

**CASE STUDY:**  
Replacement of valve using Pipe Freezing Service



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## Case Study: Repair pipe leakage using Pipe Freezing Service

### **Background information:**

One of branch chiller pipe in an international logistics centre has suffered a serious pipe leakage because of pipeline aging. Due to the pipe leakage was in the tee-off location and there is no valve for switch off, therefore, it needs to be repaired the pipe immediately without interrupt the operation of chiller water system of the building.

### **Proposed Solution:**

Alstern Technologies was invited to site for inspection and giving advice. After review the pipe condition and area of pipe leakage, Alstern proposed to replace the pipe by using Pipe Freezing. As the limitation of working area, pipe freezing location was close to the welding location, so that this pipe freezing work has require to carry out by experienced specialists.

### **Site Operation:**

According to initial on-site survey and evaluation, Alstern has determined the pipe freezing location and take responsible to the pipe freezing work.

First, out specialists conducted the non-destructive Ultrasonic flow measurement test. Once we found there is no water flow in that section of pipeline, we start install the pipe freezing clamp at the proposed location and connect it to Nitrogen cylinders.

Our specialists will continuously monitor the temperature profile in entire pipe freezing process, when the temperature profile decrease to the acceptable level and confirmed the ice-plug was formed successfully, our specialists will pass to client to carry out the following hot work and pipe replacement work.

While the replacement work was done, our specialist will remove the pipe freezing clamp and let the ice plug defrost by natural. Then, the pipe replacement work was well completed in short length of time and Alstern Technologies remain the is still incomparable as one of experienced pipe freezing companies in the Asia Pacific region.



Installation of pipe freezing jacket at proposed location



Pipe Freezing at proposed location



Finish the pipe freezing work