PUBLISHED QUARTERLY FOR THE BENEFIT OF THE WATER TREATMENT CHEMICAL USER

WATER TREATMENT NEWS

Volume 11 **Winter 2002**

Are One-Drum Products Right For Your Boiler System?

Brad Sargent had a problem. As Manager of Plant Engineering for Atlas Brewing Company, he was faced with keeping a major brewery operating at peak efficiency on a budget that, already tight, was being slashed 15% by Corporate management. To make matters worse, his engineering staff had been cut by eight men through lay-offs and attrition.

It seemed as if there was just not enough time or people to get all the work done, and never enough money to buy the equipment, parts, tools, chemicals, etc. his department needed to keep the plant running.

That's why he had agreed to meet with Karl Herman, a water treatment salesman who told Brad he had a boiler water product that would save Brad's department money on treatment costs and time in application of the treatment program.

The new product Karl was promoting was DuzAll, a one-drum treatment that contained sludge conditioner, alkalinity builder, sulfite oxygen scavenger and a neutralizing amine return line treatment.

Karl boasted, "On a DuzAl program, you'll only have to buy one drum, instead of four like you're doing now. That'll save you big bucks every time you order!"

After some quick calculations, Brad admitted that Karl appeared to be right – one drum of DuzAll cost $650, whereas the four drums it replaced totaled over $2800.

"And," Karl continued, "you can

pump DuzAll right out of the drum. That'll save your operator hours he's spending every week moving drums around and making chemical mixes. It'll free him up to do some of the other jobs he's not able to get to now."

DuzAll sounded like the answer to some of Brad's problems. He decided to give Karl a six-month trial.

Six months later, Brad felt a little older and a lot wiser. The DuzAll had worked all right, but it had definitely not saved money. His engineers had found that the demand for each of the four components was different, and they were forced to over-feed the alkalinity builder, sludge conditioner and amine in order to keep the sulfite in range. As a result, his chemical costs actually went up over the six-month trial. It *was* more convenient for his men to handle only one drum, but the sight savings in time was more than offset by the increased cost.

Brad's experience is typical of that of other people responsible for the operation of process boilers who have tried one-drum treatments. One-drum products are designed for convenience -–having a small amount of each of the components of a treatment program in a single formulation enables the system operator to feed a "complete" program in one shot. However, one-drums can't be "fine tuned" to meet individual demands of sludge conditioner, alkalinity builder, oxygen scavenger and return line treatment. As such, they are not well suited to process systems that have varying loads and changing feedwater conditions.

So where do one-drum treatments fit? One-drum products are well-suited for systems that have fairly stable loads and a very high percentage of condensate return. Churches, small schools and similar facilities where steam is used for space heating can be good applications for one-drums. In any system where, because of time and/or staffing constraints, the operator simply does not have time to mix and feed a multi-component program, a one-drum approach might be the answer.

Which type of program is best for your system? A multi-component program, where you can individually adjust sludge conditioner, alkalinity builder, sulfite and amine dosages, will almost always provide superior results and economics when compared to a one-drum program. But where time and manpower are extremely tight, a one-drum might be just the ticket.

This Newsletter courtesy of:

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