



DEFECT TYPE	Leaking defect
TANK DETAILS	Crude oil storage tank
LOCATION	Araguaney Station - CASANARE, COLOMBIA
3X SOLUTION	TANKIT®



Fig. 1: View of the defect



Fig. 2: Surface preparation in progress using Bristle Blaster®
Fig. 3: Surface preparation of the defected area completed



Fig. 4 & 5: Metallic plate and fillers application



Fig. 6: Composite patching in progress
Fig. 7: Composite patching completed (5 layers)

OVERVIEW

The objective of the job performed in 2019 by 3X ENGINEERING (3X) distributor in Colombia – CPS - was to **reinforce a crude oil storage tank by sealing a leak situated on the first ring of the tank (due to external corrosion)**.

SCOPE OF WORK

After analysis of the tank and defect characteristics, it was decided to temporarily repair the installation using the **TANKIT®**. This solution is perfect for emergency online repair required by the client.

The work team carried out the surface preparation, using Bristle Blaster® machine, to remove the coating and to get a good surface roughness (greater than 60 µm) to ensure the adherence between the tank and the composite solution. Hygrometric conditions were checked and the surface was cleaned and degreased with ethanol.

Composite repair was then performed as per the following steps:

- ① **F3XS1 filler** was first applied over the defect to stop the leak and level the surface.
- ② **F3X8 filler** was then applied to create a barrier against the corrosive environment and to facilitate the adhesion of the metallic plate.
- ③ **Metallic plate** was applied over the defected area using a thick layer of **F3X8 filler** to seal the leak.
- ④ Once the curing time of the fillers was reached, the patches installation was started. **Kevlar® patches impregnated with R3X5** were applied to repair the tank. It was necessary to install 5 Kevlar® patches corresponding to 5 layers.
- ⑤ Finally, anti-UV coating was applied to protect the repaired area and identification plate was installed for traceability.

RESULTS

The repair was successfully performed by our distributor in Colombia using our **TANKIT®** product and following 3X procedures. After 5 days, the repair was checked. No leak, drips or humidity were reported.