

**16" Fire Water Pipeline with Multiple  
Pin Holes Repair using Clock Spring®  
Contour composite wrapping**



# 16” Fire Water Pipeline with Multiple Pin Holes Repair using Clock Spring® Contour composite wrapping

## 1 Defect area

16” Fire Water Pipeline had several pin holes due to a severe external corrosion defect. The holes size varied from 5mm up to 35mm. The pipe had been put out of service due to the leak while the SKPS team had immediately mobilized to location and provided the remedial action.



## 2 Putty Application

The pin holes were arrested using a special 2 layer elastomer plug, the sealing plug was secured by fast curing high strength putty. The sealing system was applied and completed in 45 minutes.



## 3 Clock Spring® Contour Application

Comprehensive repair solution using Clock Spring Contour composite wrapping was applied, 10 layers extending 1.0 meter on either side of the defect. The line was put in operation successfully in less than 12 hrs.



## 4 Design Criteria

Actual Wall Thickness	: 16 bar
Defect Type	: External corrosion
Size	: 16”
Material	: API 5L Gr,B
Defect Analysis	: Through wall-Pin holes
Orientation of Leak	: 6 o'clock
Lifetime	: 2Years