

CASE STUDY NUMBER:	Case Study 17
DESCRIPTION:	3/4" T-PIECE CLAMP WITH STRONGBACK
CLIENT:	

SERVICE:	
Line size	3/4"
Design Pressure	10
Operating Pressure	4,5
Design Temperature	215
Operating Temperature	150
Material	SA-333 Gr6
Line Class	150

ANOMALY DESCRIPTION:
A steam leak was discovered from welding on the T-Piece

ROOT CAUSES
The leak was caused by a crack on the welding. The pipe was also reported to have an extremely low remaining wall thickness (throughwall).

INTEGRITY CONCERNS (INCLUDING PICTURES)
The pipe was in a critical condition due to the lowest remaining wall thickness (throughwall). Due to the remaining wall thickness (throughwall), the pipe could suddenly rupture/fail any time therefore, the integrity of the piping was a major concern.

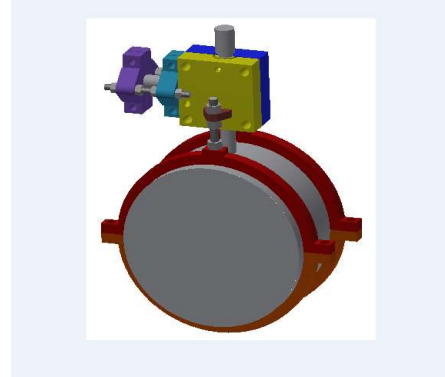


THE BERUSEAL SOLUTION (WITH PICTURES)

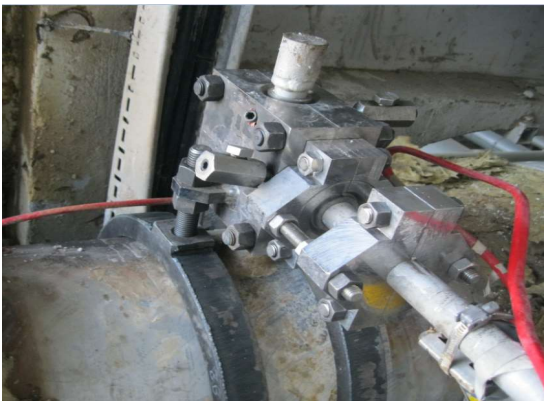
A T-piece clamp was designed according to ASME VIII Div 1 to cover the entire T-piece pipe section including the cracked welding.

A strongback system was also designed to keep the clamp in place should there be a complete failure of the cracked weld.

The strongback system also adds structural integrity to the piping since the remaining wall thickness is extremely thin (below minimum acceptable thickness).



INSTALLATION PICTURES



CONCLUSION

A successful seal was obtained by injecting a polymer compound into a sealing groove that runs throughout the seam and bores of the enclosure.