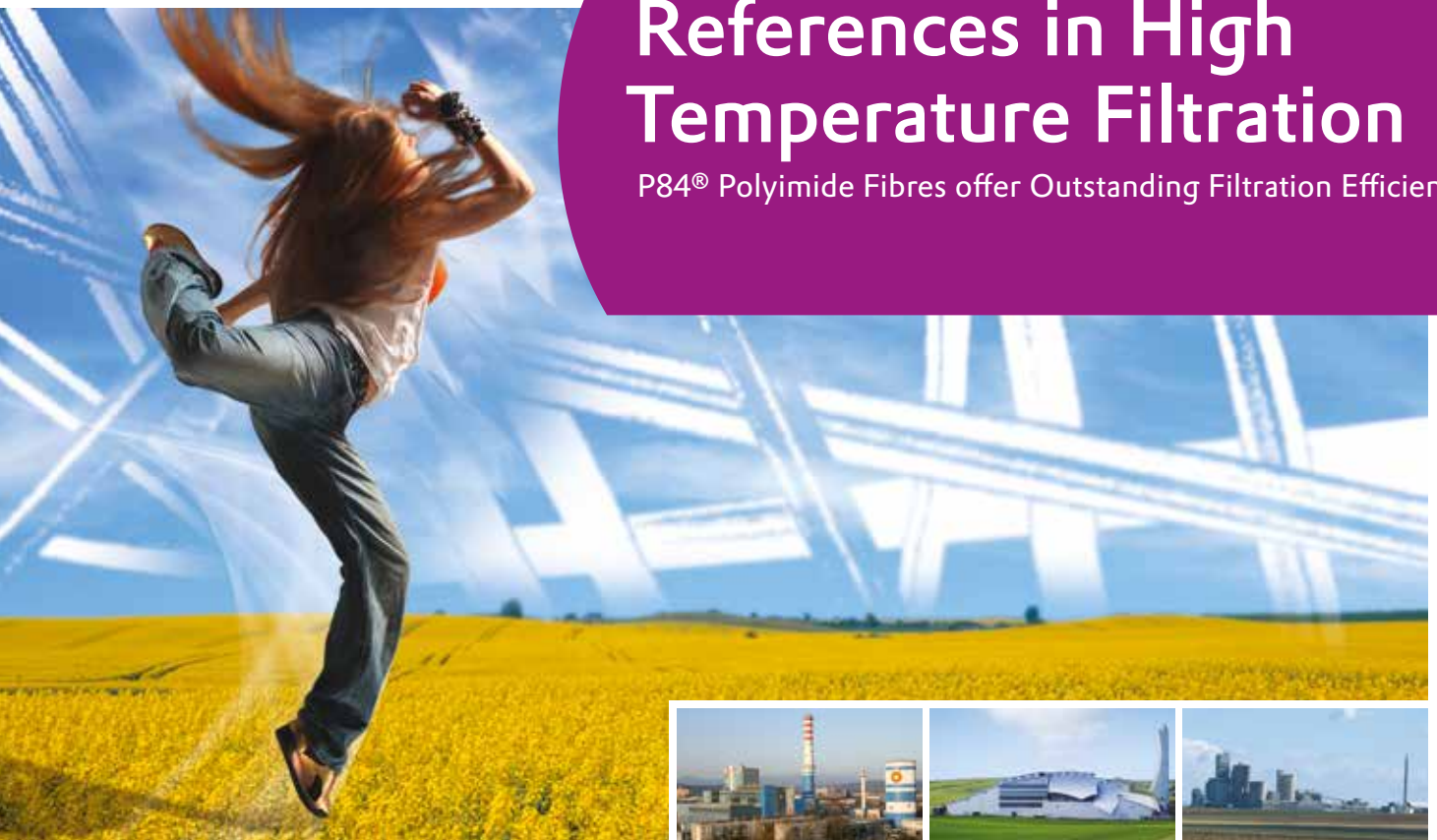
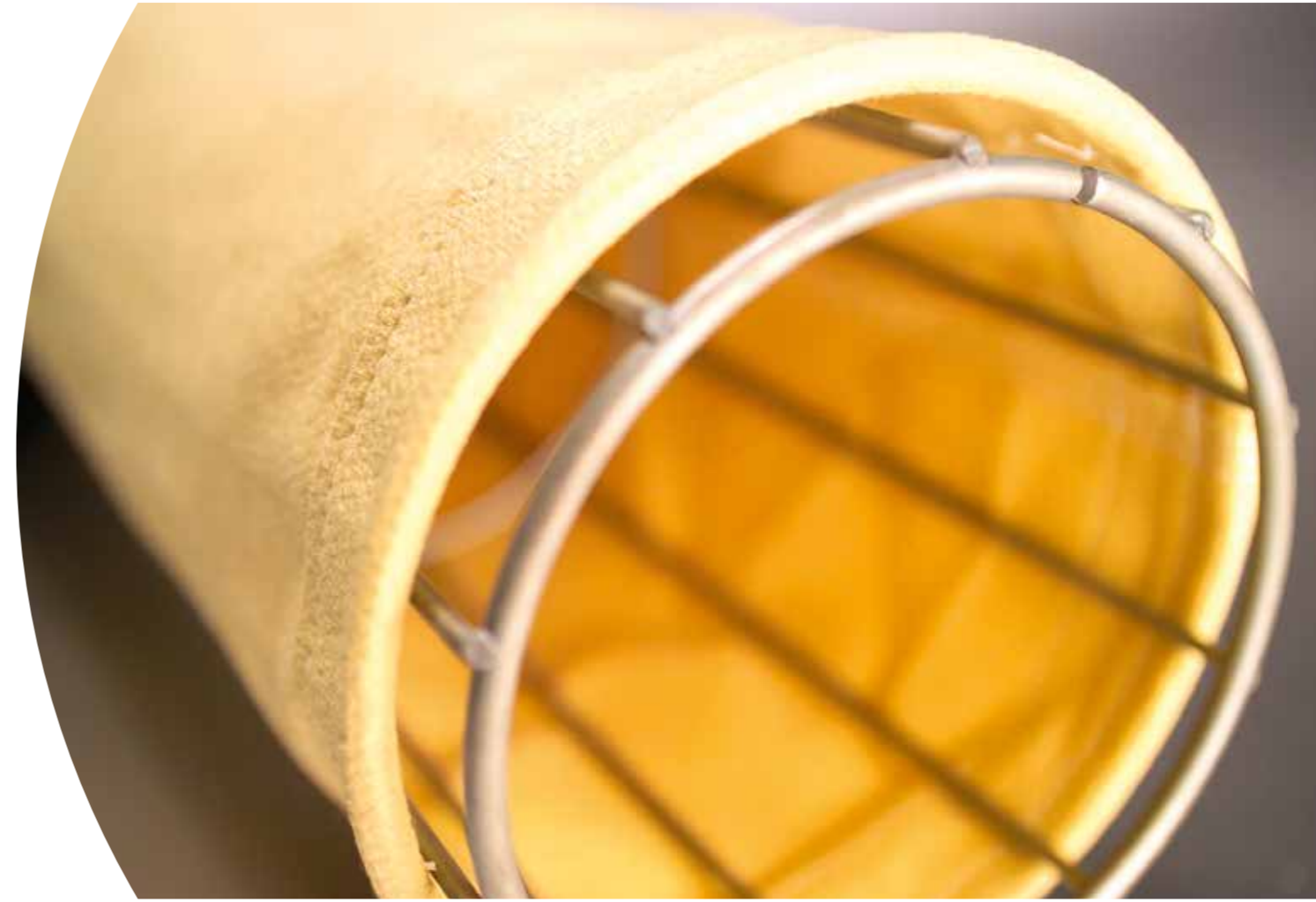


P84®

References in High Temperature Filtration

P84® Polyimide Fibres offer Outstanding Filtration Efficiency





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Waste to Energy Plant

Russia



General Information

Filter bag material: P84/P84
 Start up: 2005
 Municipal waste incineration.
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 1.724 m²
 A/C - ratio: 0,87 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Semi-dry-process

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		145	240
H ₂ O Humidity	Vol %		17	23
O ₂ Oxygen	Vol %		7	8,7
SO _x Sulfur oxides	mg/Nm ³	40		
NO _x Nitrogen oxides	mg/Nm ³		180	200
Raw gas dust load	mg/Nm ³	10.000		
Dust emission	mg/Nm ³	< 5		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

Belgium



General Information

Filter bag material: P84/PTFE
 Start up: 1996
 Power production plant.
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 6.200 m²
 A/C - ratio: 1,00 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Semi-dry-process

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	130		160
H ₂ O Humidity	Vol %		18	26
O ₂ Oxygen	Vol %		5	13
NO _x Nitrogen oxides	mg/Nm ³	400		
SO _x Sulfur oxides	mg/Nm ³	50		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h		250.000	300.000
Dust emission limit	mg/Nm ³	< 10		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

Germany



General Information

Filter bag material: P84/P84
 Start up: 2003
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 5.200 m²
 A/C - ratio: 0,94 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Dry scrubbing system (Neutrec process)

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		150	200
H ₂ O Humidity	Vol %		14	20
O ₂ Oxygen	Vol %		10	16
SO _x Sulfur oxides [after FGD]	mg/Nm ³		40	80
NO _x Nitrogen oxides	mg/Nm ³		400	500
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h		100.000	180.000
Dust emission limit	mg/Nm ³	< 10		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

Germany



General Information

Filter bag material: P84/PTFE
 Start up: 2005
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 4.334 m²
 A/C - ratio: 1,09 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Semi-dry-process and dry-sorption-system

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		140	240
H ₂ O Humidity	Vol %		10	26
O ₂ Oxygen	Vol %		6	11
SO _x Sulfur oxides	mg/Nm ³	< 50		
NO _x Nitrogen oxides	mg/Nm ³	< 200		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	152.300		
Dust emission	mg/Nm ³	< 1		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

Great Britain



General Information

Filter bag material: P84/P84
 Start up: 1996
 Waste to energy plant, 3 incineration units.
 4.600 filter bags. Pulse jet on-line cleaning.

Operating Conditions

Filter area: 13.600 m²
 A/C - ratio: 0,96 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Semi-dry-process

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	140		250
H ₂ O Humidity	Vol %		8	16
O ₂ Oxygen	Vol %		7	11
SO _x Sulfur oxides	mg/Nm ³		180	400
NO _x Nitrogen oxides	mg/Nm ³		250	500
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	600.000		
Dust emission limit	mg/Nm ³	< 10		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

South Korea



General Information

Filter bag material: P84/P84
 Start up: 2004
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 6.500 m²
 A/C - ratio: 1,20 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Semi-dry-process - Ca(OH)₂

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		150	175
H ₂ O Humidity	Vol %		17	23
O ₂ Oxygen	Vol %		7	8,7
SO _x Sulfur oxides	mg/Nm ³	< 200		
NO _x Nitrogen oxides	mg/Nm ³	274		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h		72.000	76.000
Dust emission limit	mg/Nm ³	< 10		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

Great Britain



General Information

Filter bag material: P84/P84
 Start up: 2004
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 3.100 m²
 A/C - ratio: 1,15 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Semi-dry-process - Ca(OH)₂

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		135	240
H ₂ O Humidity	Vol %	15		
O ₂ Oxygen	Vol %		7,5	9
SO _x Sulfur oxides	mg/Nm ³	< 50		
NO _x Nitrogen oxides	mg/Nm ³	200		
HCl Hydrochloride	mg/Nm ³	< 10		
Dust emission limit	mg/Nm ³	< 10		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

Hungary



General Information

Filter bag material: P84/PTFE
 Start up: 2005
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 2.500 m² per line
 A/C - ratio: 0,90 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Semi-dry-process - Ca(OH)₂

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		140	160
H ₂ O Humidity	Vol %		18	22
O ₂ Oxygen	Vol %	7,5		
SO _x Sulfur oxides	mg/Nm ³	50		
NO _x Nitrogen oxides	mg/Nm ³	200		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h		77.500	88.000
Dust emission limit	mg/Nm ³	< 5		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

Sweden



General Information

Filter bag material: P84/P84
 Start up: 2004
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 3.788 m²
 A/C - ratio: 0,80 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Dry-process - Ca(OH)₂

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		140	240
H ₂ O Humidity	Vol %		10	20
O ₂ Oxygen	Vol %		6	8
SO _x Sulfur oxides	mg/Nm ³	50		
NO _x Nitrogen oxides	mg/Nm ³	120		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	120.000		
Dust emission	mg/Nm ³	< 1		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

Canada



General Information

Filter bag material: P84/P84
 Start up: 2004
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 3.550 m²
 A/C - ratio: 1,40 m/min
 No. of shut-downs: Continuous - max. 1/a
 Neutralisation: Dry-process

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	155	140	190
H ₂ O Humidity	Vol %	15		
O ₂ Oxygen	Vol %		11	12
SO _x Sulfur oxides	mg/Nm ³	150		
NO _x Nitrogen oxides	mg/Nm ³	450		
Gas flow	Am ³ /h	116.000		
Dust emission limit	mg/Nm ³	< 20		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

Portugal



General Information

Filter bag material: P84/PTFE
 Start up: 1999
 Waste to energy plant. Life time 4 years.
 4 bag house lines.

Operating Conditions

Filter area: 15.050 m²
 A/C - ratio: 1,05 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Semi-dry-process - Ca(OH)₂

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	135	130	246
H ₂ O Humidity	Vol %			23
O ₂ Oxygen	Vol %		7	8
SO _x Sulfur oxides	mg/Nm ³		50	110
NO _x Nitrogen oxides	mg/Nm ³		200	250
HF Hydrofluoride	mg/Nm ³	2		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	681.000		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

USA



General Information

Filter bag material: P84/PPS composite
 Start up: 2000
 Solid waste incinerator, waste to energy facility.
 COHPAC Design, 2 units @1452 bags / bag house.

Operating Conditions

Filter area: 4.054 m²
 A/C - ratio: 1,92 m/min
 No. of shut-downs: 1/month, 36 hours
 Neutralisation: Semi-dry-process - Ca(OH)₂

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		149	191
H ₂ O Humidity	Vol %	17		
O ₂ Oxygen	Vol %		10	11
SO _x Sulfur oxides	mg/Nm ³		85	115
NO _x Nitrogen oxides	mg/Nm ³	190		
Raw gas dust load	mg/Nm ³	706		
Gas flow	Am ³ /h	450.000		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

USA



General Information

Filter bag material: P84 scrimless
 Start up: 1995
 Waste incinerator, 4 incineration lines.

Operating Conditions

Filter area: 16.450 m²
 A/C - ratio: 0,98 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Semi-dry-process - Ca(OH)₂

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		150	200
H ₂ O Humidity	Vol %		15	25
O ₂ Oxygen	Vol %		8	12
SO _x Sulfur oxides	mg/Nm ³		50	450
NO _x Nitrogen oxides	mg/Nm ³		300	500
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	640.000		
Dust emission limit	mg/Nm ³	< 10		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Waste to Energy Plant

Taiwan



General Information

Filter bag material: P84/PTFE
 Start up: 1996
 Municipal waste incineration system with semi dry flue gas neutralisation.

Operating Conditions

Filter area: 2.688 m²
 A/C - ratio: 1,00 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Lime slurry

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	145		260
H ₂ O Humidity	Vol %	25		
O ₂ Oxygen	Vol %	8		
SO _x Sulfur oxides	mg/Nm ³	120		
NO _x Nitrogen oxides	mg/Nm ³	150		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	84.400	34.600	97.400
Raw gas dust load	mg/Nm ³	15.000		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Cement Industry

Saudi Arabia



General Information

Filter bag material: P84/P84
 Start up: 2014
 Raw-gas dust load: 80 g/Nm³
 Kiln-raw mill dedusting.

Operating Conditions

Filter area: 13.250 m² in line 1 + 26.500 m² in line 2
 A/C - ratio: > 1,00 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		170	260
SO _x Sulfur oxides	mg/Nm ³	< 400		
NO _x Nitrogen oxides	mg/Nm ³		400	800
Gas flow [@ 20 °C, 1.013 mbar]	Am ³ /h		800.000	1.600.000
Dust emission limit	mg/Nm ³	< 10		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Cement Industry

Austria



General Information

Filter bag material: P84/P84
 Start up: 2002
 Kiln-mill dedusting.
 Pulse jet off-line cleaning.

Operating Conditions

Filter area: 3.700 m²
 A/C - ratio: 1,15 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		160	230
H ₂ O Humidity	Vol %	10		
O ₂ Oxygen	Vol %	8		
SO _x Sulfur oxides	mg/Nm ³	60		
NO _x Nitrogen oxides	mg/Nm ³	600		
Gas flow [@ 20 °C, 1.013 mbar]	Am ³ /h	220.000		
Dust emission	mg/Nm ³	< 3		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Cement Industry

Austria



General Information

Filter bag material: P84/P84

Start up: 2001

Kiln-raw mill dedusting, 2.400 filter bags.

Low volume pulse jet cleaning.

Operating Conditions

Filter area: 7.000 m²

A/C - ratio: 0,95-1,40 m/min

No. of shut-downs: Continuous - max. 12/a

Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	150	180	250
H ₂ O Humidity	Vol %		3	15
O ₂ Oxygen	Vol %		10	15
SO _x Sulfur oxides	mg/Nm ³		100	400
NO _x Nitrogen oxides	mg/Nm ³		600	1.800
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	250.000		
Dust emission limit	mg/Nm ³	< 10		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Cement Industry

Norway



General Information

Filter bag material: P84/PTFE-Hybrid

Start up: 1998

Kiln-raw mill dedusting.

Operating Conditions

Filter area: 8.580 m²

A/C - ratio: 1,27 m/min

No. of shut-downs: Continuous - max. 12/a

Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	160	120	250
H ₂ O Humidity	Vol %		14	20
O ₂ Oxygen	Vol %		8	12
SO _x Sulfur oxides	mg/Nm ³		115	1.000
NO _x Nitrogen oxides	mg/Nm ³		750	900
Gas flow	Am ³ /h	400.000		430.000
Dust emission limit	mg/Nm ³	< 5		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Cement Industry

France



General Information

Filter bag material: P84/PTFE-Hybrid
 Start up: 1999
 Kiln-raw mill dedusting.

Operating Conditions

Filter area: 13.290 m²
 A/C - ratio: 0,60 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	120	100	240
H ₂ O Humidity	Vol %	18		
O ₂ Oxygen	Vol %	10		
SO _x Sulfur oxides	mg/Nm ³	6		500
NO _x Nitrogen oxides	mg/Nm ³		412	800
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	355.000		
Dust emission limit	mg/Nm ³	< 5		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Cement Industry

Slovakia



General Information

Filter bag material: P84/P84
 Start up: 2005
 Average bag life: > 4 years
 Pulse jet off-line cleaning.

Operating Conditions

Filter area: 8.313 m²
 A/C - ratio: 1,10-1,40 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		120	160
O ₂ Oxygen	Vol %		8	10
SO _x Sulfur oxides	mg/Nm ³	< 76		
NO _x Nitrogen oxides	mg/Nm ³		400	600
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	544.000		
Dust emission limit	mg/Nm ³	< 20		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Cement Industry

Japan



General Information

Filter bag material: P84/P84
 Average bag life: > 5 years
 Cement clinker cooler.
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 4.450 m²
 A/C - ratio: 1,04 m/min
 No. of shut-downs: Continuous
 Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	150		
H ₂ O Humidity	Vol %		0	3
O ₂ Oxygen	Vol %	20,5		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	179.211		
Dust emission limit	mg/Nm ³	< 10		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Cement Industry

China



General Information

Filter bag material: P84/P84
 Start up: 2005
 Average bag life: > 3 years
 Kiln-raw mill dedusting, pulse jet on-line cleaning.

Operating Conditions

Filter area: 18.000 m²
 A/C - ratio: < 1,00 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	140		260
H ₂ O Humidity	Vol %	< 21		
O ₂ Oxygen	Vol %	< 10		
SO _x Sulfur oxides	mg/Nm ³	< 69		
NO _x Nitrogen oxides	mg/Nm ³	< 465		
Gas flow [@ 20 °C, 1.013 mbar]	Am ³ /h	1.050.000		
Dust emission limit	mg/Nm ³	< 20		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Cement Industry

Libya



General Information

Filter bag material: P84/P84
 Start up: 2007
 Kiln filter, 2 filter units. Bags dimensions
 160 mm x 6.000 mm. Pulse jet on-line cleaning.

Operating Conditions

Filter area: 7.208 m²
 A/C - ratio: 0,90 m/min
 No. of shut-downs: Continuous - max. 12/a

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		150	200
H ₂ O Humidity	Vol %		10	12
O ₂ Oxygen	Vol %		6	11
SO _x Sulfur oxides	mg/Nm ³	300		
NO _x Nitrogen oxides	mg/Nm ³		500	1.000
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	360.000		
Dust emission limit	mg/Nm ³	< 10		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Cement Industry

China



General Information

Filter bag material: P84/P84
 Start up: 2005
 Raw-gas dust load: < 100 g/Nm³
 Kiln-raw mill dedusting, pulse jet on-line cleaning.

Operating Conditions

Filter area: 18.200 m²
 A/C - ratio: 0,98 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	160		260
H ₂ O Humidity	Vol %	< 21		
NO _x Nitrogen oxides	mg/Nm ³	465		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	1.100.000		
Dust emission limit	mg/Nm ³	< 20		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Coal Fired Boiler

USA



General Information

Filter bag material: P84/P84
 Average bag life: 5 years
 Two identical boiler/bag house systems at this location independent power producer. FBB bubbling bed type boiler, burning low sulfur western coal.

Operating Conditions

Filter area: 2.996 m²
 A/C - ratio: 1,10 m/min
 No. of shut-downs: Continuous - max. 1-2/a
 Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	163	163	182
Gas flow	Am ³ /h	199.000		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Coal Fired Boiler

Slovenia



General Information

Filter bag material: P84/P84
 Start up: 1996
 Burning Indonesian brown coal (0,2% S).
 2 units with bag filters, pulse jet on-line cleaning.

Operating Conditions

Filter area: 13.540 m²
 A/C - ratio: 1,39 m/min
 No. of shut-downs: Continuous - max. 2/a
 Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	130	150	180
H ₂ O Humidity	Vol %		8	16
O ₂ Oxygen	Vol %		10	11
SO _x Sulfur oxides	mg/Nm ³		50	300
NO _x Nitrogen oxides	mg/Nm ³		400	600
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	750.000		
Dust emission limit	mg/Nm ³	< 20		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Coal Fired Boiler

Poland



General Information

Filter bag material: P84/P84
Start up: 1992
Baghouse: 4 units with each 1.380 filter bags.
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 4.160 m²
A/C - ratio: 1,42 m/min
No. of shut-downs: Continuous - max. 1-2/a
Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C	160	180	220
H ₂ O Humidity	Vol %	7		
O ₂ Oxygen	Vol %	9		
SO _x Sulfur oxides	mg/Nm ³			1.450
NO _x Nitrogen oxides	mg/Nm ³		460	540
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	238.000		
Dust emission limit	mg/Nm ³	< 30		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Coal Fired Boiler

USA



General Information

Filter bag material: P84/P84
Start up: 2000
 Two systems installed on existing cyclonic fired boiler, burning low sulfur, Powder River Basin Wyoming Coal.
 26 compartments, 360 bags/compt.

Operating Conditions

Filter area: 31.000 m²
A/C - ratio: 1,10 m/min
No. of shut-downs: Continuous - max. 6/a
Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		170	175
H ₂ O Humidity	Vol %		11	12
O ₂ Oxygen	Vol %		5	6
SO _x Sulfur oxides	mg/Nm ³	430		1.450
NO _x Nitrogen oxides	mg/Nm ³	480		
Raw gas dust load	mg/Nm ³		1.199	3.531
Gas flow [@ 20 °C, 1.013 mbar]	Am ³ /h	2.000.000		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Wood and Sewage Sludge Incineration

Sweden



General Information

Filter bag material: P84/PTFE
 Start up: 2003
 Bubbling fluidized bed boiler.
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 2.250 m²
 A/C - ratio: 0,95 m/min
 No. of shut-downs: Continuous - max. 24/a
 Neutralisation: Dry-process - Ca(OH)₂

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		155	170
H ₂ O Humidity	Vol %	25		
O ₂ Oxygen	Vol %		3	6
SO _x Sulfur oxides	mg/Nm ³	15		
NO _x Nitrogen oxides	mg/Nm ³	250		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	80.000		
Dust emission limit	mg/Nm ³	< 10		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Chicken Manure Combustion

Great Britain



General Information

Filter bag material: P84/PTFE
 Average bag life: 4 years
 Grate boiler.
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 9.300 m²
 A/C - ratio: 1,05 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Dry-process - Ca(OH)₂

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		190	200
H ₂ O Humidity	Vol %			26
O ₂ Oxygen	Vol %	3,6		
SO _x Sulfur oxides	mg/Nm ³	250		
NO _x Nitrogen oxides	mg/Nm ³	200		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h		250.000	350.000
Dust emission limit	mg/Nm ³	< 10		

All information on this page is correct to the best of our knowledge. Data upon guarantee request.

Straw Residues Fired Boiler

Spain



General Information

Filter bag material: P84/P84
 Start up: 2003
 Straw residues fired boiler.
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 4.500 m²
 A/C - ratio: 1,15 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		120	190
H ₂ O Humidity	Vol %		11	14
O ₂ Oxygen	Vol %		4	8
SO _x Sulfur oxides	mg/Nm ³			800
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	235.000		

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Wood Fired Boiler

Switzerland



General Information

Filter bag material: P84/P84
 Start up: 2007
 Fuel: untreated wood
 Dry scrubbing system. Pulse jet on-line cleaning.

Operating Conditions

Filter area: 2.799 m²
 A/C - ratio: 0,95 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Dry-process - Ca(OH)₂

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		140	170
H ₂ O Humidity	Vol %		15	25
O ₂ Oxygen	Vol %		5	6
SO _x Sulfur oxides	mg/Nm ³	< 10		
NO _x Nitrogen oxides	mg/Nm ³	< 200		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	105.180		
Dust emission	mg/Nm ³	< 3		

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Industrial Applications

Canada



General Information

Filter bag material: P84/P84
 Start up: 2004
 Raw-gas dust load: 3.500 mg/Nm³
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 3.024 m²
 A/C - ratio: 0,90-1,80 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: Semi-dry-process

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		130	160
H ₂ O Humidity	Vol %		20	24
O ₂ Oxygen	Vol %		4	8
NO _x Nitrogen oxides	mg/Nm ³		340	385
Dust emission	mg/Nm ³	< 5		

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Alumina Calciner

Australia



General Information

Filter bag material: P84/PTFE
 Start up: 2003
 Raw-gas dust load: 75.000 mg/Nm³
 3 calziner, 6.800 filter bags each

Operating Conditions

Filter area: 8.848 m²
 A/C - ratio: 1,10 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		120	240
H ₂ O Humidity	Vol %		52	55
O ₂ Oxygen	Vol %	2,5		
NO _x Nitrogen oxides	mg/Nm ³		50	150
SO _x Sulfur oxides	mg/Nm ³	< 10		
Gas flow [@ 20 °C, 1.013 mbar]	Nm ³ /h	375.000		
Dust emission limit	mg/Nm ³	< 10		

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Steel Plant

Austria



General Information

Filter bag material: P84/P84
 Start up: 2006
 Secondary dedusting system.
 Pulse jet on-line cleaning.

Operating Conditions

Filter area: 8.710 m²
 A/C - ratio: 0,76 - 2,10 m/min
 No. of shut-downs: Continuous - max. 12/a
 Neutralisation: None

Raw gas data

Parameter	Unit	Value	Range (from)	Range (to)
Temperature	°C		90	230
HCl Hydrochloride	mg/Nm ³	< 10		
O ₂ Oxygen	Vol %		18	21
SO _x Sulfur oxides	mg/Nm ³	< 10		
NO _x Nitrogen oxides	mg/Nm ³	< 50		
Gas flow [@ 20 °C, 1.013 mbar]	Am ³ /h		400.000	1.100.000
Dust emission limit	mg/Nm ³	< 10		

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Evonik Fibres GmbH

Gewerbepark 4
4861 Schörfling
Austria

PHONE +43 7672 701-2891

FAX +43 7672 968622

www.P84.com

