

BOILER MODERNISATION

Pos.	Plant name Boiler №	Boiler type	Description	Reduction / current NO _x emission	Start-up Year
1	WROCLAW CHP Plant Boiler No 3	WP-120	Tangential furnace, Low NO _x burners + OFA system	40% NO _x <145 g/GJ	1992
2	DOLNA ODRA Power Plant Boiler No 4	OP-650	Tangential furnace, Low NO _x burners +OFA (partial) system	50% NO _x 180 g/GJ	1992
3	POŁANIEC Power Plant Boiler No 4	OP-650	Tangential furnace, conventional burners +OFA system	40% NO _x <160 g/GJ	1992
4	Ń Boiler No 2	WP-120	Tangential furnace, Low NO _x burners +OFA system	30% NO _x <170 g/GJ	1992
5	LUBLIN CHP Plant Boiler No 3	WP-120	Tangential furnace, Low NO _x burners +OFA system	35% NO _x <160 g/GJ	1993
6	OPOLE Power Plant Boiler No 1	BP-1150	Tangential furnace, upgraded conventional burners + OFA system	NO _x <145 g/GJ	1993
7	DOLNA ODRA Power Plant Boiler No 7	OP-650	Tangential furnace, Low NO _x burners + OFA system	67% NO _x <150 g/GJ	1993
8	DOLNA ODRA Power Plant Boiler No 8	OP-650	Tangential furnace, Low NO _x burners + OFA system	59% NO _x <150 g/GJ	1993
9	KRAKÓW ŁĘG CHP Plant Boiler No 5	WP-120	Tangential furnace, Low NO _x burners + OFA system	55% NO _x < 160 g/GJ	1993
10	ŁÓDŹ IV CHP Plant Boiler No 4	WP-120	Tangential furnace, Low NO _x burners + OFA system	NO _x <140 g/GJ	1993
11	GDAŃSK CHP Plant Boiler No 10	OP-230	Low NO _x wall swirl burners + OFA system Sup: BABCOCK ENERGY Ltd.	NO _x <170 g/GJ	1993
12	SIERSZA Power Plant Boiler No 3	OP-380	Low NO _x wall swirl burners Sup: BABCOCK ENERGY Ltd.	NO _x =150-190 g/GJ	1993
13	SZCZECIN CHP Plant Boiler No 41	OP-130 Pauker	Tangential furnace, Low NO _x burners + OFA system	NO _x <150 g/GJ	1993
14	SZCZECIN CHP Plant Boiler No 42	OP-130 Pauker	Tangential furnace, Low NO _x burners + OFA system	NO _x <150 g/GJ	1993
15	POŁANIEC Power Plant Boiler No 5	OP-650	Tangential furnace, Low NO _x burners + OFA system	NO _x <170 g/GJ	1994
16	POŁANIEC Power Plant Boiler No 6	OP-650	Tangential furnace, conventional burners + OFA system	NO _x 170 g/GJ	1994
17	JAWORZNO III Power Plant Boiler No 4	OP-650	Low NO _x wall swirl burners + OFA system, Licence: ECO-ENERGIA	NO _x <170230 g/GJ	1994
18	WROCLAW CHP Plant Boiler No 2	WP-70	Tangential furnace, Low NO _x burners + OFA system	NO _x < 170g/GJ	1994
19	OPOLE Power Plant Boiler No 2	BP-1150	Tangential furnace, conventional burners + OFA system	NO _x <150 g/GJ	1994
20	SKAWINA Power Plant Boiler No 5	OP-230	Tangential furnace, conventional burners + OFA system	45% NO _x <160 g/GJ	1994
21	SKAWINA Power Plant Boiler No 6	OP-230	Tangential furnace, Low NO _x burners + OFA system	NO _x <170 g/GJ	1994
22	SIERSZA Power Plant Boiler No 5	OP-380	Low NO _x swirl burners Licence: Babcock Energy Ltd.	NO _x <200 g/GJ	1994
23	ŁÓDŹ II CHP Plant Boiler No 6	OP-130	Tangential furnace, upgraded burners + OFA system	NO _x <160 g/GJ	1994
24	ŁÓDŹ II CHP Plant Boiler No 7	OP-130	Tangential furnace, upgraded burners + OFA system	NO _x <160 g/GJ	1994
25	ŁÓDŹ IV CHP Plant Boiler No 3	OP-430	Tangential furnace, upgraded burners + OFA system	NO _x <170 g/GJ	1994
26	Gdańsk Refinery Boiler KIA	OO(G)- 145	Low NO _x burners fired with heavy and light oil, and with natural gas	NO _x <120g/GJ	1994
27	OPOLE Power Plant Boiler No 3	BP-1150	Tangential furnace, upgraded burners + OFA and SOFA system	NO _x <160 g/GJ	1995
28	WROCLAW CHP Plant Boiler No 3	OP-430	Tangential furnace, Low NO _x burners + OFA system	Design NO _x <170 g/GJ	1995
29	KOZIENICE Power Plant Boiler No 10	AP-1650	Tangential furnace, upgraded burners + OFA system	Design NO _x <170 g/GJ	1995

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30	SKAWINA Power Plant Boiler No 4	OP-230	Tangential furnace, Low NO _x burners	NO _x <170 g/GJ	1995
31	SKAWINA Power Plant Boiler No 3	OP-230	Tangential furnace, Low NO _x burners + OFA system	Design NO _x <170 g/GJ	1995
32	CZECHNICA CHP Plant Boiler No 1	OP-130	Tangential furnace, Low NO _x burners + OFA system	NO _x <160g/GJ	1995
33	OPOLE Power Plant Boiler No 4	BP-1150	Tangential furnace, upgraded burners + OFA and SOFA system	Design NO _x <160g/GJ	1995
34	KRAKÓW-ŁĘG CHP Plant Boiler No 6	WP-120	Tangential furnace, upgraded burners + OFA system	NO _x <160g/GJ	1995
35	POŁANIEC Power Plant Boiler No 2	EP-650	Tangential furnace, conventional burners + OFA system	NO _x <170g/GJ	1995
36	POŁANIEC Power Plant Boiler No 7	EP-650	Tangential furnace, conventional burners + OFA system	NO _x <170g/GJ	1995
37	POŁANIEC Power Plant Boiler No 8	EP-650	Tangential furnace, conventional burners + OFA system	NO _x <170g/GJ	1995
38	SIEKIERKI CHP Plant Boiler No 14	OP-430	Tangential furnace, conventional burners + OFA and SOFA system	50% NO _x <150g/GJ	1995/96
39	Poznań CHP Plant Boiler No 3	OP-430	Tangential furnace, Low NO _x burners + SOFA system	Design NO _x <170g/GJ	1996
40	Czechnica CHP Plant Boiler No 3	OP-130	Tangential furnace, conventional burners + OFA and SOFA system	NO _x <160g/GJ	1996
41	ŁÓDŹ II CHP Plant Boiler No 9	OP-140	Tangential furnace, conventional burners + SOFA system	NO _x <170g/GJ	1996
42	Poznań-Karolin CHP Plant Boiler No 3	OP-430	Tangential furnace, conventional burners + SOFA system	NO _x <170g/GJ	1996
43	Plock Petrochemical Plant Boiler No 5	OOG-420	Low NO _x swirl burners fired with goudron arranged tangentially	NO _x <160g/GJ	1996
44	GDAŃSK CHP Plant Boiler No 5	OP-230	Tangential furnace, PM burners + OFA system	Design NO _x <170 g/GJ	1997
45	ŁÓDŹ III CHP Plant Boiler No 3	OP-250	Tangential furnace, PM burners + OFA system	NO _x <170 g/GJ	1997
46	ŁÓDŹ II CHP Plant Boiler No 3	OP-130	Tangential furnace, conventional burners + SOFA system	NO _x <170 g/GJ	1997
47	Poznań-Karolin CHP Plant Boiler No 2	OP-430	Tangential furnace, conventional burners + SOFA system	NO _x <170g/GJ	1997
48	Białystok CHP Plant Boiler No 5	OP-140	Tangential furnace, conventional burners + SOFA system	NO _x <170g/GJ	1997
49	Wrocław CHP Plants Czechnica CHP Plant Boiler No 4	OP-130	Tangential furnace, conventional burners system of OFA & SOFA nozzles	emission<160 g/GJ	1997
50	Wrocław CHP Plants Czechnica CHP Plant Boiler No 2	OP-130	Tangential furnace, conventional burners system of OFA & SOFA nozzles	emission<160 g/GJ	1998
51	Siersza Power Plant Trzebinia	OP-380	Wall-mounted swirl burners front furnace	NO _x < 165g/GJ	1998
52	Łódź CHP Plants Boiler 8 at Łódź 3 CHP	OP-230	Tangential furnace, low-NO _x burners	NO _x <170 g/GJ,	1998
53	Łódź CHP Plants Boiler 3 at Łódź 4 CHP	OP-230	Tangential furnace, swirl burners	NO _x < 230g/GJ	1998
54	Wrocław CHP Plants Boiler K-2 Wrocław	OP-430	Tangential furnace, jet burners	NO _x <150-160 g/GJ	1997/ 1998
55	Łódź CHP Plant Boiler 9 at Łódź 3 CHP	OP-230	Tangential furnace, low-NO _x burners	NO _x <540 mg/m ³ n	1999
56	Łódź CHP Plants Boiler 2 at Łódź 4 CHP	OP-230	Tangential furnace, low-NO _x burners	NO _x <540 mg/m ³ n	1999
57	Kozienice Power Plant Świerże Górne 2 boilers	AP-1650	Tangential furnace, low-NO _x swirl burners, new heat transfer surfaces	NO _x <170 g/GJ	2000/ 2002

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58	Grudziądz CHP Plant, Poland	WR-25	Stoker modernization, membrane walls, other elements reconstruction	NOx<400 mg/m ³ n	2000
59	Zduńska Wola CHP Plant, Poland	OR-32	Stoker modernization, membrane walls, other elements reconstruction	.....	2001
60	Tuzla Power Plant Bosnia and Herzegovina	OP-650b	Tangential furnace, low-NOx jet burners, new heat transfer surfaces, membrane walls	NOx<450 mg/m ³ n	2002
61	Yatagtan Power Plant Turkey	OB-650	Furnace modernization, new jet burners, optimization of combustion	.....	2004
62	ZE Kogeneracja CHP Plants, Wrocław, Poland	OP-230	Modernization of boiler K1	.....	2006
63	Yenikoy Power Plant, Turkey	OB-650	Modernization of boiler	.....	2009
64	Obrenovac A6 Power Plant, Serbia	BB-920	Modernization of boiler - new membrane walls of the furnace chamber	NOx< 300 mg/rr [^]	2010
65	TENT B Obrenovac Power Plant, Serbia	BB-1880	Modernization of boiler (increase of parameters up to 2000 t/h)	.....	2012
66	Łaziska Power Plant, Poland	OP-650b	Modernization of boiler K 11	.....	2012
67	Głinojeck Sugar Factory, Poland	OR-32	Stoker modernization, membrane walls, other elements reconstruction	.....	2014
68	Stalowa Wola Power Plant, Poland	OP-120	Conversion coal to biomass boiler	.....	2014
69	Chełmża Sugar Factory, Poland	PR-27	Boiler modernization. Membran walls,	.....	2015-2016
70	Dobrzelin Sugar Factory, Poland	OR-55N	Modernization of boiler - new membrane walls of the furnace chamber	.....	2016
71	Morawa Power Plant, Serbia	OP-380b	Modernization of boiler - new membrane walls of the furnace chamber	.....	2016
72	TENT B Obrenovac 2 Power Plant, Serbia	BB-1880	Modernization of boiler (increase of parameters up to 2000 t/h)	.....	2017
73	Opalenica Poland	2 x OR-32	Boiler modernization	.....	2018
74	Połaniec Power Plant, Poland	6 x EP-650	SCR installation	NOx<200 mg/m ³ _n	2020
75	Kozienice Power Plant, Poland	5 x OP-650	SCR installation	NOx<200 mg/m ³ _n	2020
76	Bełchatów Power Plant, Poland	BB-1150, K2	Modernization of furnace: membrane walls, superheaters, other elements reconstruction	.....	2022
77	TENT B1 Obrenovac Power Plant, Serbia	BB-1880	Modernization of boiler - new membrane walls of the furnace chamber. Changing of capacity to 2000 t/h	NOx<200 mg/m ³ _n	2022