BIO-BLOCK. THE SOLUTION TO FAT AND GREASE DEPOSITS

The problems associated with fat and grease build-up in Waste Water Treatment Plants are well documented. The costs associated with the removal and disposal of fat and grease, coupled with the repair and maintenance costs because of clogging and damage to pipe work and pumps make the problem one worth addressing.

There are numerous solutions to this problem. Mechanical removal and fat-reducing agents all have their part to play and can show positive effects, resulting in considerable financial savings over a given period. This is in spite of the intrinsic operational costs. Most dosing or remediation procedures require an on-site supply of energy, clean water, or both. Much of the specialist equipment needs monitoring and maintenance. This, coupled with the need for ample space to accommodate the procedure, can present the site with problems.

The Bio-Block has been developed to address the above-mentioned problems. The Bio-Block offers 24/7 operation with no need for dosing equipment, power, or storage and operation space. The block hangs in a wet well, positioned in the in-coming waste water flow. The turbulence of this water slowly erodes the block dosing the complete system and colonising all aspects of the operation.

Not only is the incumbent fat and grease content dealt with at source, but the residual build up is slowly broken down as is any organic sediment, resulting in fewer expensive clearing and disposal operations.

THE CHEMISTRY BEHIND THE BIO-BLOCK

The Bio-Block is a formulation of aerobic and facultative bacteria, organic enzymes, proteins and micro-nutrients. It's carefully selected 'families' of bacteria offer an effective solution in the break down and digestion of fat and grease found present in waste water streams. The enzymatic action of the Bio-Block attacks the fatty-chain molecules transforming them into suitable substrates on which the bacteria work, breaking them down further and causing the effective micro-organisms to proliferate in the process.

Facultative bacteria are capable of degrading organic matter where there is a lack of Oxygen. This results in the reduced production of Hydrogen Sulphide normally produced under anaerobic conditions, eliminating potential odour and human suffering.

HOW IS THE TREATMENT IMPLEMENTED?

Before the treatment commences, a trained operative surveys the plant and assesses the severity of fat and grease there present. In some cases it may be appropriate for an initial removal of the residual build up to allow for effective operation of the Bio-Block.

An initial shock dose of a specialist agent is then applied at the earliest possible stage of the treatment operation. Once this has been achieved, the Bio-Block is suspended in the primary wet well and passive dosing commences.

Though the active ingredients of the Bio-Block are effective immediately, it's full effects are not seen for three to four weeks. This is due to the bacteria having to colonise, proliferate and penetrate the fat build-up. In fact, during this phase, more fat and grease may be appear to be present as a result of old fat and grease deposits being freed and deposited in the system.

Different flow rates result in varying amounts of friction on the Bio-Block. This friction dictates the rate of wear on the block which results in the frequency of replacement. Once this rate has been established, the operative will include the site in his job rota and attend to the renewal of the block with no involvement needed by site personnel. Likewise, annual budgets for the use of Bio-Block can be established at this stage.

*Photographs of a trial commissioned in Europe follow.

IMPLEMENTING THE BIO-BLOCK TREATMENT.

For further information, or to commence a survey or trial please feel free to contact us.

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BEFORE

The following pictures show the primary wet well at a pumping station in Europe. The Bio-Block is suspended just below the waste water inlet.

AFTER

The following pictures show the results of treatment with the Bio-Block after only six weeks. With the exception of a small build-up in the upper left hand corner, the well appears to be virtually free of any fat or grease.