



Diversified Technology Services

2045 Preisker Lane Suite A – Santa Maria, California 93454 – 805-928-6392

INTERNAL VISUAL INSPECTION REPORT (API-653 – Atmospheric Storage Tanks)



Client: DTS Client **Location:** Somewhere USA
Tank Number: TK-1903 **Date Built:** _____
Tank Name: 3,000 bbl. Oxidizer Tank
P&ID No.: F-9761-6 **Service:** Process Slurry
Inspector Name: API Certified Insp **API 653 #** 16 **Date:** 11/08/03

* Statistics and purpose for entry on vessel *

Date of Last Inspection: 01/01/01 **Date of Next Inspection:** 11/07/08

What was the purpose for entry into this Pressure Vessel?

Opened for scheduled internal inspection interval.

* Narrative description of findings *

Date: 11/08/03 **Equipment No.:** TK-1903

An internal inspection was performed in accordance with the guidelines of API-653.

Coating:

The internal coating has numerous areas of damaged and peeling coating. The coating on the floor, bottom 24" of the shell, and below the chute to TK-1902 were all sandblasted and new coating was applied. Rust and peeling coating were noted further up the tank shell and engineering reported they might consider recoating the entire tank internally after evaluating this coating application at the next inspection interval.

The following is a daily chronicle outlining the application of the coating:

Saturday 11/08/03: During the coating application, it began to rain. Even with tarps over the tank, rainwater was dripping in the tank within approximately 15 to 20 minutes after coating was completed. Within an hour, a puddle was visible on the coated area near the center of the tank floor.

Sunday 11/09/03: Operations personnel report the tarps were rearranged to stop the leaking into the tank and the puddle was cleaned the following day.

Monday 11/10/03: AJC personnel determined that 11 areas inside the tank needed repairs to the coating on the floor, shell and supports. AJC reports the rest of the coating cured properly and is in operational condition.

Inspection noted areas on the floor where the coating was washed away from the water dripping from the roof. Watermarks were visible in the center of the tank that measured between 12' and 13' in diameter. Areas of smaller watermarks were visible on the coating from water running across it. The areas that were physically damaged by dripping and running water were sanded and recoated by AJC. The areas with the watermarks were determined by AJC to be in satisfactory condition.

Vapor Chute:

A new vapor chute nozzle was installed on the tank. The internal welds were visually inspected as requested by engineering. No areas of concern were noted on the welds.



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* Narrative description of findings *

Date: 11/08/03

Equipment No.: TK-1903

Internal Hardware:

The fiberglass sparger assembly was found in multiple pieces on the floor of the tank. A new fiberglass sparger assembly was built and installed during this shutdown. The new sparger appears to be in satisfactory condition. All of the u-bolts securing the sparger were attached with double nuts on the u-bolt.

The roof support columns appear to be in satisfactory condition. The swirl baffles on the columns next to the agitator have experienced significant wear and corrosion (see photos). The swirl baffles were sand blasted and coated to help prevent further corrosion. If the coating is damaged and corrosion continues at the next inspection, consideration may be given to replacing sections of the swirl baffles.

Floor:

The floor was scanned using ultrasonic B-scan method to determine the condition of the condition of the underside of the floor plates. The thinnest area noted during the B-scan was .180" thick. No areas were noted that require any repairs at this time. See the B-scan report for further details.

Shell:

The internal surface of the shell appears to be in satisfactory condition. No areas of bulging, distortion or degradation were noted.

Roof:

The internal surface of the roof appears to be in satisfactory condition as viewed from the floor of the tank. Daylight is visible at the roof to shell attachment in numerous areas around the tank.

Nozzles:

The nozzles appear to be in satisfactory condition.

* Recommended Items for Repair *

Item	Recommendations
1	Install new sparger assembly.
2	Repair or replace damaged coating.

* Completed Repairs *

Item	Description of Repairs Completed
1	New sparger assembly installed.
2	New coating installed on floor, bottom 24" of shell, and below chute on shell.



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* Report Sign-Off *

11/08/2003






API Certified Inspector

Date

* Narrative Photo Attachment Page *

TK-1903

11/08/2003

Area of rust on shell		Swirl baffle with corrosion at agitator	
Swirl baffle with corrosion at agitator		Swirl baffle with corrosion at agitator	
Swirl baffle with corrosion at agitator			No photo here