

## EL Teniente Lime Plant Case Study

### LEAK, REPLACE, REPEAT

Replacing leaky valves with new ones from the same company doesn't really solve the problem. It only postpones the inevitable.

### ZERO LEAKAGE

CGIS stands by its promise of providing ZERO Leakage valves to the mining industry. Our range of ZERO Leakage isolation valves are designed to do just that – isolate.

### ZERO DOWNTIME

The Delta guided shear knife gate valve works perfectly with no maintenance required on a long term basis.

No repairs = ZERO downtime



The Clarkson KGD valve used at the El Teniente plant

### The Client:

The El Teniente lime plant, located at Codelco's second largest copper mine in Rancagua, Chile.

### The Challenge:

The El Teniente lime plant presents harsh conditions for isolation valves to operate under. Not only does lime solidify internally it also cakes on every external surface available causing moving parts to seize. The challenge was to provide a valve that could isolate without requiring constant replacement or repairs.

### The Problem:

Plant supervisor Rene Harrison had seen many knife gate valves used in his twenty years at El Teniente. Clarkson KGD, Valvulas Chile, Remak, Recval, IIT Fabri, Orbinox

and Newcon are just a few that were used. These valves worked for about six to eight months before requiring maintenance and repairs. These repairs usually added an additional two to three months to the life of the valve but not before causing loss in production and downtime.

### The Journey:

In 2004 CG Industrial Specialties Ltd. (CGIS) visited the plant and discussed the Delta guided shear knife gate valve. Although the idea was well received the Rene team was skeptical of its benefits. Rene however took a chance and agreed to try one 10" Delta KGV in the most difficult positions with options selected by CGIS to withstand the harsh conditions.



**LOWER COST OF OWNERSHIP**

By using the Delta guided shear knife gate valve – a valve that has proved itself reliable and resilient - companies save money by purchasing a superior quality product.

**CGIS PROVIDES**

- ZERO Leakage Isolation Valves
- ZERO Leakage Control Valves
- Automation
- Consultation Services
- Repair Services

For more information on any of our products and services please visit us on the Web at: [www.cgis.ca](http://www.cgis.ca)



CGIS President Ross Waters shows how to examine the Delta bonnet and adjust the packing.

**The Discovery:**

The valve was installed and quickly showed its superiority. Rene began a campaign of replacing the troublesome knife gates they had been using with the Delta guided shear knife gate valves. By 2007 Delta occupied nineteen (19) of the key isolation points within the plant.

**The Results:**

On June 17, 2010 CGIS and its new Chilean distributor Flow Valve Sistemas e Ingenieria visited the El Teniente plant and Rene Harrison. The original Delta installed in 2004 was still working perfectly with no maintenance required for over six years. The remaining eighteen (18) Delta valves, installed between 2004 and 2007 were functioning normally and had required only minor tightening; no parts or system downtime was required. All valves continued to provide Zero Leakage isolation despite the internal and external cementation and scale precipitation

**Summary:**

The Delta guided shear knife gate valves have proved that they can withstand the most severe application as well as internal and external conditions. Delta's knife gate valves have provided Rene Harrison with long term low cost of ownership and the highest isolation performance.

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