

RBC SERVICES UPDATE

RBC Services
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RBC BIOMASS CONTROL

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The control of biomass thickness has been recognized as the most important aspect of enhancing process and alleviating RBC equipment concerns.

It has been determined that RBC process efficiency is at its optimum level when biomass thickness is maintained between .040 and .060 of an inch for Standard Density media and between .015 and .030 of an inch for High Density media. In either case, this relates to 60% to 80% of the recommended operating weight limit.

There are only a few methods of controlling biomass thickness on RBC media, although only one can accomplish this without disrupting process operations. These methods are:

1.) STARVATION

Flow to the RBCs must be shut off while allowing the units to continue rotating in a full tank for a minimum of 2 weeks. Eventually, the biology is starved and biomass begins to slough from the media. Process recovery time takes up to 1 week. Most plants cannot afford the time for this method.

2.) CHEMICAL ADDITION

The most common chemicals used are chlorine or a caustic solution. Again, the flow is shut off, chemicals are added and the RBCs continue rotation in a full tank. While this method takes only a few days, the biology is killed, meaning process recovery time takes up to 2 weeks. And again, most plants cannot afford the time for this method.

3.) AERATION

The most effective method of biomass control is aeration. Coarse bubble diffused air is introduced through a header positioned under the length of the media at the bottom of the tank. The coarse bubbles scour the biomass from the media, thereby controlling weight, all without disrupting treatment. By monitoring and controlling the thickness of the biomass, the RBC process is at its optimum level.

There are certain aspects of application which must be followed however. For information regarding biomass monitoring and control or to discuss the possible need to strip biomass from the RBCs at your facility, give me a call. We can help handle an emergency situation for a short term basis or assist in setting-up measures to provide control for the long term.

By working together, we can eliminate concerns. Whatever the problem or situation, please do not hesitate to give me a call. I'm sure we can provide solutions and we'll be glad to assist in any way possible.