

# MCOR ABILITIES™

## CASE STUDY

### SERIES



**PROJECT:** Crude Oil Pipeline Repair  
**OWNER:** Seplat Petroleum (E & P)  
**DATE:** June 20-24, 2018  
**PRODUCTS:** MCOR 3115 | mClad mFill™  
**LOCATION:** Sapele, Delta State, Nigeria  
**CONTRACTOR:** Aniz Allied Services Limited  
**ENGINEER:** Afolabi Ogunmefun & Isaac Ejuomah

#### Crude Oil Pipeline Repair

##### The Problem

Metal loss due to corrosion made reinforcing this pipeline essential to avoid potential loss of containment.

##### Solutions that Work

After an in-depth evaluation, Floyd Energy, exclusive MCOR distributor for Nigeria, proposed using MCOR 3115 | mClad mFill. MCOR provides high-performance coatings and cold-weld repair compounds. MCOR's 3000 series offers advanced, high-build repair solutions for precision reclaiming, metal filling, and high-build wear cladding, making this solution ideal to not only repair the pipeline but also protect the steel from future corrosion. The decision to use MCOR 3115 in conjunction with a fiberglass reinforcing wrap provides four-dimension protection both circumferentially and longitudinally. Reinforcement with various fabrics, and other mechanical meshes, scrim, and materials will increase flexural and tensile strengths, which is much needed when working to resolve issues pertaining to pressure, such as in oil and gas pipelines.

##### Products that Outperform

MCOR 3115 | mClad mFill is a multipurpose metal filler and metal repair paste. This two-component, high-strength product is extremely forgiving and tolerant, and it can hang vertically and overhead without sagging. It is a fast-set epoxy paste packaged in a convenient 1:1 mix ratio that can be used as a general industrial-grade repair, reclaiming, resurfacing, and patch filler for metal. Epoxy-based and highly modified with fibers and ceramics, this material is a durable, sealed protective solution to combat corrosion that met all the criteria necessary for this pipe repair.



**No Nonsense Applications**

Because the pipeline is pressurized, and the bonding would be supported with reinforcement, surface preparation involved solvent cleaning to SSPC-SP1, “Solvent Cleaning Removal” to eliminate all visible oil, grease, soil, and other soluble contaminants from steel surfaces, including removing loose rust and other contaminants. The contractor, Aniz Allied Services Limited, prepared MCOR 3115 | mClad mFill per MCOR specifications, and the pipe defect was filled/coated 2 mm thick with the fiberglass cloth impregnated and laid into the coating while still wet soon after.

Immediately after the initial stage of application (direct-to-steel filling + fiberglass reinforcement layer), the fiber reinforcement was recoated with another 2.5 mm of MCOR 3115 as an overlay and allowed to fully cure. An approved thinning agent was then used to allow fluid flow and viscosity for the final top coat.





**A Final Look**

MCOR 3115 | mClad mFill successfully restored the pipe. Aniz Allied Services Limited was impressed with the ease of application and product performance, and they are now seeking Floyd Energy's assistance with another leak repair.

For more information on MCOR 3115 | mClad mFill, visit [www.mcor.net/mcor-product/mcor-3115-mclad-mfill/](http://www.mcor.net/mcor-product/mcor-3115-mclad-mfill/)

To contact Floyd Energy Services, visit [www.mcor.net/floyd-energy-services/](http://www.mcor.net/floyd-energy-services/)

To learn more about MCOR's complete product line, visit [www.mcor.net/products](http://www.mcor.net/products)

For more information, please contact your local MCOR™ consultant



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