featured columnist

Why and how to buy reconditioned mixing equipment

Limitations in capital spending, especially in the present environment, do not necessarily have to result in a development freeze. From a processing point of view, companies have a number of creative options available for ensuring that methods and product quality are continually being made better.

One such strategy is to buy used or reconditioned process equipment instead of new. The objective is to acquire pre-owned but reliable, long-lasting equipment that will immediately boost productivity and improve existing bottlenecks. When properly restored to perfect working condition and therefore comparable, if not equal, in efficiency to new equipment, a reconditioned machine serving a new product line will get you to the profitable stage sooner. The following tips and considerations could help you get the most out of this kind of investment.

Assess Your Needs and Areas of Improvement

Logically, identifying your needs is the first step to purchasing equipment, whether used or new. What you can afford, the size that will serve your immediate requirements, the features you need, how the equipment will fit in with your current set-up – all these items will need to be answered even before you go out to shop.

During the selection process, it would also be useful to determine if a certain piece of equipment can serve multiple purposes or can be adapted to future uses. For instance, an inline high-shear rotor/stator device can serve as both a mixer and a pump, easily eliminating a high-speed batch disperser and downstream pump. The same equipment can be used as a pre-mixer for emulsions before these are processed in a high-pressure homogenizer. Because emulsion stability relies on fine and uniform droplet sizes, frequent passes through a homogenizer may be required.

Operating and maintenance costs for a homogenizer are high, so the addition of an inline mixer/emulsifier to the system can reduce processing costs and sharply improve equipment utilization. In the processing of paints, inks and coatings, the same advantages are reaped when an inline high-shear mixer is used as a pre-mixer prior to energy-intensive milling equipment.

If product discharge of a viscous or sticky material is a process bottleneck on your production floor, you do not need a bigger mixer to compensate for the volume of product being made per batch. Instead your process could likely use a mixing system with a compatible discharge system to hydraulically press non-flowing product out of the mix can. Remember, your process will only be as fast as your slowest operation.

When you have a clear and complete picture of your needs, it would then be easier to review technical specifications and decide what style of equipment is advantageous. With respect to your requirements, an older model can provide similar performance at a fraction of the cost of newer models.

"Used" and "Reconditioned"—What's the Difference?

A "reconditioned" piece of equipment has been inspected and rebuilt back into perfect working order and offered with the same guarantee as new equipment. Beware of buying equipment simply labeled as "used" as these could cost you extra in repairs and parts replacement even before they can actually be used.

It is not generally ideal to purchase pre-owned equipment from a vendor other than the OEM (original equipment manufacturer), but if you must, do check if the manufacturer has gone out of business as parts will be difficult to get and later the trade-in value will be much less.

When purchasing reconditioned equipment, it is recommended to go straight to the OEM. You can then expect the best parts availability, warranty and flexibility for possible equipment modifications which other vendors or previous owners of the equipment cannot provide.

Know Thy Vendor

The previous point brings us to this next tip: know your vendor. It is very important to buy from a reliable source. Find out where others have had success buying reconditioned equipment and the quality of technical support they received. Any warranty is only as good as the company that issues it.

Aside from being your best bet in parts availability and warranty issues, the OEM would also be your best resource in terms of equipment modifications. Whether you want to change a port configuration or install higher horsepower drives, the manufacturer will be most flexible in tailoring their own product to suit your needs, in a way that other vendors or previous owners of the equipment cannot.

Say Yes to an Upgrade, No to Full Price

Mixing is one unit operation often overlooked in terms of upgrades. Managers and operators tend to settle on a process that takes too much effort and time but well, works…most of the time. "That's how we've always done it."

Buying a reconditioned piece of equipment allows companies to access what's state-of-the-art, put it to work and improve outdated practices without paying full price. It could be a continuous mixer with integrated powder induction capabilities or a familiar mixer design retrofitted with new agitator blades. The savings will come not just from the reduced price of the reconditioned equipment but also from the production gains it will generate.

On the other hand, be wary of any machine priced drastically below market value. There is a good reason for the low price and you could simply be wasting money on a lemon.

Get it Fast

One obvious advantage of buying reconditioned equipment is that it's in stock; hence turn around time from order to installation is much shorter as compared to new equipment that can require weeks (or months, if especially large capacity) to build. When there is a right-now sales opportunity or a critical machine that must be replaced immediately, purchasing reconditioned equipment will meet the demand in a timely fashion.

Useful Hint: Try it First

There is no substitute for a thorough test drive, so try a machine prior to making a purchase commitment. You can either arrange a trial run at the manufacturer's facility or better yet, take the machine to your plant and play with it. Ask about consignment and rental options. These programs could cost you some fees but a major portion, if not all, may be applied to your purchase, once you make the decision.

This is ultimately worth the extra step because you will soon find out if there's anything amiss or defective with the machine. So look beyond the fresh coat of paint and fancy controls – make that piece of equipment actually perform what it's supposed to do.

Plan Ahead

Lastly, plan ahead. The above mentioned considerations will be most helpful if you plan ahead, do your homework and resist buying at the last minute.

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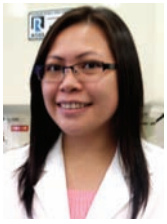
Established in 1842, Ross manufactures a broad range of specialty mixing and dispersion equipment used in the process industries. Ross batch-type and continuous equipment are available in laboratory, pilot and production scale models. With five plants in the U.S., two in China, one in India, and the mixing industry's most extensive inventory of new and reconditioned units, Ross is uniquely equipped to meet the standard or custom needs of any customer anywhere in the world.



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