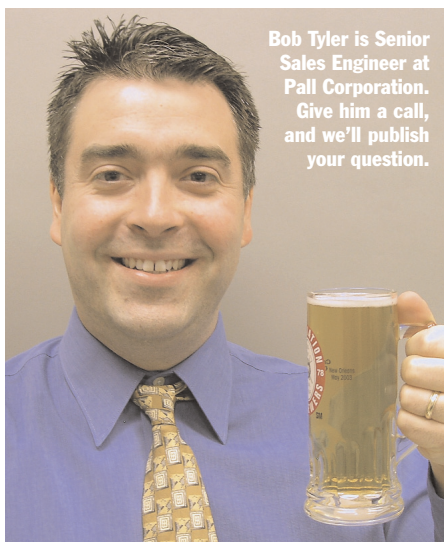




Bob Tyler is Senior Sales Engineer at Pall Corporation. Give him a call, and we'll publish your question.

Ask Bob!

Pall's Bob Tyler answers filtration questions from craft brewers.

From beer clarification to maximizing beer yields and improving shelf life, Pall Corporation works to help brewers around the world leverage filtration capabilities to deliver high quality beer to customers. Got a filtration question? You've come to the right place...Ask Bob!

Bob, can chill haze be removed by using filtration?

The easiest and most cost effective way to remove the polyphenols that cause chill haze is to use PVPP (polyvinylpolypyrrolidone). Filtration is needed to remove the PVPP after it has done its job.

There are various filtration methods to remove the PVPP from the beer. PVPP is pretty expensive stuff, and some filter companies make systems that can reuse PVPP, which of course lowers your PVPP costs.

Another option is to use filter sheets with PVPP. They work just like regular filter sheets except they are impregnated with PVPP. If you use these sheets you'll need to pay close attention to flow rates as PVPP must be in contact with beer for at least three minutes to work effectively.

My brewery and many other breweries use caustic to clean pipes and tanks, etc. However, caustic is getting expensive to buy. Is there something I can do to save in this area?

Absolutely! Cross flow technology has made its way into several markets, one being caustic recovery. Cross flow technology is used to handle the large amount of solids in used caustic. Cross flow works quite differently than traditional filtration. In cross flow, the particulate bounces or skips across the filter surface. The

clean caustic flows through the membranes and is collected back into the CIP tank. Once filtration is complete, the solids are in one stream, and the clean caustic is properly adjusted and reused. If you spend \$100K or more annually on caustic, a system of this type can easily improve your bottom line.

What can you tell me about beer recovery systems? My brewery is just about at max production, and I need to find a way to increase beer yield.

Beer recovery systems are becoming increasingly popular. Most current systems are fully automated, making them extremely easy to use. The basic premise is simple: concentrate the yeast, and recover the beer. This beer and yeast mix used to be a waste stream in breweries. Via cross flow filtration (almost all beer recovery systems today are cross flow), we take this waste stream and produce two valuable fluids. One of these fluids is the concentrated yeast, which can be sold to farmers / food makers. The other valuable stream is BEER, which, to answer your question, enables you to increase your beer yield.

Here are some standard numbers to use as a reference:

- Approximately 2.4 – 2.9 % of total beer output is spent yeast.
- About half of that 2.4 – 2.9 % can be saved beer.

If your brewery produces at least 75K bbls annually, there is a great case to support using a beer recovery system.

I make small batches of beer, around 7-8 bbls for my restaurant/brewery. I would like to remove yeast and clarify the beer. What can I use that is both affordable and easy-to-use?

Look into filter modules. Filter modules use the same technology as plate and frame that hold filter sheets, except the system is enclosed, making it more sanitary and much easier to use. This type of system also has minimal beer loss. You can use different types of filter media in the system, which means you aren't committed to using just one range of filter.

Regarding cost, filter module housings are much cheaper than buying a plate and frame filter.

Bob, I have a plate and frame filter that I've been using for years. It has always worked great, but in the last couple of months I have noticed that I can't get this filter clean no matter what I do. The filter size is 60 x 60 and holds 99 filter sheets. The plates are of the plastic type. What can I do?

It sounds like your plastic plates have developed micro cracks. These micro cracks are the result of the plates being heated during cleaning/sanitizing and cooled from filtering beer – thus expanding and contracting for years. These cracks usually form near the inlet/outlet manifold. They are too small to be seen with the naked eye, but are plenty big enough for bacteria to live in.

Unfortunately, there is no way of fixing this problem except by replacing all the plates, which is very costly, especially if you want to upgrade to stainless steel plates.

Cleaning the filter with the ram slightly open may help. This enables the plates to expand more, possibly enough to let the hot water get into these micro cracks and get the filter clean. If you still have problems, well, you've got my number! ■

Bob Tyler is senior sales engineer at Pall Corp. Tel: 866.905.7255 or bob_tyler@pall.com. Give him a call, he would be delighted to talk with you.