



# FlexSleeve™ Case Study

## Fast Construction. Permanent Protection.

### Aggressive Produced Water Service

LPS first approached the client while they were in the middle of testing competitor sleeves due to joint failures related to the epoxy caulk that is required to help seal each side of the sleeve.

In side by side tests on 12 inch pipe, it was decided that FlexSleeve was the superior product due to the ease of insertion, better heat resistance, and a better sealing system that did not require epoxy caulking.

The client contracted LPS to provide FlexSleeves for trial in a produced water injection pipeline. One FlexSleeve was welded into a pipe spool immediately after a 90 deg. elbow that is connected to a pump. The water flow at this location is highly turbulent. The turbulence, corrosive water at elevated temperature, and relatively high pressure are all putting FlexSleeve to the test.

The sleeve was video inspected after 4.5 months of service, showing the seals and coating intact. No adverse issues reported and the spool was returned to service.

#### Project Details

**Pipeline Details:** 6" dia. sch. 80 seamless. Produced water injection. 43° - 88° C (110° - 190° F). Operating pressure 103 - 124 bar (1,500 - 1,800 psi). Flowrate 4 m / sec. (13 ft. / sec.)

FlexSleeve installed immediately after 4" x 6" reducing elbow, connecting to pump w/ 4" outlet.

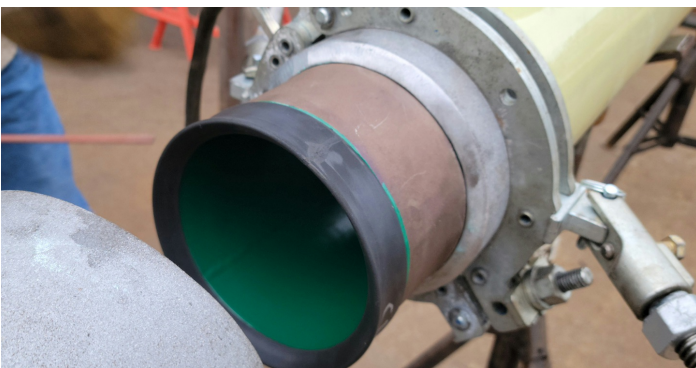
**Owner / Location:** California Resources Corp., Long Beach, CA. USA. Offshore oil production island.

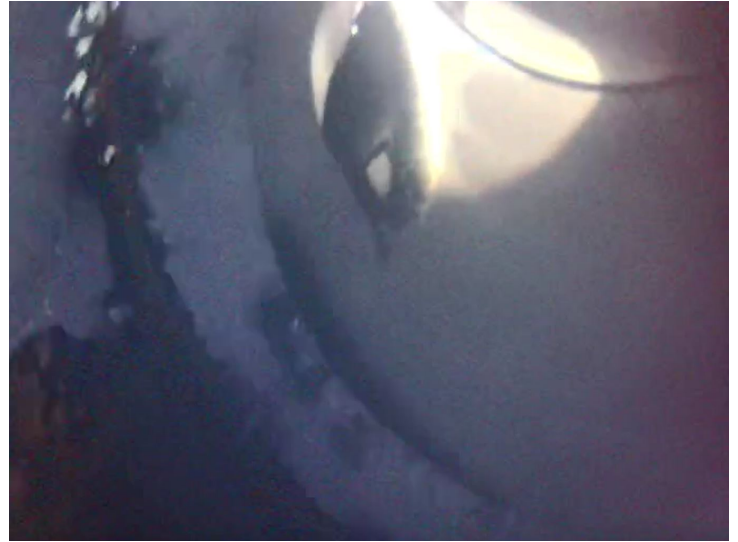
**Contractor:** Schultz Industrial Services (Aegion)

**Install Date:** March 2022

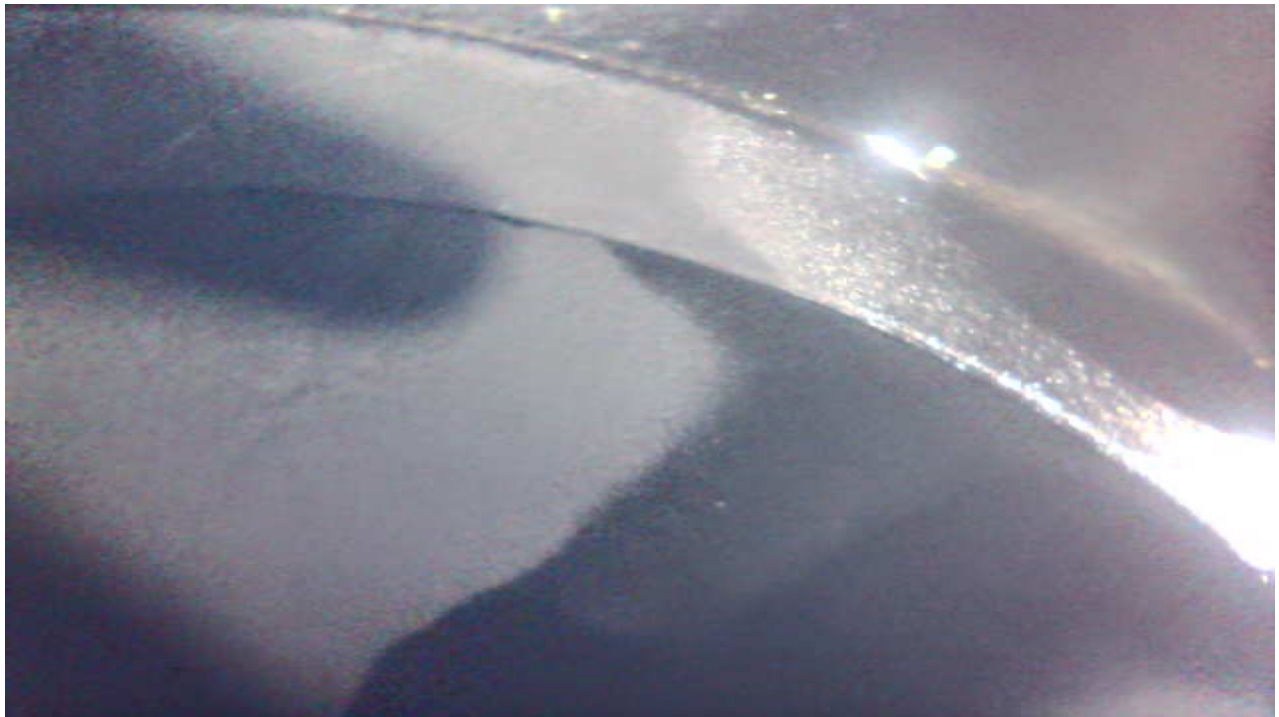
**Quantity of FlexSleeves:** 1 ea.

**Current Status:** FlexSleeve video inspected after 4.5 months of service. No adverse issues & back in service.





Video stills of upstream bore seal show it perfectly intact, proving seal suitability for high velocity, high temp, and turbulent flow.



Video still of downstream bore seal shows seal intact and the sleeve coating in good condition after 4.5 months in aggressive service.

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Lined Pipe Systems provides welded joint systems for internally lined pipelines transporting corrosive liquids and abrasive slurries. Their products permit fast construction of welded steel pipelines that are built to last.

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**Patents Pending**