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TECHNICAL PUBLICATION

INFORMATION & STRATEGY FOR THE
FACILITY MANAGER

Automation via Tracer Dye - A Technological Innovation or... a Trojan Horse?

Mario C. Uy (1994)

This article will not discuss the benefits of automation. It will discuss the one concept of automation employed by a couple of water treatment companies that use the tracer dye concept in lieu of other standard forms of automation.

Automation has become a necessity in the administration of a water treatment program. With everything being tighter these days, from financial to environmental reasons, automation plays an even greater role in the assurance of compliance within these narrower limits. As such, many managers are turning to their water treatment suppliers for assistance.

Automation suppliers

There are many automation manufacturers who sell their products and services to the water treatment customers, ranging from input devices to complete PC linked intelligence to output devices.

Most water treatment companies recommend these standard automation products and services. Standardization is a cost effective approach.

However, a couple of water treatment companies have chosen to market another form of automation via a tracer dye concept.

The tracer dye concept

Here's how the tracer dye concept works. A chemical company adds a proprietary dye to its chemical. It designs all automation around this dye. Once the dyed chemical is injected into the water, a water stream is passed through a chamber where the dye is read by a light transmitter and a receiver. The intensity of the dye is read. As the intensity of the dye decreases, the controller increases the chemical injection proportionately, and vice versa.

Disadvantages of the tracer dye technology

- The customer is **locked-in** to the supplier.

At first glance, tracer dye automation appears to be a real innovation. However, unbeknown to the customer, it is investing in a system that can only be used with that particular chemical supplier. Nobody else can use the proprietary dye reading equipment. Once locked-in, the supplier has total control over the customer.

It would be very difficult for the customer to change suppliers, as it would have to revamp the entire system. The supplier can raise prices at its discretion. If the service suffers a little, the customer is left without much of a choice but to accept status quo.

- Tracer dye technology is **not universally recognized**

The tracer dye technology is supplier specific. The customer cannot apply this technology to another plant or job, unless the new facility happens to have the exact system from the same chemical supplier.

There's little value to any technology that has very limited applications. So this technology is hardly transferable or marketable.

- Tracer dye equipment **may undermine property value.**

The value of the real estate property may actually be compromised as this equipment may have a negative value to a future buyer. Most likely, the buyer would be unable to use the equipment, so it would have to incur cost in the removal and replacement of the equipment.

Advantages of standard automation

By using the industry's standard equipment instead of the tracer dye equipment, you can accomplish the same level of automation without the disadvantages.

You can easily switch suppliers, as any water treatment company will be able to use any standard equipment.

Your knowledge on standard automation will be more widely recognized, which brings value to your next facility.

Your property value would be enhanced as there would be a larger pool of buyers of standard instrumentation.