



TechTalk: How to Develop the Right Grab Sampling System for Your Plant Q&A Session with Matt Dixon

1. Are the grab sampling systems available in different materials of construction?

Yes, I'm sure you're aware that different applications might require different alloys for compatibility reasons or environmental reasons, so we can certainly do that. Monel or alloy 400 is one of the more common requests that we get. We've done them in Hastelloy as well. Those are probably the two biggest materials of construction outside of stainless steel. We can explore other materials of construction on a case-by-case, but certainly Monel and Hastelloy are available.

2. Is there a maximum pressure at which you can use a bottle? At what pressure do you have to use a sample cylinder instead?

Good question. The bottle itself is not intended to be for pressure containment. You may get a few psi pressure containment out of it but it's probably not a good idea. If you need to maintain that sample under pressure, then the sample cylinder is definitely the way to go. If you're talking about the actual system pressure, sometimes you can have non-volatile liquids in a system that is under pressure and you need to take a sample from that.

So what the maximum pressure at which you can use a bottle to collect that sample is going to depend on a few different factors. Viscosity of the liquid... But in general, more than a few 100 psi and we're going to start to look at that and say, is there a way we can regulate that pressure down or put some sort of a flow control or pressure control device in there to kind of knock that down before we introduce that to the sample container. There is a reducing restriction orifice inside the sampling valve apparatus to help with some of that, but once you get above a few 100 psi, maybe topping out at 1000 psi depending on circumstances, above that, we're probably going to want to look at some way of reducing that pressure before we try to introduce that into the bottle.

3. Is there a disadvantage to collecting a sample with a sample cylinder in the horizontal orientation?

Yes, there are some disadvantages there, and we talked about our preference and what we consider to be the best practice is to collect in the vertical orientation. But there are a lot of people who collect it in a horizontal orientation. It's not that that's wrong and there are certain applications where that might be beneficial, but in general, we don't consider it to be best practice. For example, the scenario I gave where we had a gas with condensation in it... If you have a cylinder in the horizontal position, then that condensation is probably going to start to collect in the bottom half of that horizontal cylinder. So, you could theoretically end up with a cylinder that is half full of condensation. If you're looking to sample your condensation, maybe that's the way you want to do it, but most people don't want to do that. So, you would typically sample that in the vertical orientation. That way, any sort of condensation could get flushed out the bottom of the cylinder.