



Client :	OGDCL		
Job Number :	---	Tank Number :	T-9700
Type Of Inspection :	Out of Service Inspection		

Client :	OGDCL
Location :	Qadirpur Gas Plant
Tank Number :	T-9700
Type Of Inspection :	Out of Service Inspection
Job Number:	----
Inspection Date :	03 Sep 2018 To 05 Sep 2018
Job Executed By :	Bakhtiar Ahmed Shams ul Haq Muhammad Akram Danish Vohra Omar Moin

Prepared By :	Reviewed By :	Approved By :
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	Client :	OGDCL		
	Job Number :	---	Tank Number :	T-9700
	Type Of Inspection :	Out of Service Inspection		

Table of Contents

	<u>Page</u>
1. Introduction	4
1.1. General Tank information	4
1.2. Summary of Findings	5
1.2.1. Visual Inspection	5
1.3. Visual Inspection Photos with Comment	8
1.3.1. General View of Tank.....	8
1.3.2. Foundation	8
1.3.3. Shell	10
1.3.4. Fixed_Roof.....	12
1.3.5. Bottom.....	13



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1. Introduction

Tank T-9700 has been inspected at Qadirpur for OGDCL .

1.1. General Tank information

Tank General Information							
Tank Number	T-9700		Owner	OGDCL			
Tank Location	Qadirpur		Manufacturer	Unknown			
Tank Diameter	13,720mm or 45.013ft		Product	Produce water			
Tank Height	9,000mm or 29.528ft		Specific Gravity	01			
Maximum Filling Height	8,500mm or 27.887ft		Nominal Capacity (m ³)	8500 BBLS			
Design Code	Unknown	Heating System	No	Cathodic Protection	No		
Data Plate	No	Insulation	FRP on internal shell	Leak Detection	No		
Tank Component Geometry Information							
Foundation	Concrete Ring wall		Roof	Fixed Cone Roof			
Shell	Butt Weld		Bottom	Cone Up			
Tank Component Coating Availability							
Shell	Internal	FRP on internal shell	Roof	Internal	None	Bottom	FRP Coated
	External	Coated		External	Coated		
Tank Dates Information							
Year of Manufacture	2008		Year of Last Inspection	2016			
Year of Current Inspection	2018		Year of Last Bottom Plates Change	N/A			
Other Information							
Access To Roof	Spiral Stairway						



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1.2. Summary of Findings

1.2.1. Visual Inspection

1.2.1.1. Foundation

Item	Findings	Recommendations	Repair Priority
1. Access way	There is one access way at south side, minor corrosion and paint failure observed on step pad.	<ul style="list-style-type: none"> To made good surface preparation and recoat as per paint manufacturer' specification. 	Online Or Offline
2. Dyke wall	Reinforced Concrete ring wall observed around the tank, found in good condition	<ul style="list-style-type: none"> Nil, just for info 	N/A
3. Tank Foundation	Spalling, minor cracks and broken concrete observed all around the foundation	<ul style="list-style-type: none"> Need to rectify by grouting 	Online Or Offline
4. Bottom Projection Plate and Foundation	Projection plate and 2" lower first shell course found covered with tap coating, shell to bottom weld joint not inspected externally due to tap coating	<ul style="list-style-type: none"> Need to expose the above mention area in order to avoid corrosion under tap coating 	Offline
5. Bottom Projection Plate	UTG of projection plate not performed due to tap coating	<ul style="list-style-type: none"> Need to expose the projection plate in order to avoid corrosion under tap coating 	Offline
6. Concrete Steps of stairway	Spalling, minor cracks and broken concrete observed on cemented staircase steps	<ul style="list-style-type: none"> Need to refurbished as per project specification 	Online

1.2.1.2. Shell

Item	Findings	Recommendations	Repair Priority
1. Name plate	Name plate not found on the tank shell, however identification and other details found printed on tank shell.	<ul style="list-style-type: none"> Need to install name plate as per section 13.2 of API 653 	Offline
2. Shell plate	Remnants observed on 3rd shell course near stairway side also construction clead observed on all external and internal shell plate	<ul style="list-style-type: none"> Need to grind flush weld remnants and remove th construction clead followed by MPI and DPT 	Offline
	Top side near stairway one shell plate found without coating	<ul style="list-style-type: none"> To made good surface preparation and recoat as per paint manufacturer' specification. 	Offline

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Type Of Inspection :	Out of Service Inspection		

3. FRP Coating	FRP Coating found damaged and deattached from shell plate at area 2 x 3 meter internally south side	<ul style="list-style-type: none"> To made good surface perparation and rectify the damage area as per manufacturer' specification. 	Offline
4. Bob gauge	Bob gauge assembly found detoriated and wornout	<ul style="list-style-type: none"> Need to replace it with new one alongwith its assembly 	Offline
5. Tank Earthing	The Earthing bosses have been observed on two locations on tank shell without values of electrical resistance up to date written on them	<ul style="list-style-type: none"> Electrical resistance of each earthing boss should be checked on annual basis & current readings with date should be displayed on shell plates and maintained in log book 	Online

1.2.1.3. Fixed Roof

Item	Findings	Recommendations	Repair Priority
1. Internal Roof plate	scaling observed on internal side roof plate and supporting structure,	<ul style="list-style-type: none"> to made good surface perparation and recoat as per paint manufacturer' specification. 	Offline
2. External Roof plate	Newly installed roof plate found without coating	<ul style="list-style-type: none"> to made good surface perparation and recoat as per paint manufacturer' specification. 	Offline
	UTG recorded and thickness found in satisfactory and acceptable limit as per API 653	<ul style="list-style-type: none"> to made good surface perparation and recoat as per paint manufacturer' specification. 	N/A
3. Hand railing	at some loaction on roof hand rail found paint failure	<ul style="list-style-type: none"> to made good surface perparation and recoat as per paint manufacturer' specification. 	Online
4. Roof Manway	found in rusted condition	<ul style="list-style-type: none"> to made good surface perparation and recoat as per paint manufacturer' specification. 	Offline

1.2.1.4. Bottom

Item	Findings	Recommendations	Repair Priority
1. MFL	MFL carried out on bottom plate where no significant under side corrosion observed or recorded	<ul style="list-style-type: none"> Nil,just for info 	N/A
2. FRP coating	FRP coating observed on entire bottom plate where at	<ul style="list-style-type: none"> Need to repair effedcted area 	Offline



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	some location blistering observed		
3. Patch plate	Non standard spacing observed on existing patch plate	<ul style="list-style-type: none">• Nil,just for info	N/A
4. Sump	Visually found in satisfactory condition	<ul style="list-style-type: none">• Nil,just for info	N/A
5. Shell to bottom weld joint	Internally shell to bottom weld joint not inspected due to FRP coating	<ul style="list-style-type: none">• Nil,just for info	N/A

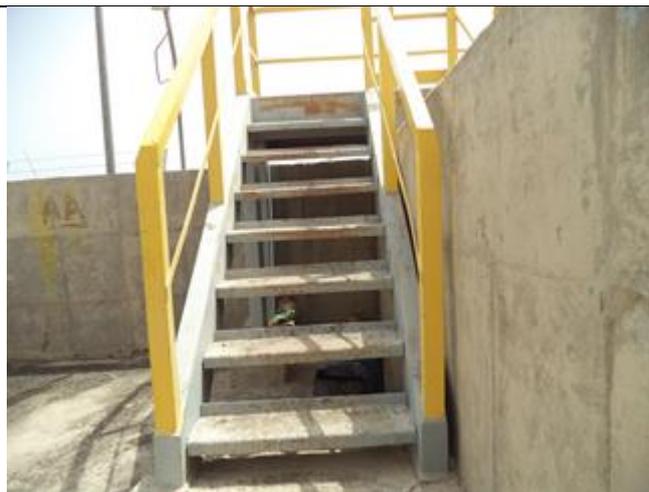
	Client :	OGDCL		
	Job Number :	---	Tank Number :	T-9700
	Type Of Inspection :	Out of Service Inspection		

1.3. Visual Inspection Photos with Comment

1.3.1. General View of Tank

	<p>General View of Tank T-9700</p>
	<p>General View of Name plate</p>

1.3.2. Foundation

	<p>Access way</p> <p>Finding: There is one. access ways at south side, minor corrosion and paint failure observed on step pad.</p> <p>Recommendation: To made good surface perparation and recoat as per paint manufacturer' specification.</p> <p>Repair Priority: <i>Online Or Offline</i></p>
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	<p>Dyke wall</p> <p>Finding: Reinforced Concrete ring wall observed around the tank, found in good condition</p> <p>Recommendation: Nil, just for info</p> <p>Repair Priority: N/A</p>
	<p>Tank Foundation</p> <p>Finding: Spalling, minor cracks and broken concrete observed all around the foundation</p> <p>Recommendation: Need to rectify by grouting</p> <p>Repair Priority: <i>Online Or Offline</i></p>
	<p>Bottom Projection Plate and Foundation</p> <p>Finding: Projection plate and 2" lower first shell course found covered with tap coating, shell to bottom weld joint not inspected externally due to tap coating</p> <p>Recommendation: Need to expose the above mention area in ordered to avoid corrosion under tap coating</p> <p>Repair Priority: <i>Offline</i></p>

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Bottom Projection Plate

Finding:
 UTG of projection plate not performed due to tap coating
Recommendation:
 Need to expose the projection plate in ordered to avoid corrosion under tap coating
Repair Priority: *Offline*



Concrete Steps

Finding:
 Spalling, minor cracks and broken concrete observed on cemented staircase steps
Recommendation:
 Need to refurbished as per project specification
Repair Priority: *Online*

1.3.3. Shell



Name plate

Finding:
 Name plate not found on the tank shell, however identification and other details found printed on tank shell.

Recommendation:
 Need to install name plate as per section 13.2 of API 653
Repair Priority: *Offline*

	<p>Shell plate</p> <p>Finding: Remnants observed on 3rd shell course near stairway side also construction clead observed on all external and internal shell plate</p> <p>Recommendation: Need to grind flush weld remnants and remove th construction clead followed by MPI and DPT</p> <p>Repair Priority: <i>Offline</i></p>
	<p>FRP Coating</p> <p>Finding: FRP Coating found damaged and deattached from shell plate at area 2 x 3 meter internally south side</p> <p>Recommendation: To made good surface perparation and rectify the damage area as per manufacturer' specification.</p> <p>Repair Priority: <i>Offline</i></p>
	<p>Bob gauge</p> <p>Finding: Bob gauge assembly found detoriated and wornout</p> <p>Recommendation: Need to replace it with new one alongwith its assembly</p> <p>Repair Priority: <i>Offline</i></p>
	<p>Shell plate</p> <p>Finding: Top side near staiway one shell plate found without coating</p> <p>Recommendation: To made good surface perparation and recoat as per paint manufacturer' specification.</p> <p>Repair Priority: <i>Offline</i></p>

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Tank Earthing

Finding:

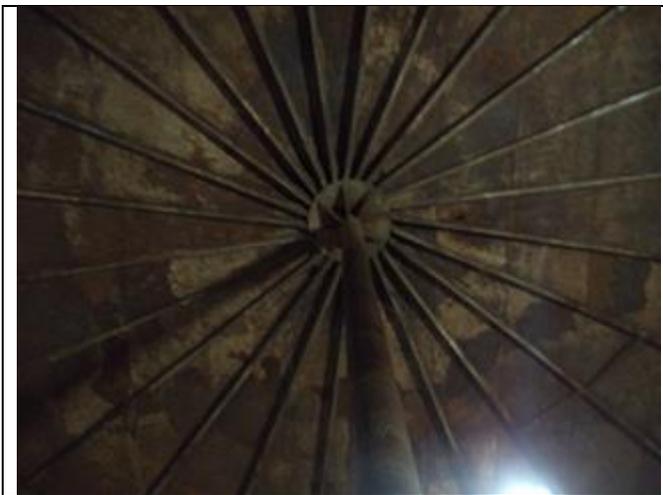
The Earthing bosses have been observed on two locations on tank shell without values of electrical resistance up to date written on them

Recommendation:

Electrical resistance of each earthing boss should be checked on annual basis & current readings with date should be displayed on shell plates and maintained in log book

Repair Priority: *Online*

1.3.4. Fixed_Roof



Internal Roof plate

Finding:

scaling observed on internal side roof plate and supporting structure,

Recommendation:

To made good surface perparation and recoat as per paint manufacturer' specification.

Repair Priority: *Offline*



Internal Roof plate

Finding:

same above

Recommendation:

Same above

Repair Priority: *Offline*

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	<p>External Roof plate</p> <p>Finding: Newly installed roof plate found without coating</p> <p>Recommendation: To made good surface perparation and recoat as per paint manufacturer' specification.</p> <p>Repair Priority: <i>Offline</i></p> <p>Finding: UTG recorded and thickness found in satisfactory and acceptable limit as per API 653</p> <p>Recommendation: Nil,just for info</p> <p>Repair Priority: <i>N/A</i></p>
	<p>Hand railing</p> <p>Finding: at some loaction on roof hand rail found paint failure</p> <p>Recommendation: To made good surface perparation and recoat as per paint manufacturer' specification.</p> <p>Repair Priority: <i>Online</i></p>
	<p>Roof Manway</p> <p>Finding: found in rusted condition</p> <p>Recommendation: To made good surface perparation and recoat as per paint manufacturer' specification.</p> <p>Repair Priority: <i>Offline</i></p>

1.3.5. Bottom

Client :	OGDCL		
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	<p>MFL</p> <p>Finding: MFL carried out on bottom plate where no significant under side corrosion observed or recorded</p> <p>Recommendation: Nil,just for info</p> <p>Repair Priority: N/A</p>
	<p>FRP coating</p> <p>Finding: FRP coating observed on entire bottom plate where at some location blistering observed</p> <p>Recommendation: Need to repair effected area</p> <p>Repair Priority: Offline</p>
	<p>Patch plate</p> <p>Finding: Non standard spacing observed on existing patch plate</p> <p>Recommendation: Nil,just for info</p> <p>Repair Priority: N/A</p>
	<p>Sump</p> <p>Finding: Visually found in satisfactory condition</p> <p>Recommendation: Nil,just for info</p> <p>Repair Priority: N/A</p>

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Shell to bottom weld joint

Finding:

Internally shell to bottom weld joint not inspected due to FRP coating

Recommendation:

Nil, just for info

Repair Priority: N/A

Conclusion :

On the basis of above finding there is no significant threat to the tank integrity it can with hold any product loading for long term, however minor finding which are adress in the report can be rectify after 3 to 4 month or can be planned.

This tank can be immediately boxed-up