

# Regal Training Fills a Need for KRWA Staff



KRWA Tech Tony Kimmi recently took training at Chlorinators Incorporated on the troubleshooting and maintenance of Regal Chlorinators.

**A**s KRWA employees, it was a pleasure for KRWA Tech Lonnie Boller and me to attend a recent training session at Chlorinators Incorporated in Stuart, Florida. This training was some of the best inservice I have been able to attend, and it will be particularly helpful to us as we continue to work with water utilities and water treatment issues, specifically gas chlorination.

Chlorinators Incorporated recently celebrated its 30th anniversary but their history goes back even further to 1960 when Jim Haskett designed and patented the first direct-cylinder-mounted all vacuum gas chlorinator.

Before 1960, using chlorine gas had truly been a potentially hazardous business. Existing chlorinators used many different parts that frequently failed and allowed chlorine gas under pressure and/or chlorine solution to escape.

Haskett's invention changed that. A major change was that his design was mounted directly on the chlorine tank and it placed the ejector at the point of injection where the application needed to be chlorinated. Rather than pressure, vacuum now moved the gas from the cylinder valve to the

ejector, allowing for the design to eliminate numerous parts; only a single vacuum line was needed. If that line failed accidentally, the flow of gas would stop immediately.

Jim Haskett's chlorinator was more efficient and safer than other models. It was innovative and well received that his direct-cylinder mounting concept became the world's standard by the time he sold the company in 1970.

In 1975, Haskett and his wife Diane designed a new chlorinator that was unique as far as terms of serviceability, durability, and reliability. They founded a new company, Chlorinators Incorporated, which has been successful due to a strong product, continual improvement, and devotion to customer service.

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## The training . . .

The training at Chlorinators Incorporated began on Monday, July 18. Chris Myers, Vice President of Chlorinators Incorporated, provided a hearty welcome to the training. Others attending were Ben Casselman from Lee Supply of Lexington, South Carolina, and Joe Decker from Water Products, McPherson, Kansas.

Rod Parker of Chlorinators Incorporated provided a half-hour session on “The Properties of Chlorine Gas and Comparisons”. In this session, Rod spoke of some of the “myths” of how unsafe gas chlorine is in comparison to sodium hypochlorite and calcium hypochlorite. Statistics show more injuries occur with liquid chlorine compared to gas.

Next, Keith Thompson of GCEC (Gas Chlorine Education Committee) discussed the history of chlorine gas. He reported that nearly 1.8 million deaths occur per year due to unsafe water supplies worldwide. The GCEC encourages each water system store at least a twelve-week supply of disinfectants on site.

Bob Hull, Chlorinators Incorporated, explained how a chlorinator works, and the proper hydraulics needed to ensure that it works properly. He stressed that all piping and fittings be used with schedule 80 PVC, and a wye strainer is a must at the booster pump to remove foreign debris.

Rod Parker then gave a three-hour demo/training on Regal chlorinators. This was a very beneficial part of the training. Each of us was able to disassemble a chlorinator head and reassemble it with new parts. Rod led us through this process step by step. He also answered any questions during this course.

Rod also explained how the new Regal Smart Valve works. The Regal Smart Valve is designed to automatically control the feed rate of chlorine. This is primarily controlled by a chlorine analyzer that tells the valve to open or close, depending on the chlorine residual. Regal offers a chlorine analyzer that is designed to continuously measure the levels of free and/or total chlorine.

John Hentz of Chlorinators Incorporated ended the day with a hands-on session of the Regal Smart Valve and the Regal Gas Detector. He explained how to set the Smart Valve to properly achieve the amount of chlorine needed to disinfect. He also went into detail on how Regal’s Gas Detector works. The Regal detector has a bar graph on the display that monitors the gas level. Regal also offers a battery backup to keep the unit active during power outages.

The training continued early the next morning with Bob Hull’s continuation on chlorinator maintenance. He explained that it is critical that the proper check valve is installed to prevent water from leaking by the ejector and entering the chlorinator head. He explained that the filter inside the head needs to be periodically cleaned with muriatic acid and the head itself be cleaned with denatured alcohol.



A switch-over chlorination setup at the city of Sabetha.

Again, I appreciate KRWA arranging for Lonnie and me the opportunity to attend this training. While a trip to Florida may sound exciting, I don’t particularly care for flying and there was no time for goofing off. But the outside temperature was cooler in Florida in July than it was in Kansas, although much more humid. It was a couple of days well-spent and I’ve been able to put what I’ve learned to good use when helping troubleshoot several systems since and to show other operators what to look for and proper maintenance procedures. Please let me know if I or anyone else at KRWA can be of any assistance by contacting me at [tony@krwa.net](mailto:tony@krwa.net) or calling the KRWA office at 785-336-3760.

*Tony Kimmi has worked as a Tech Assistance for KRWA since October 2009. He has extensive experience in the operation of construction equipment. He has assisted in the construction of several rechlorination stations and ongoing monitoring of water quality issues. Tony enjoys providing assistance to public water systems.*



1-800-327-9761 (except FL)  
E-mail: [regal@regalchlorinators.com](mailto:regal@regalchlorinators.com)

TEL (772) 288-4854  
FAX (772) 287-3238

 **chlorinators  
incorporated**

1044 S.E. Dixie Cutoff Road, Stuart, FL 34994 USA  
[www.regalchlorinators.com](http://www.regalchlorinators.com)

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