



# Out with the OLD

## *Remote B.C. hospital brings in the new with boiler replacements*

**T**he hard fact of running any facility is that no equipment lasts forever. No matter the make, model, degree of use, or quality of maintenance, every thing eventually reaches the end of its useful lifecycle. This can end in costly repairs or full-out replacements. How a facility manages this transition differs from industry to industry, but for those in the financially constrained healthcare industry, an extra effort must be made to find solutions with financial, environmental and energy efficiency benefits.

This was the challenge for British Columbia's Kootenay Lake Hospital, when its management was faced with deciding the fate of its failing 57 and 58 Cleaver-Books boilers, which had served the facility well for over 40 years.

"Those boilers were old, they were getting to their lifecycle end," Kootenay Lake Hospital's chief engineer Mario Campese

recalls, "The lifecycle of a boiler is such that when you're starting to push 40 years, you really should be looking at replacement as opposed to constant repair. In our case, we had to decide whether to retube the boilers or replace them, and in the end we decided it was time for a replacement due to cost of repair and maintenance."

**"Considering its remote location in Nelson, B.C., Kootenay Lake Hospital's engineers like to know the ins and outs of every piece of equipment that enters the facility, lessening their reliance on outside service calls."**

The decision to replace its Cleaver-Books boilers opened the hospital to a number of options. To ensure their dollars would be spent in the most effective way possible, management employed the help of a mechanical engineering consultant firm, Cobalt Engineering, which assisted in selecting three pairs of smaller, more efficient boilers, which would be allocated to different parts of the facility.

"In replacing those two boilers, they went to six in total smaller boilers, but each pair of boilers had discreet duties," Campese explains. "As a result, we had two for domestic hot water use, two for heating the building, and two Clayton steam boilers for process steam required in our laundry, [operating room], sterilizing department, and kitchen and laboratories."

The addition of the six new boilers brought many benefits to the facility. A prime example of this was the installation of two, monotube Clayton boilers to handle the facility's steam operations. They feature faster heat up times, quicker response



to load change, enhanced safety and a design that diminished heat and chemical loss. The boilers represented a marked improvement from their predecessors. What's more, an independent study by the San Diego University, reported that the Clayton Steam Generator averaged 5.8-percent higher efficiency across the entire operating range than the Clever Brooks firetube boiler — another key motivator behind Kootenay Lake Hospital's purchase.

"They wanted the best efficiency on the market which was the benefit of a Clayton," notes Dave Stalker of Pacific Boiler, the Clayton distributor that worked with the hospital. "They could put two smaller units in that would take less physical footprint and give them more area in their boiler room. So it came down to efficiency and significant space saving."

Overall, Stalker adds, "Clayton produce more steam for less fuel than the existing steam boilers. When I say high efficiency I mean substantial fuel savings."

Considering its remote location in Nelson, B.C., Kootenay Lake Hospital's engineers were accustomed to learning the ins and outs of every piece of equipment that entered the facility, lessening their reliance on outside service calls. With Pacific Boiler situated nearly ten hours away, the same in-house training was required with the new boilers, and Pacific Boiler was more than willing to accommodate the hospital's needs.

"Most companies don't want to be trained, they just want to be able to call the service department. But because they're



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Mario Campese, chief engineer at Kootney Lake Hospital, surveys a recently installed Clayton boiler that helps handle the facility's steam operations.

remote, and because they are a hospital, it was important to them that they could do just about anything they needed to do on the boiler to get it going," Stalker says. "There's some things that legally they can't do, such as some gas projects because they're not gas fitters, but in regards to the general maintenance and the service, their own staff can perform and they do it quite well."

Looking back at the initial training, Campese adds: "Dave Stalker did the first service on the boilers and we participated and got instruction from him concerning the peculiarities of that boiler. From that first time, we took it on and kept going from there. It's been all good."

During the time since the replacement of its boilers, and Kootenay Lake Hospital team has had ample time to assess how much its boiler replacements have saved them in terms of money and energy. Looking back throughout the decade, Campese says: "In the eleven years since then, the hospital has continued to see the benefits of these on-going energy and maintenance savings."

Conclusion: It can be costly to replace systems, but it's a price all facilities must eventually pay. Finding the best replacement, and the right partners for the job is therefore key in repeating Kootenay Lake Hospital's success. **PEM**

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