

RBC SERVICES UPDATE

RBC Services
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IMBALANCE - DIFFUSERS - AIR PURGE

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On occasion, calls have been received with reports of loping Air Drive RBCs, heavy biomass which will not slough or weights up to or beyond the recommended limit. In some cases, the comment is made that there is not enough reserve air available to increase rotational speed to purge the biomass.

I'm sure some of you are shaking your heads, "Yes", right now. In case you may experience this type of problem and would like some ideas or would like to confirm those you have, give us a call and we can discuss the situation.

These types of problems have remedies and have been corrected on a scheduled basis at other plants. Although most procedures are time consuming, it's the results you're after.

An unbalanced Air Drive RBC tends to lope. In some cases, it may stop dead in the water, and nothing you do seems to get it rotating again.

One plant was experiencing a problem of this type and the operator thought the media was all plugged and was making plans to replace the RBC, or at least the media.

He installed a load cell and took readings which indicated that the unit was not overloaded. So other measures, far less costly, were taken.

By now, most of you should have heard about the FLEXCAP Coarse Bubble Diffuser. The FLEXCAP Diffuser has helped many plants get rid of their imbalance problems. It may be the only remedy you'll need.

Now, if you don't have the air availability to increase rotational speeds to strip excess biomass once weights get high, it won't make any difference which diffuser you have.

Air rates can be checked with relative ease. Your local gas company and/or meter company has air flow devices which can measure the CFM being produced by the blower(s) and received at the air valve of the RBC.

Many cities have a portable air compressor at the city garage which can be used temporarily to increase air flow to a given RBC. However, the pressure should not exceed 3.5 psi, but increase the total CFM to about 300.

These air rates will increase rotational speeds which will have beneficial effects on both weight and balance. Performing this procedure for approximately 24 hours on those RBCs which need weight reduction should help get the unit back in safe operation. If it doesn't, other measures can be taken. While a slight imbalance may still exist, the weight has been reduced.

At any RBC plant, if biomass thickness gets out of hand and causes overloading on a constant basis, Soluble BOD levels entering the first stage should be checked. It may become necessary to increase the surface area.

The primary clarifier should also be checked regarding sludge thickness and detention time. A possible septic condition in the primary will have an adverse effect on the RBC process.

Success of weight correction procedures on RBCs can only be determined with a Load Cell. Judging only from appearance of an Air Drive RBC can be deceptive. This is why Load Cells are so important; for protection and to determine progress.

If you ever have any questions regarding any of the procedures prescribed in the UPDATE Series or about your RBC operations in general, please do not hesitate to give me a call.