Data Sheet

AirFilt Filtertechnik

P r e c o n - W™ for the preconditioning of filter elements

What is *Precon-W*?

Precon-W is a dry powdery substance. It is chemical inert and "colourless". The average particle size is appr. 10nm (1/100micron).

Where will *Precon-W* be used?

It is used to pre-condition filter elements which are operating in difficult applications where due to the dust type and -characteristics the regeneration of the filter elements is difficult.
Some examples are:
- Welding fume extraction
- Plasma prozesses
- Thermal Spraying
- etc.

What does *Precon-W* ?

The preconditioning acts as a separation layer between filter media und dust cake.
It prevents the dust particles from penetrating into the structur of the filter media and clogging of them.
It operates as a "lubricant" between the dust particles to avoid incrusting of the dust cake and enables sufficiant regeneration of the filter media.
It closes the open pores of the filter media and avoids the dust particles to pass through.
Precon-W removes the filtration from the depth of the filter media to the surfaces of the *Precon-W* layer.

How will *Precon-W* be applied ?

First of all the Extraction system with unused filter elements will be started with clean air and no dust (ideally a/c-ratio < 1/3)
The system will be adjusted to the nominal air volume and the actual pressure drop will be measured (appr.100Pa).
Now *Precon-W* will be feeded into the air stream (appr. 5-10gr/m² filter area) whilst the puls-jet system is off.
The pressure drop must be kept under controll and should rise by appr. 700 - 800 Pa (at nominal air volume).
For Extraction systems with unfavourable and unsymmetric distribution of the air stream we recommend to apply more *Precon-W* in order to make sure that the whole filter area will be covered properly.
Now the dust can be feeded to the system. The extraction system should run without puls-cleaning until an pressure drop of appr. 1600 Pa is reached.
Whislt the puls-jet-cleaning goes on you must make sure that it operates with as less as possible pressure.
The cleaning system should be adjusted in order to keep the pressure drop always above 1000Pa.
In order to maintain this pressure drop even with unconstant dust loadings it is recommended to operate the cleaning system by a differential pressure switch.
If all these preconditions are fullfilled it can be expected, that the preconditioning with *Precon-W* must be carried out only once during the commissioning of the system.

What else must be considered ?

Unfavourable factors like
- to high a/c-ratios,
- bad design of the dust compartment,
- unsymmetric distribution of the cleaning energy,
- etc.

can create higher pressure drop.
This can be compensated by actions like
- carry out the preconditioning-prozess again after a certain time,
- an additional after cleaning periode whilst the system is off,
- etc.

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