KOMSA

Depurazione gas di combustione e biogas

Biomassa
Rifiuti
Inceneritori

Complete Solutions for clean and eff cient workplaces

Nederman the specialist in the complete air pollution problem analysis and solving. The process starts with the analysis of customer's air pollution problem, follows by the design of solution system for air pollution, dust - smoke - fume - oil mist, offering the system installation products, and after- sale service. With the experience in the air pollution system installation in many factories were installed worldwide and the modern technologies.

Nederman focuses on individual solutions for individual customer needs. We benefit from the experience and expertise of over 40,000 air cleaning systems. Our products deliver consistent reliability, low energy consumption and compliance with all mandatory requirements for a wide range of applications in many different industries all over the world.

We provide everything from design and engineering, through project planning, installation and commissioning, to lifetime service and maintenance.

Long term experience in combination with our engineering teams work with our customers' experts to develop tailor made solutions for individual requirements.

Nederman also look at the separation of harmful gases using different sorbents, and produced state-of-the-art flue gas cleaning plants.

Sorption of harmful gases requires a great variety of different additives. The range extends from carbon adsorbents such as activated lignite, activated carbon and petroleum coke via alkaline additives such as hydrated lime and sodium hydrogen carbonate to more exotic substances such as alumina or zeolites.

- Flat bag dust collectors
- Tubular Bag
- Flat tube coolers, optionally with air pre-heater and/ or heat recovery
- Dry scrubbers
- Additive injectors
- Static mixing reactors
- Preseparators like cyclones and skimmers

Nederman installs various industrial applications a large number of plants such as:

- Flue gas cleaning from biomass and coal flied boiler plant
- Dry sorption of harmful gases from waste incineration and crematory plants
- Flue gas cleaning and dry sorption from aluminium and copper smelting plant
- Dust and Fume extraction system for foundry and metal industry
- Dust extraction system for bulk handling
- Dust extraction system for general manufacturing industry

..... and many more

Nederman is also paying attention after the plant commissioning. 24/7 attendance and service centers all over the world assure that unbureaucratic assistance by competent experts is available on short notice. We maintain a broad spare part stock to avoid expensive downtimes.

Product Overview

FS-FD Filter

* Air flow volume 15,000 - 400,000 m³/h
* Max. dust concentration 500 g/m³
* Under pressure operation
* Hi-temperature applications
* Low energy cleaning
* Filtration area 82 to 2,400 m²
* Multiple medias
* Heavy duty
* Flat bag cleaning by reverse air / pulse jet while running with offline

MJ Filter

* Robust welded steel construction
* Cartridges/Tubular bag on line cleaning by UniClean
* Filtration area 7 to 1700 m²
* Max. dust concentration 10/100 g/m³
* Positive / Negative pressure operation
* Vacuum up to 750 daPa water column
* Stainless Steel available
* Airflow volume upto 180,000 m³/h
* High pressure applications
* Multiple medias
* Different pressure controller

The modular design enables larger units to be assembled and also existing units to be extended whenever required. It's easy to install and maintain system.

Roto Sorp

Direct umidification of the hydrated lime improves the efficiency even further. The hydrated lime particles are surrounded by an extremely thin liquid film which evaporates very quickly so that dry hydrated lime is precipitated in the following filter. The moistened recirculated product flows as easily as dry dust. During evaporation, a zone with almost 100% relative humidity forms directly around the hydrated lime grain.
Depending on the different other process parameters such as temperature and residence time separation rates of approx. 98% are possible for SOx.

Additive Feeder

* As a part element in a filter system, dosing a precoat like lime into the filter.
* The adding of lime ensures a stable function of the filter and prevents clogging of the filter material.
* Typically approximately 1 g/m³ air.
* This gives for instance 1 stroke per 54 seconds at 1,000 m³/h and 1 stroke per 11 seconds at 5,000 m³/h.
* The dosage depends on the application.

Cyclonic Separator

Multi-Cyclone:
* Highly efficient dust separation is required
* Max. temp. of 300 °C.
* Gas flows from 600 to 63,000 m³/h
* For cleaning gases from industrial processes such as earth and gravel processing, foundries, steel industries as well as cleaning residual gas from furnace plants.

Skimmer :
* Air flow volume 25,000 - 90,000 m³/h
* Size depend on volume of air flow
* For flue gas
* The coarse particles are transported out of the twist to the near - wall area by the arising centrifugal force and drop downwards into the dust discharge

Industrial Fan

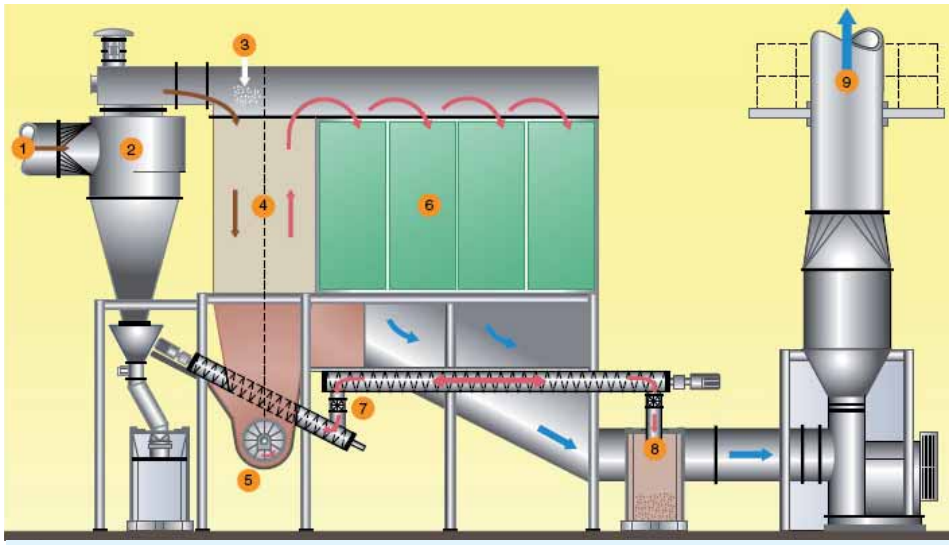
* Air flow volume 500 to 250,000 m³/h
* Hi-efficiency fan and low energy consumption
* Multiple wheel designs for specific applications
* Available with 3 different impeller types
* Direct and Belt driven
* Effective noise reduction
* Reliable functionality

Dry Sorption of harmful gases

Dry sorption of harmful gases

We are not restricted to just one process but offer several different solutions – from purely dry via quasi-dry to wet processes.

Adsorption of dioxines and furan for example is possible with the additive in the air stream and in the dust/ additive cake on the filter bags. Furthermore, the content of noxious gases such as SO_2 and especially HF and HCl can be reduced by adsorption by example $CA(OH)_2$ (lime).



1	Dirty gas	2	Preseparator
3	Fresh hydrated lime	4	Reactor
5	Rotor	6	Bag Filter
7	Re-circulation	8	To residues silo
9	Cleaned gas		

Advantage of the Rotosorp process:

- High recirculation rates by easy mechanical means
- Humidification of the dust for SO_2 - removal possible
- Homogeneous distribution of the recirculated dust in the flue gas
- Highest possible efficiencies for the compliance with all regulations for SOx / HCL / HF / PCDD / PCDF

Rotor with chains housing

Flue gas cleaning

Nederman supplies systems for reduction of dust/smoke filtration from processes like furnaces, incinerators, crematories, coal, wood or oil fired boiler plants. All systems are characterized by low energy consumption and low residual contents.

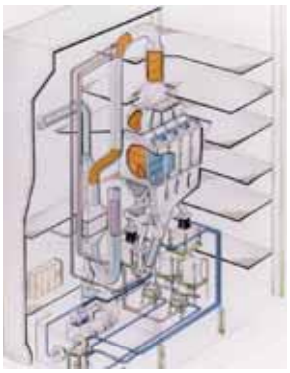
The flue gases reach, via the dirty gas ductwork, a cyclone preseparator where the coarse particles and sparks are being separated. The gases from cyclones pass through the dirty gas hood into the dirty air chamber of the filter and then passes through the filter bags to the clean gas side of the filter. The dust are restrained by the filter bags.

A special control system reassures a safety operation of the filter cleaning system as well as a sufficient dust layer on the filter bags.

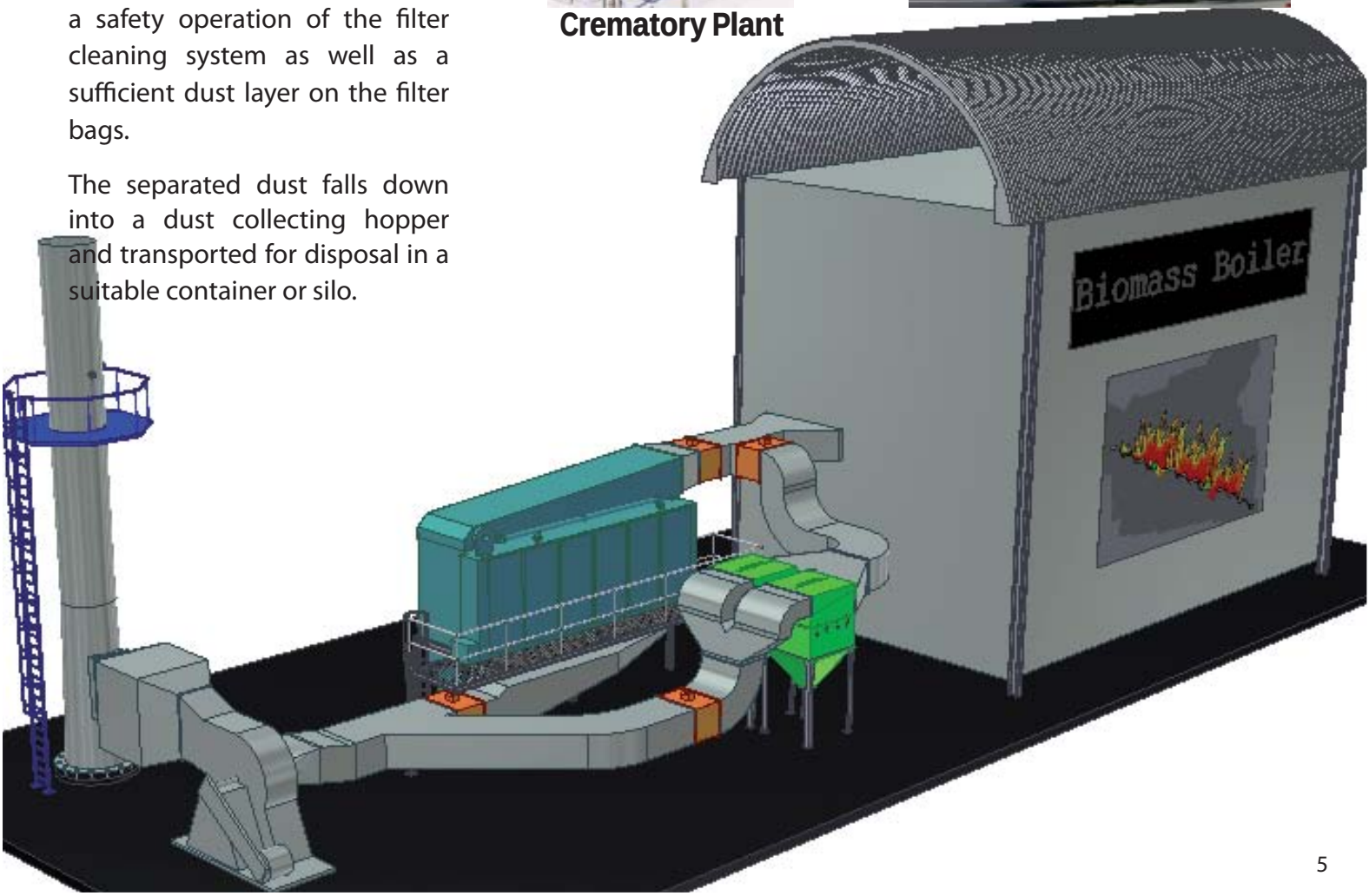
The separated dust falls down into a dust collecting hopper and transported for disposal in a suitable container or silo.

Waste Removing

Recycling



Crematory Plant



Other applications

Conveyer Venting Extraction

Intake Hoppers

SiloSafe on Silo
SiloSafe on fly ash silo

Dry sorption with humidification and re-circulation

Our Solution
Nederman is design solution with making the right selection, the process choice also plays a major role in offering the customer the most economic and reliable solution.

Installation references

ALCHIN, *Biomass power station*
Natural finished wood from forestry and woodworking,
Untreated wood from industry, scrap wood, lemon peel

Alva Aluminium, *Thailand*
FS722 / 9,00 / 1260 with Skimmer, Lime feeding and recirculation system, for 2 gas fired tilt rotary furnace

Harpen EKT, *Berlin, Germany*
Wood fired power plant "Gropiusstadt"
Emission Data: dust<5mg/m^3

FLS, *Germany*
FS Filter for temp 135 deg. C
Application: fume gas cleaning for garbage incineration

Otto-Rudiger Schulze, *Wilmersdorf*
Biomass power plant, air volume max. 58,000 Nm³/h
Temp. boiler end 180-200°C, SOx, HCl in raw gas

Themoselect S.A., Locarno (CH)
Waste gas cleaning for garbage disposal plant separating of dust and sulphur dioxide

Bua Yai Power Plant, *Thailand*
Flu gas cleaning, Biomass Power Plant
Extraction from boiler ash dust, Fuel rice husk, Biomass

Therm Engineering, Thailand
Waste gas cleaning for garbage disposal plant separating of dust and sulphur dioxide

Industry we serve:

Air Pollution Control Solution

Nederman focuses on individual solutions for customer needs. We leverage the experience and expertise of air cleaning systems for wide range of applications.

Aluminium
Casting
Chemicals
Food processing
Metal & Casting
Packaging
Paper
Pharmaceutical
Shot blast
Tobacco
Wood processing
Agriculture
Cement
Electronics
Foundry
Machinery
Painting
Plastic
Rubber
Steel
Wood production
... and many more

Soluzioni KOMSA per le vostre necessità di aspirazione

Vi mostriamo qui di seguito alcuni esempi di sistemi di aspirazione che fanno parte della nostra ampia gamma di prodotti.
Per maggiori informazioni potrete visitare il nostro sito internet: www.komsa.it

Bracci di aspirazione

Sistemi di aspirazione per gas di scarico veicoli

Elettroventilatori

Filtri

Filtri per impianti centralizzati

Filtri carrellati

Aspiratori indusatriali ad alta pressione

Arrotolatori per tubi e cavi

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