

Case Study
36" Pinhole Leak Composite Repair
on Shut Down Valve



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1 Defect area

36” Shut Down Valve with internal corrosion accumulated a “Pinhole leak”. It was previously sealed using a rubber lined clamp that eventually failed. A repair solution was engineered to arrest the leak and seal the valve from any further leaking.



2 Clock Spring® Composite Repair

Secure both sides of the sealing clamp using a 5 minute leak sealant steel putty. Crude oil seeping was evident from both sides of the clamp.



3 Clock Spring® Composite Repair

An engineered repair was designed according to ISO 24817 and executed by the SKPS team to secure the leak and maintain the production without the need for any shutdown for replacement. Application of the Clock Spring Contour composite reinforcement finished with 6 layers to encapsulate the clamp and extended over the valve body.



4 Design Criteria

Operating Temperature	: 140° F
Operating Pressure	: 145PSI
Defect Type	: Wall metal loss -Internal Corrosion
Size	: 36” inch
Material	: A216--WPB
Orientation of Leak	: 6 O'clock
Defect Analysis	: Wall metal loss-pin hole leak sealed by temporary clamp