COUGAR COATINGS Estd. 1988
WASTEWATER DIVISION

Supplying unique solutions for the water and waste water industry

BIO-BLOK® INTELLIGENT FIXED FILM BIOLOGICAL FILTER MEDIA

1.1.2. Mode of Operation

The filter medium BIO-BLOK® is made from polyethylene and it is constructed as a square block consisting of net tubes that are welded together. The special surface of the many net tubes provides a big accessible surface area, and at the same time, it improves the biological growth on the filter.

The surface of the filter works as a "house" for the bacteria that are able to treat the different types of waste waters that exist.

The mode of operation is very simple as the treatment capacity depends on the quantity of bacteria that is room for on the filter, i.e. the bigger a surface and thus more bacteria, the bigger a treatment capacity.

Therefore, the future construction of wastewater treatment plants is only a matter of creating good conditions for the bacteria, meaning that the bacteria have to live well in order to work well.

The filter medium BIO-BLOK® has these living qualities.

The BIO-BLOK® products are available in different sizes, e.g. BIO-BLOK® 100 and BIO-BLOK® 200. The numbers indicate the active biological area in m^2 per m^3.

The BIO-BLOK® products are being used for all kinds of biological treatment of industrial waste waters, domestic sewage and water from the aquaculture.

1. Biological wastewater treatment plants which can be constructed as:

* Trickling filters
* Submerged, aerobic filters
* Or as a combination of active sludge plant, trickling filter or submerged, aerated filter

BIO-BLOK® 100, BIO-BLOK® 150 and BIO-BLOK® 200 are used for trickling filters and submerged filters.

BIO-BLOK® 150 HD in heavy version is used for submerged, aerobic filter and trickling filters.

VAT Registration Number 491201374
HEAD OFFICE: 4 Mill Hill, Gamlingay, Sandy, Bedfordshire SG19 3LW Contact details 01767 651151-
Fax: 01767 651269 e-mail: andygostling@cougarwastewater.co.uk

BIO-BLOK® INTELLIGENT FIXED FILM BIOLOGICAL FILTER MEDIA

2. Lamella separations which can be used in new or existing final sedimentation basins

BIO-BLOK® 80 HD G in smooth version is used as lamella separator. This results in the fact that the capacity of existing final sedimentation basins can increase considerably and that new final sedimentation basins can be reduced in size.

3. Aeration and degassing of water

BIO-BLOK® 80 HD G in smooth version is used for aeration of treated waste water before the waste water is discharged into a river or the sea.

This system is also used for aeration of drinking water as the high content of oxygen causes a more effective precipitation of manganese and ochre which are often seen in the ground water.

Generally speaking, you can say about the fixed film technology that this technology works better and that it has a more stable process by low temperatures of the waste water than the active sludge technology has. This is a very important fact in those places where the temperature of waste water gets very low in winter.

The fixed film technology also has a bigger process stability towards fluctuating supply of organic matters. Furthermore, the fixed film is more resistant to occasional occurrences of toxins in the waste water. These qualities are especially important where surface water is being lead to the wastewater treatment plant.

The fixed film technology works even by thin waste water which is difficult for the active sludge plant. This means that the groundwater infiltration in existing wastewater pipes does not influence the treatment ability as much as it could have if the wastewater treat-ment plant had been constructed as an active sludge plant.
The fixed film technology nitrificates by lower temperatures of the waste water than the active sludge plant does.

VAT Registration Number 491201374
HEAD OFFICE: 4 Mill Hill, Gamlingay, Sandy, Bedfordshire SG19 3LW Contact details 01767 651151-
Fax: 01767 651269 e-mail: andygostling@cougarwastewater.co.uk