

CASE STUDY:

Replacement of valve using Alstern's Balloon Line Stop Service



Alstern Technologies is a renowned pipeline solutions provider. We provide one-stop cost-effective pipeline solutions to our customers with the objective of optimizing their assets while minimizing operational downtime.

The Specialist for:

- Pipe Freezing
- Hot Tapping
- Line Stopping
- Valve Insertion
- Leak Repair
- Flow Measurement
- Thickness Measurement

For more pipeline solutions, please visit our website: <https://alstern-technologies.com.hk>

Unit 2, 26/F, Global Gateway Tower
63 Wing Hong Street, Cheung Sha Wan, H.K.
enquiry@alstern-technologies.com.hk
<https://alstern-technologies.com.hk>
(852) 2647 8163



Case Study: Replacement of valve by using “Alstern Balloon Line Stop Service”

Background information:

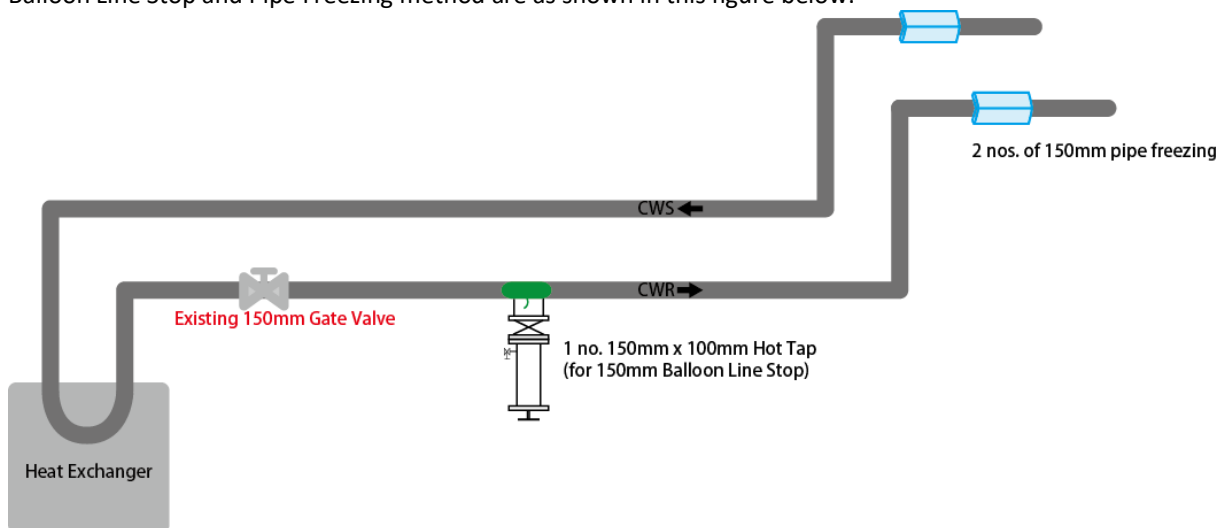
A broadband data centre is doing the engineering maintenance for their existing condenser water system. They found that part of valves in the condenser water system was faulty, and even all the valves were close, still cannot stop the water flow. Therefore, they seeking a professional solution to replace the faulty valve and insert new valve.

Proposed Solution:

Alstern Technologies participated the on-site survey for giving the recommendation and working procedure. Our specialist observes pipeline condition and performs on-site dimension measurements.

We proposed to use balloon line stop to block the water flow and then use pipe freezing to freeze condenser water for the valve replacement works. Balloon line stop is a method which used to temporarily stop the pipe flow by acting as a stop valve.

Balloon Line Stop and Pipe Freezing method are as shown in this figure below:



Site Operation:

As we need to do the balloon line stop, we require to tee-off a new valve into pipeline for placing the balloon line stop machine. Therefore, the first step was cleared up the surface area of the pipe and performing welding, tie-in operations and hot tapping works.

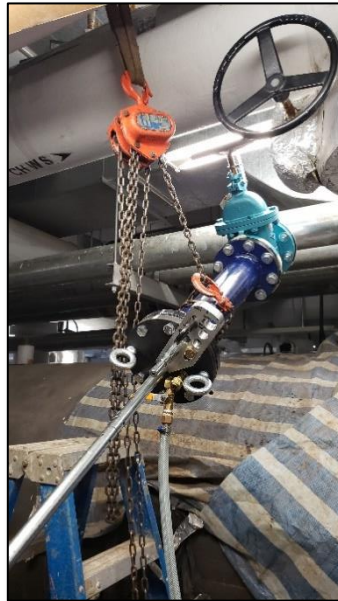
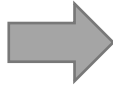
After the tie-in operation was completed, our specialist starts placing the balloon line stop machine and let the balloon expand to the inner wall of pipeline. To ensure the balloon line stop was success block off the water flow, we use ultrasonic flow measurement to monitor the water flow in entire process.

After that, we could perform the pipe freezing to freeze out both end of the pipeline which going to be valve replacement. This is the time-effective way to avoid waste lots of condenser water and reduce the time to resume normal.

Finally, the balloon line stop service was performed successfully and client could be smoothly carried out the replacement work and the system operation resume to normal in shortly.



Tie-in Operation Completed



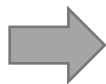
Install balloon line stop machine



Perform balloon line stop by inflating the balloon



Install pipe freezing clamp



Perform Pipe Freezing