

CASE STUDY:
Insertion of branches using Hot Tapping 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
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Background information:

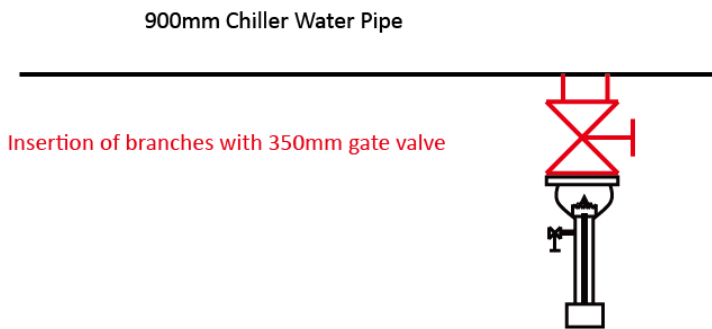
An international airport is going to make a branch connection from the existing chiller header pipeline. As the air condition system is operating in 24 hours x 7 days and there is no way to shut down the transportation pipe, therefore decide to use the time-effective method – Hot Tapping, to handle the branches insertion works. This tie-in project requires a professional company with solid track records in order to carry out this work.

Proposed Solution:

Alstern Technologies was invited to on-site survey and advise the working recommendation. Alstern has full of experience and successful track records of performing welding, tie-in operations and hot tapping works. Our specialist collects the initial valve size data and perform on-site dimension measurements. After that, Alstern proposed the best hot tapping location to avoid any collision of existing pipeline and equipment while doing the branches insertion works.

Hot Tapping method as shown in this figure below.

Proposal:



Site Operation:

First, our specialist cleared up the scale on surface area of the pipe by grinder and sand paper and pre-fabricate the short spool at site.

Before starting the welding process, it is important to spot-weld the short spool and reconfirm the alignment of Tee-joint assembly. Only approved welding rod would be used to carry out the electric arc welding works.

Next, a short pipe spool was welded onto the existing chiller water pipeline, the gate valve installed on tee-joint and then carry out water hydraulic test in 1.5 times of operating pressure.

After the test, install the Hot Tapping machine onto the gate valve and start the hot tapping works, our specialist drained out the water in manually upon the pilot drill penetrates the chiller pipe, and flush off the water from the drain valve as to remove the debris while the hot tapping nearly finished.

Thereafter, move back the bore head inside the hot tap machine and clear up again, our specialist shut of the gate valve and taken out the coupon at the end. Finally, the new tee-off is ready to use and hot tapping was performed successfully based on the customer's requirement and expectation.



Pipe Spool Installation



Pressure Test after welding works



Hop Tap Operation



Hop Tap Coupon



Valve Close after hot tap



Tie-in Operation Completed