

Phase Converters Play Role In Wastewater Systems

Continual technology updates are helping many cities to function better as they try to keep up with an ever increasing wastewater collection load.

This is particularly challenging to many managers and engineers given the fact that the overwhelming percentage of new loads comes from suburbs and extended subdivisions. These new loads now are well beyond the original plan of many cities which largely depended upon gravity flow to the treatment plant. Within the near future, lift stations will continue to be installed to handle both storm and sanitary wastewater.

Many smaller communities have sewer systems dating back many years which all too frequently collapse without any fanfare. How to keep operating costs within reason is on everyone's mind. Phase Converters, which enable three phase lift stations to operate where only conventional single phase is available nearby, can reduce the installation and operating costs of these lift stations.

Unfortunately, with any system there is going to be failures somewhere along the line, with some regularity. The goal is to keep the failures to a minimum and to simplify repairs. Just as the wastewater system raises many different problems with different solutions, the same can be said of the approach to the use of phase converters on many lift and pump stations. Since each of the basic type converter systems offers their own pros and cons, engineers must choose them individually as each job dictates.

For steady pumping applications, with fairly constant loads, the static type converter is well suited. Where the load cycling is high and loads may widely vary, the rotary type converter should be used. Rotary type units are typically used, as noted above, where loads can vary greatly from day to day. Real world applications would include water runoff handling. These systems will handle high volume of water during storms but have little or no use during other periods.

An important consideration for most cities is maintenance. A static converter- like the Ronk Add-a-Phase has major components that have proven very reliable; in fact, there have been very few autotransformer failures in this unit in over 50 years. The start capacitors, which occasionally need replacement can be carried in a tool box or purchased quickly from electrical distributors and motor shops alike. The bottom line on the initial installation is the much lower start-up cost involved with converters. In some cases, bringing a three phase extension to the remote location is expensive and in other cases it is out of the question. With energy conservation and green initiatives becoming even more important, choosing the correct converter is even more important than ever. A capacitor/autotransformer static phase converter, like the Add-a-Phase, is very energy efficient, generates no harmonics, limits inrush to 3xFLA on the single phase lines and can be configured for multiple motor applications.

For more information on our line of phase converters for duplex lift and pump stations you can call us at 1-800-221-7665 or on the web at: www.ronkelectrical.com