

On the road again: Impressions of a golf market on the move

By CHARLES VON BRECHT

From time to time I like to get my two cents worth into *Golf Course News* with some thoughts on the golf industry and to bring readers up to date on the commerce side of this publication.

Having just returned from a nine-day trip to the Midwest, I'm off to Phoenix and Florida for another nine-day trek (I did drop by for a quick hello to the office in late July). Fortunately, this trip ends with a family gathering, where I hope my children will recognize me — even though we live under the same roof!

The Midwestern trip was anchored by a two-day celebration of a combined 145-years, honoring Jacobson (75) and Milorganite (70). These Racine- and Milwaukee-based organizations invited editors and publishers for plant tours, product & equipment presentations, and the required golf outings. It seems like summer is my plant-tour season, and I learn more and more with every tour!

The Jake plant, though physically antiquated, has

been updated with millions in capital equipment. Jake president Phil Tralies seems to have initiated some vital changes in plant rehab during his relatively short tenure. More improvements are planned to keep up with demands for Jacobson equipment.

The Milorganite facility, as most of you may know, is contained in the MMSD (Metro Milwaukee Seven District). This facility is truly amazing. Warning: Do not take a tour on a hot day with a hangover... Fortunately I had

Continued on page 70



GCN Publisher Charles von Brecht: Don't try this at home!

SECOND OF TWO PARTS

Focus your attention on the 10 to 20 basic irrigation system components

By LARRY RODGERS

A well-written irrigation plan, like a construction blueprint, instructs users on how to create the best system for their exact needs. The plan reflects current course watering demands, as well as irrigation requirements 20 to 30 years in the future. While the plan specifies the absolute functional necessities of how your station affects the total irrigation system, it's important to pick out 10 to 20 basic components on which you should focus your attention.

These items should be part of the review process and should be evaluated as to how they compare to the intent of the specifications.

1. Industry Standards: U.L., NEMA, NEC, ASME, and uniform plumbing code. If a component is to be built within ASME standards does that mean the same as ASME code construction? No, only an ASME certified shop can provide ASME code equipment. Determine what industry standards are important and use this to influence the final decision.

2. How is the start-up, installation, testing, and training going to be provided? Determine how many visits will be provided in the base cost and ask for the fees of the additional visits.

3. Service contracts and warranty: Determine what conditions are covered under warranty and why service contracts may be required during the warranty period.

4. The skid construction: Determine if it is channel, bent steel, or I-beam and how that affects the integrity of the system. Identify and follow the pump mounting plate thickness. If the system is a vertical turbine, determine how access to the wetwell will be achieved.

5. Pumps: Determine the speed — 3600 rpm pumps are generally less initial cost than 1800 rpm pumps but tend to wear out quicker. On a turbine pump, determine if the head is cast from a mold or fabricated steel and the features of

Continued on page 12

Larry Rodgers is an irrigation consultant based in Lakewood, Colo. The first part of his irrigation series appeared in the July edition of *Golf Course News*.



Sun.



Wind.



Tournaments.



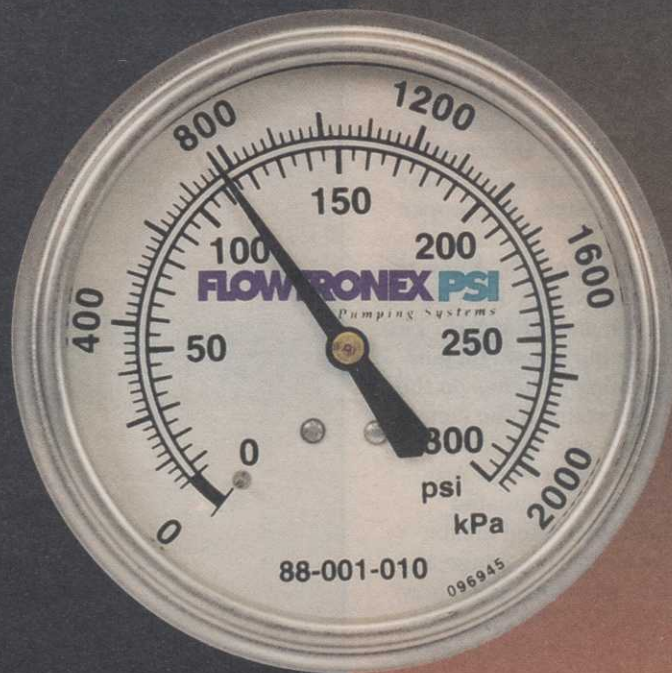
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Rodgers comment

Continued from page 11

each. Examine the packing/stuffing box: Is it oil or water lubricated? And know the importance of each kind. Be sure the pump shaft has two-piece construction in the event motor repair is needed.

6. Motors: Determine that the size is larger than the largest draw the pump is capable of producing. There are some fabricators that only look at the duty point and ignore the highest demand of the pump. If the specifications call for non-reverse ratchets, are they included?

7. Piping: What is the rating of a Sch. 40 pipe when it is machined to accept a victaulic coupling? Know the differences in schedule ratings and how they affect the highest pressure rating of lower flows. If the specifications call for the pipe to be loaded with galvanizing or epoxy, what is the coating process and how does it hold up to the environment that calls for this process? If drains, fertigation taps, and blow-out stubs are specified, are they included?

8. Pressure/Surge/Hydro-pneumatic tank: If a tank is specified, what is its purpose and is it constructed within the laws and codes of the jurisdiction where it will be located? Check the local boiler codes for ASME labeled construction techniques. Determine if the tank will be installed in-line or off-line providing pressure maintenance and how that is important to the application.

9. Control Valves: How will they be used? In a pressure control (conventional) or relief (VFD) situation. Valves can be sized too small and cause excess pressure losses or too large and not operate properly at lower flows. Check to be sure proper filtration is provided and that parts are locally available. If gauges are specified be sure they are the size, rating, style, and proper locations.

10. Control panels: Know the differences NEMA 1, NEMA 3, NEMA 3R, and NEMA 12. This NEMA rating should include the operating switches on the door. Determine if the construction is one big panel or a series of smaller ones. Are there any water actuated components located inside, such as a pressure gauge or pressure switches? If so, how may this affect the electrical components if a leak develops?

11. Starters: Do the starters have fused or circuit breaker protection? What are the benefits and limitations of each kind? Do the starters need to be soft-start, as required by the local power companies?

12. VFD Unit: Variable frequency drive is one of the latest features added to a

prefabricated pump station. Keep in mind the VFD is nothing more than an industrial computer. Just as with personal computers, there are many manufacturers of electronic boxes. To insure the box will perform as required, you should establish minimum operating features that are usually part of the "software programming."

13. PLC (Program Logic Controller): This device is very similar in operation to an Intel PC microprocessor. The PLC will determine how each command is carried out.

Today's PLC's are large electronic relays using digital memory in lieu of a cabinet full of relays. Their size is determined in memory (KB) and capacity (input/output count: 1/0). The PLC is used for industrial reliability, cross checking all 1/0s and verifies the system integrity prior to operation.

14. OID: Operator Input Device is the keypad which is similar in operation to the keyboard of a personal computer. When evaluating the system, compare the keypad layout to see if it has been

customized for your needs or if it's an off-the-shelf pad with numbers and letters for codes.

15. Safeties: Each system should have a list of safety devices as included equipment. At minimum they should be 1) low water level; 2) low pressure discharge-indicating more demand; 3) lightning/surge protection; and 4) loss of phase protection. Look at each one in addition to others that may be included.

16. Features: This is the "Bells and Whistles" section, where only your imagination, I/O capability, and software

engineering are the limitations. Check to be sure some basics, such as motor running time meters and general reset alarms, are included. For remote operation and monitoring make a list of what is needed for your use then see if the system has it included.

17. Skid Preparation: The final condition is only as good as the preparation. Insist on steel grit blasting of metal for surface preparation. This process "pits" the metal and allows the paint, epoxy, or hot dipped galvanizing, a surface

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Phillips comment: The Public Golf Forum

Continued from page 10

mix, meet and network with hundreds of Forum attendees, the public-access superintendents, owners and developers who are shaping the future of the golf course industry?

I urge you to join us in Chicago and afford yourself the same opportunity.

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This just in (only a year late):

A survey of U.S. nitrogen fertilizer manufacturers indicates the industry reduced

its industrial emissions, as reported on the annual Toxic Release Inventory (TRI) by 3.6 percent in 1994, as compared to the previous year. Also, a survey of U.S. phosphate fertilizer manufacturers shows the industry reduced its emissions (as reported on the annual TRI) by 65.6 percent in 1994.

Ladies and gentlemen, a nice round of applause for the fertilizer industry, which has chosen to address its emission issues before the heavy-hand

of regulation lowers the boom. Indeed, these decreases were posted despite increases in production.

Both surveys, conducted by the International Fertilizer Development Center for the Washington, D.C.-based Fertilizer Institute, are compilations of information reported annually to the Environmental Protection Agency (EPA) under the Community Right-To-Know Law. EPA's involvement probably explains why we're just now getting figures for 1994... Ha! Just kidding!

In truth, when it comes

matters of Red Tape, EPA has really cleaned up its act. In February we reported on innovative fast-track registration programs EPA created to more quickly accommodate reduced-risk chemicals. Last month, we reported on EPA's hugely successful effort to reduce the number of scientific studies chemical manufacturers conduct — and re-conduct — in support of products applying for reregistration.

The time and money saved by this program should be enough to silence even EPA's harshest critics — for a couple

of weeks, at least.

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More Updates: The Budd Family of Winston Salem announced July 11 that it has completed its acquisition of **Lofts Seed, Inc.** As we noted in our earlier story on the sale (*GCN* May 1996), no discernible changes in the Loft' proprietary name or product line are expected.

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Also from the unfinished department: **AgrEvo USA Co.** and **The Nu-Gro Corp.** of Woodstock, Ontario, Canada have completed transfer of AgrEvo's Nitroform/Nutralene business to Nu-Gro's U.S. subsidiary, Omnicology, Inc. of Gloversville, N.Y.

Though Omnicology and AgrEvo jointly honored existing prices and marketing prices through July 31, new programs — expected to be similar — were scheduled to be announced Aug. 1.

Rodgers comment

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18. Filtration: The degree and type of filtration depends on the water source. At minimum insist on Wye Strainer with a 20 mesh screen. On the extreme end there are systems that will filter down to 5 micron (1 micron = .00004 inches).

19. Main Disconnect: This is usually required by utility companies and could become a big expense if left off and required later.

20. 120-Volt Power Conditioner: The only item that has remained constant in the golf course irrigation industry is power. If you have power to operate the pumps you can count on power to operate the irrigation system. It is our policy to use the pump location as our sole power source. It's very important to send proper voltages to the solid state controllers. If a power conditioner is called for, be sure it is included.

The Bottom Line:

Don't evaluate solely on today's price. Use GM vs. Cadillac example. Not every course needs a Cadillac, but you better understand what you don't need and how that translates into the final cost. Initial bid quotes, ignorance or simply going with your buddy down the road should not play a role in the final decision.

Also, don't buy technology just for technology's sake. Buy it for what it can do for you. VFD alone isn't the answer, the software that operates the VFD is the answer.

Following specifications protects short-term and long-term interests, for with pump stations, what you specify is what you get.



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