capacity per each boiler	:	HP	535	t/h
		RH	530	t/h
Thermal Output LP-part		LP	50	MW
Design pressure	:	172/40/6 bar		
Superheated steam temperature	:	HP	566	°C
		RH	566	°C
Flying take-over	:	yes		
Auxiliary fuel	:	Natural gas, blast furnace gas, coke gas		
Scope	:	Boiler Island		
Year of commissioning	:	2004		

LLS, Duisburg, for Heating Power Station Würzburg, Germany



Gas turbine	:	Siemens-SGT 800		
Gas turbine output	:	1 x 45		MW _{el}
Steam capacity	:	1 x 125		t/h
Design pressure	:	72		bar
Superheated steam temperature	:	515		°C
Flying take-over	:	yes		
Auxiliary fuel	:	Natural gas		
Scope	:	Boiler Island		
Year of commissioning	:	2005		

Lurgi Lentjes AG for Mainova, Power Station Niederrad, Germany



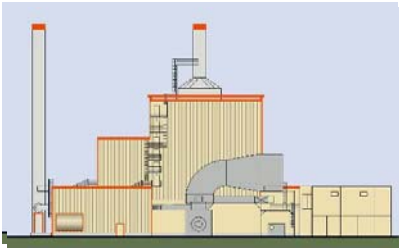
Gas turbine	:	GE-PG 6581 (B)	
Gas turbine output	:	1 x 47,7	MW _{el}
Steam capacity	:	1 x 135	t/h
Design pressure	:	87	bar
Superheated steam temperature	:	530	°C
Flying take-over	:	no	
Auxiliary fuel	:	Natural gas	
Scope	:	Boiler Island	
Year of commissioning	:	2004	

Lurgi Lentjes AG for Stadtwerke Duisburg, Germany



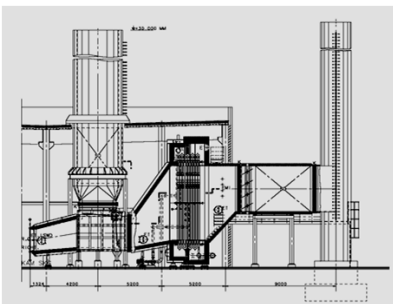
Gas turbine	:	GE-PG 6111 (FA)	
Gas turbine output	:	2 x 77	MW _{el}
Steam capacity	:	2 x 91	t/h
Design pressure	:	150	bar
Superheated steam temperature	:	533	°C
Flying take-over	:	no	
Auxiliary fuel	:	no	
Scope	:	Boiler Island	
Year of commissioning	:	2004	

E.ON for Kraftwerk Grenzach-Wyhlen, Germany



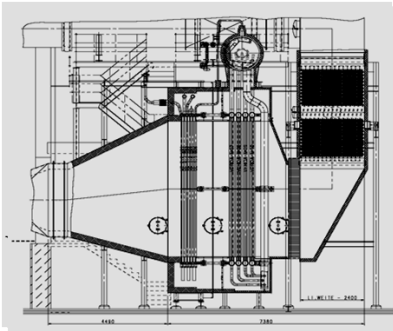
Gas turbine	:		RR-RB 211T
Gas turbine output	:	1 x 32	MW _{el}
Steam capacity	:	1 x 80	t/h
Design pressure	:	129	bar
Superheated steam temperature	:	525	°C
Flying take-over	:		no
Auxiliary fuel	:		Natural gas
Scope	:		EPC
Year of commissioning	:		2004

Kraftanlagen Anlagentechnik München (KAM) for Stadtwerke Augsburg, Germany



Gas turbine	:		GE-LM 2500 PR DLE
Gas turbine output	:	1 x 30,8	MW _{el}
Thermal output boiler	:	50	MW _{th}
Design pressure	:	23	bar
Flow temperature	:	130	°C
Return flow temperature	:	75	°C
Flying take-over	:		no
Auxiliary fuel	:		Natural gas
Scope	:		Boiler Island
Year of commissioning	:		2004

MVV for Power Station Ludwigshafen, Germany



Gas turbine	:	Solar-Taurus 70
Gas turbine output	:	1 x 8,5 MW _{el}
Steam capacity	:	1 x 25 t/h
Design pressure	:	65 bar
Superheated steam temperature	:	455 °C
Flying take-over	:	no
Auxiliary fuel	:	Natural gas
Scope	:	EPC
Year of commissioning	:	2003

Lurgi Lentjes AG for Rzeszow, Poland



Gas turbine	:	Siemens-V64.3a
Gas turbine output	:	1 x 62 MW _{el}
Steam capacity	:	1 x 110 t/h
Design pressure	:	110 bar
Superheated steam temperature	:	540 °C
Flying take-over	:	no
Auxiliary fuel	:	no
Scope	:	Boiler Island
Year of commissioning	:	2003

Lurgi Lentjes AG for Lublin, Poland



Gas turbine	:		Siemens-V 94
Gas turbine output	:	1 x 155	MW _{el}
Steam capacity	:	1 x 250	t/h
Design pressure	:	95	bar
Superheated steam temperature	:	528	°C
Flying take-over	:		no
Auxiliary fuel	:		no
Scope	:		Boiler Island
Year of commissioning	:		2002

InfraServ Bayernwerk Gendorf GmbH, Burgkirchen, Germany



Gas turbine	:		SGT-800
Gas turbine output	:	1 x 43	MW _{el}
Steam capacity	:	1 x 130	t/h
Design pressure	:	71	bar
Superheated steam temperature	:	510	°C
Flying take-over	:		yes
Auxiliary fuel	:		Natural gas, Hydrogen
Scope	:		Boiler Island
Year of commissioning	:		2002

Jacobs Comprimo GmbH for Aserbaidshon (Baku 1 and 2)



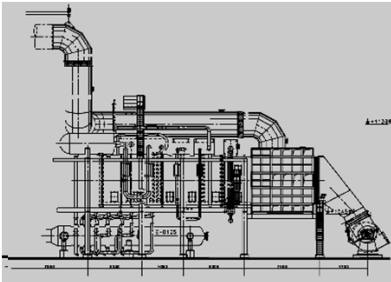
Gas turbine	:	ABB-GT 8	
Gas turbine output	:	2 x 56	MW _{el}
Steam capacity	:	2 x 218	t/h
Design pressure	:	22	bar
Superheated steam temperature	:	302	°C
Flying take-over	:	no	
Auxiliary fuel	:	Natural gas	
Scope	:	Boiler Island	
Year of commissioning	:	2001	

Isar Amperwerke for Papierfabrik Roman Bauernfeind, Deutschland
(today: E.ON München für Mondi Packaging Raubling GmbH)



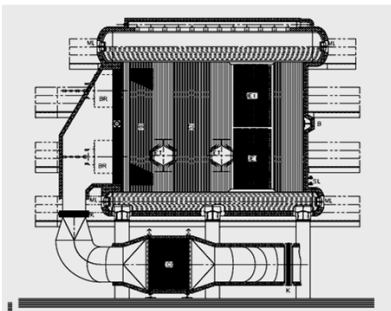
Gas turbine	:	Solar-Mars 100	
Gas turbine output	:	11.3	MW _{el}
Steam capacity	:	85	t/h
Design pressure	:	104	bar
Superheated steam temperature	:	502	°C
Flying take-over	:	yes	
Auxiliary fuel	:	Natural gas, bio gas	
Scope	:	EPC	
Year of commissioning	:	2001	

Lurgi Oel Gas Chemie for YPF Methanol, Argentina



Process heat generator	:	Reformer
Energy source	:	Waste gas
Steam capacity	:	1 x 67,3 MW _{th}
Gas inlet temperature	:	980 °C
Gas outlet temperature	:	130 °C
Medium flows	:	Process gas, steam, fuel gas, air
Scope	:	Boiler Island
Year of commissioning	:	2000

Drewsen, Lachendorf, Germany



Gas turbine	:	Solar-Taurus 60
Gas turbine output	:	1 x 6.9 MW _{el}
Steam capacity	:	1 x 65 t/h
Design pressure	:	46 bar
Superheated steam temperature	:	460 °C
Flying take-over	:	yes
Auxiliary fuel	:	Natural gas
Scope	:	EPC
Year of commissioning	:	2000

E.ON München for Meggle, Germany



Gas turbine	:	Solar-Taurus 70
Gas turbine output	:	1 x 6,75 MW _{el}
Steam capacity	:	1 x 55 t/h
Design pressure	:	64 bar
Superheated steam temperature	:	510 °C
Flying take-over	:	yes
Auxiliary fuel	:	Natural gas
Scope	:	EPC
Year of commissioning	:	2000

Stadtwerke Düsseldorf for Power Station Lausward, Germany

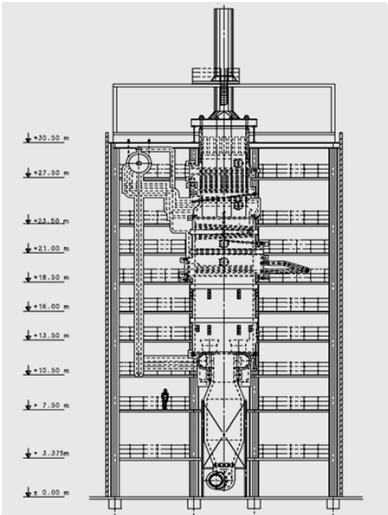


Gas turbine	:	Siemens-V64
Gas turbine output	:	1 x 70 MW _{el}
Steam capacity	:	1 x 103 t/h
Design pressure	:	97 bar
Superheated steam temperature	:	541 °C
Flying take-over	:	no
Auxiliary fuel	:	no
Scope	:	Boiler Island
Year of commissioning	:	2000

"Heat Recovery Boiler Plants"

Extraction from the list of references of Standardkessel GmbH

**GEW, Cologne, Merheim, Germany
(today: Rheinenergie)**



Gas turbine	:	Solar-Taurus 50
Gas turbine output	:	1 x 5 MW _{el}
Steam capacity	:	1 x 53 t/h
Design pressure	:	86 bar
Superheated steam temperature	:	525 °C
Flying take-over	:	yes
Auxiliary fuel	:	Natural gas, light fuel oil
Scope	:	EPC
Year of commissioning	:	1999

Stadtwerke Erfurt, Germany



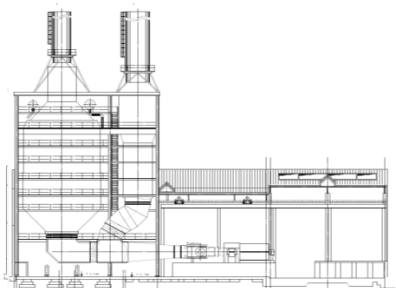
Gas turbine	:	GE-LM 2500
Gas turbine output	:	2 x 25 MW _{el}
Steam capacity	:	2 x 85 t/h
Design pressure	:	86 bar
Superheated steam temperature	:	525 °C
Flying take-over	:	yes
Auxiliary fuel	:	Natural gas, light fuel oil
Scope	:	EPC
Year of commissioning	:	1999

Schwarze Pumpe, Brandenburg, Germany



Gas turbine	:		GE-Frame 6
Gas turbine output	:	1 x 40	MW _{el}
Steam capacity	:	1 x 182	t/h
Design pressure	:	124	bar
Superheated steam temperature	:	525	°C
Flying take-over	:		yes
Auxiliary fuel	:		Light fuel oil, synthetic gas
Scope	:		Boiler Island
Year of commissioning	:		1997

Kraftwerk Obernburg GmbH, Germany



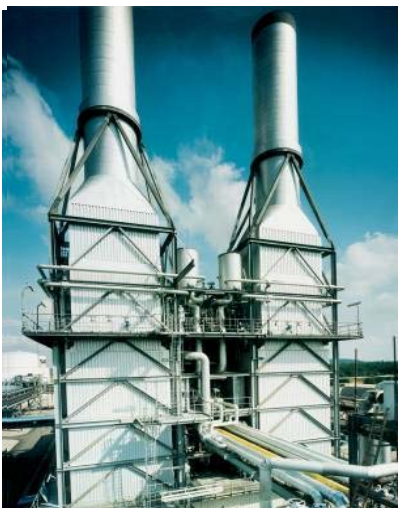
Gas turbine	:		Siemens-V 64
Gas turbine output	:	70 (Design)	MW _{el}
Steam capacity	:	130	t/h
Design pressure	:	88	bar
Superheated steam temperature	:	515	°C
Flying take-over	:		yes
Auxiliary fuel	:		Turbine exhaust gas, natural gas (referred to 8 degree air intake)
Scope	:		Boiler Island
Year of commissioning	:		1997

Stadtwerke Leipzig, Germany



Gas turbine	:		Siemens-V 64
Gas turbine output	:	2 x 70	MW _{el}
Steam capacity	:	2 x 125	t/h
Design pressure	:	85	bar
Superheated steam temperature	:	512	°C
Flying take-over	:		no
Auxiliary fuel	:		Natural gas
Scope	:		Boiler Island
Year of commissioning	:		1996

BASF Ludwigshafen for Schwarzheide, Germany



Gas turbine	:		GE-Frame 6
Gas turbine output	:	40	MW _{el}
Steam capacity	:	2 x 130	t/h
Design pressure	:	96 / 35	bar
Superheated steam temperature	:	480 / 270	°C
Flying take-over	:		no
Auxiliary fuel	:		Natural gas
Scope	:		Boiler Island
Year of commissioning	:		1995

DEA, Heide, Germany
 (today: Shell Germany Oil GmbH)



Gas turbine	:		GE-Frame 3
Gas turbine output	:	10	MW _{el}
Steam capacity	:	135	t/h
Design pressure	:	86	bar
Superheated steam temperature	:	520	°C
Flying take-over	:		no
Auxiliary fuel	:	Turbine exhaust gas, gas, heavy fuel oil (referred to 8 degree air intake)	
Scope	:		Boiler Island
Year of commissioning	:		1995

Oelmühle Hamburg, Germany



Gas turbine	:		RR-Typhoon
Gas turbine output	:	2 x 6,0	MW _{el}
Steam capacity	:	2 x 65	t/h
Design pressure	:	19	bar
Saturated steam temperature	:	198	°C
Flying take-over	:		no
Auxiliary fuel	:		Natural gas
Scope	:		Boiler Island
Year of commissioning	:		1993

Salinco, Hengelo, The Netherlands



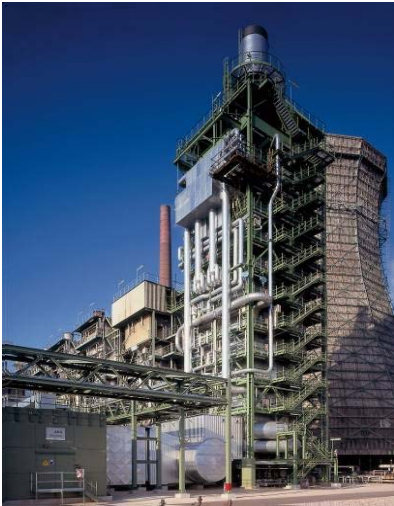
Gas turbine	:		GE-Frame 6
Gas turbine output	:	1 x 40,5	MW _{el}
Steam capacity	:	1 x 175	t/h
Design pressure	:	103	bar
Superheated steam temperature	:	525	°C
Flying take-over	.		no
Auxiliary fuel	:		Natural gas
Scope	:		EPC
Year of commissioning	:		1993

Henkel Düsseldorf, Germany



Gas turbine	:		Solar-Mars 100
Gas turbine output	:	1 x 8,8	MW _{el}
Steam capacity	:	1 x 110	t/h
Design pressure	:	89	bar
Superheated steam temperature	:	510	°C
Flying take-over	:		yes
Auxiliary fuel	:		Natural gas, oil
Scope	:		Boiler Island
Year of commissioning	:		1990

Shell Godorf, Germany



Gas turbine	:		GE-Frame 5
Gas turbine output	:	25	MW _{el}
Steam capacity	:	120	t/h
Design pressure	:	136	bar
Superheated steam temperature	:	535	°C
Flying take-over	:		no
Auxiliary fuel	:		Refinery gas, turbine exhaust gas (referred to 8 degree air intake)
Scope	:		Boiler Island
Year of commissioning	:		1988