

**SHAMS POWER COMPANY**  
**ENGINEERING DIVISION**  
**INSPECTION & CORROSION SECTION**  
**SHAMS 1**

**LOCATION : R1HAN50BB010**

**KKS : R1HAN50BB010**

**GRADE & CLASSIFICATION : 2**

**CERTIFICATE OF INSPECTION**

The equipment detailed below was examined in accordance with the SHAMS code of practice for plant inspection,

**ITEM : Ullage tank**

**LOCATION : SHAMS Plant**

**TYPE OF INSPECTION : Major**

**DATE OF INSPECTION : March, 2020**

**PLACE OF INSPECTION : IN-SITU**

**DATE OF LAST INSPECTION : Jan, 2019**

**REPORT :**

**1.0. SUMMARY**

The above pressure vessel was taken off line, isolated, opened, vented & cleaned for major external & internal inspections.

**2.0. SUBJECT**

2.1. This is a horizontal, cylindrical, carbon steel tank with one inlet and outlet of condensate water.

Size	
Design pressure	
Design temperature	
Operation pressure	90barg
Operation temperature	310c
Fluid characteristics @	
Flanges	A314
Piping	A314
Shell minimum thickness	
Head minimum thickness	

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The above equipment is/ ~~is not~~ considered suitable for further service under the present operating conditions

**NEXT MAJOR INSPECTION DUE : March 2024**

**INSPECTED: Osman Ismail**

**ENDORSEMENT: 48 MONTHS**

**REVIEWED: Ali Al Masabai**

### **3.0 HISTORY**

This tank was commissioned in 2013. Periodical inspection records since Oct.'2014 are available.

### **4.0. SCOPE OF INSPECTION**

4.1. Visual Inspection

4.2 Ultrasonic Thickness survey

### **5.0. CONDITIONS FOUND**

#### **5.1. External**

5.1.1 All painting and insulation found intact without any evidence of painting peel off or blistering and no evidence of any damage for insulation or insulation cover aluminum sheet.

5.1.2 All ladders, stairways and handrails found in satisfactory condition.

5.1.3 All concrete support found in satisfactory condition without evidence of cracking or spalling.

5.1.4 All external piping insulation found in satisfactory condition.

5.1.5 All earthing lugs found in satisfactory condition.

#### **5.2. Internal**

5.2.1 All internals found in satisfactory condition without evidence of fallen down, damage or corrosion.

5.2.2 All internal surfaces of shell and heads found in satisfactory condition, apart from normal carbon steel very thin hydroxide layer.

### **6.0 NDT**

- Ultrasonic thickness measurement was carried out on the internal shell courses and heads found satisfactory. See attached thickness measurement report.

### **6.0. Recommendations**

Blow down tank should be open for inspection after four years as per SHAMS code of practice.

### **10. Inspection Grade and Interval**

In accordance with the latest revision of SHAMS Code of Practice, this **Deaerator** was endorsed for 48 months under class 2, for next Major Inspection.



**FREQUENCY : 48 MONTHS.**

**ENDORSEMENT : 48 MONTHS,**

**GRADE : 2**

**Next Major Insp. due : March, 2024**

## Photos

	
Shell, dished end and weld condition	Manway cover and devoid
	
Manway nozzle, flange gasket seating	Shell internal surface and welds
	
Internals and connecting piping	

Form No.: IN-QSF-36 Rev. 05E Dtd.: 20-10-2018

**ULTRASONIC THICKNESS GAUGING REPORT**

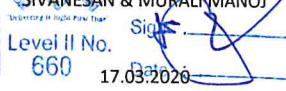
Client:	SHAMS POWER COMPANY		
Date:	17.03.2020	Report No.:	AD / 483
Project:	SHAMS OUTAGE MARCH 2020	Job No. :	N/A
Location:	MADINAT ZAYED	Drawing No.:	N/A
Item ID:	ULLAGE TANK R1QJA80-AH001	Material:	CS
Ref/ Procedure No:	INSPEC/UTG/001 Rev.10	Ref. Standard:	ASME SEC V
UTG Equipment Model/ Manufacturer:	USM 35 X DAC / GE	Serial No.:	7292a
Calibration Block No. :	STEP WEDGE, IIV V2 BLOCK	EQPT Calibration Certificate & Due Date:	INS/UT/CAL-043/19/AUH
Probe Type/ Size/Frequency:	WK TR 0° PROBE/ 10mm DIA / 5 MHz	Couplant Brand Name & Type:	POLYCELL + WATER
Connecting Cable Type & Length:	LEMO TO MICRODOT & 2 MTR	Special Attachment/ Equipment/ Block:	STEP WEDGE BLOCK (SL NO : AZB270)
Test Temperature:	AMBIENT	Surface Condition:	AS CLEANED
Inspection Date:	17.03.2020	Page:	1 of 3

Description:

# ULTRASONIC THICKNESS GAUGING WAS CARRIED OUT ON THE FOLLOWING ITEM

# FOR THICKNESS DETAILS REFER CONTINUATION SHEET

**REPORT FORMAT APPLICABLE ONLY FOR AUH & FUJ FACILITY**

LEVEL II TECHNICIAN		CLIENT REPRESENTATIVE		AI / TPI	
Name :	SIVANESAN & MURALI MANOJ	Name :		Name :	
Sign :		Sign :		Sign :	
Date :	17.03.2020	Date :		Date :	

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For Complaints & Suggestions:  
Please email to: suggestions.inspec@intertek.com

Please see terms & conditions. This report is valid only if signed and stamped ( Numbered Stamp ) by Level II / Level III.



Form No.: IN-QSF-36A Rev. 05E Dtd.: 20-10-2018

**ULTRASONIC THICKNESS SCANNING REPORT**

(CONTINUATION SHEET)

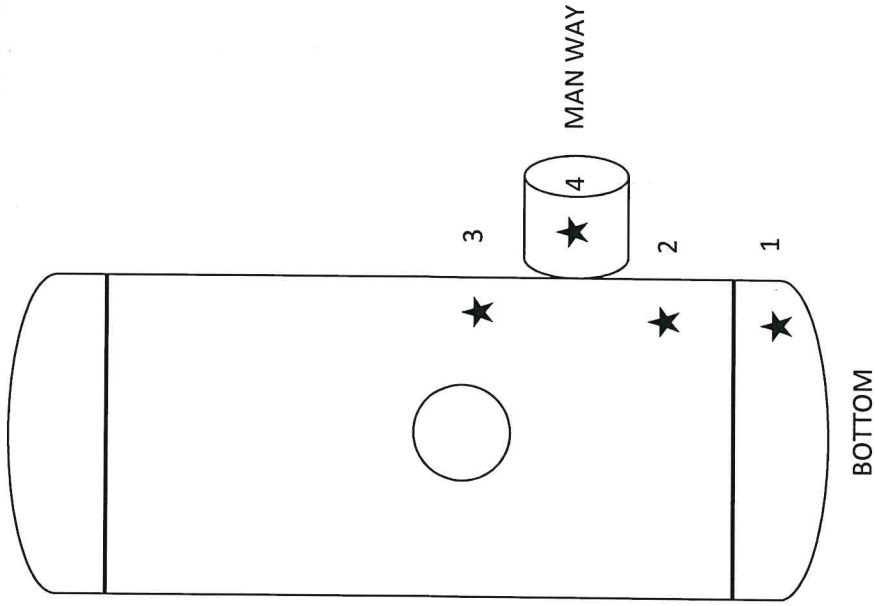
Date:	17.03.2020	Report No.:	AD- 483	Page:	2	Of	3
LOCATION	ORIENTATION	ORIGINAL THICKNESS	MEASURED THICKNESS MINIMUM (mm)	DIMINUTION IN mm	DIMINUTION IN %	REMARK	
1	0°	-	21.01	-	-	DISH	
	90°	-	21.06	-	-	DISH	
	180°	-	20.07	-	-	DISH	
	270°	-	21.18	-	-	DISH	
2	0°	-	17.80	-	-	SHELL	
	90°	-	17.61	-	-	SHELL	
	180°	-	17.68	-	-	SHELL	
	270°	-	17.55	-	-	SHELL	
3	0°	-	18.16	-	-	SHELL	
	90°	-	18.20	-	-	SHELL	
	180°	-	17.32	-	-	SHELL	
	270°	-	17.55	-	-	SHELL	
4	0°	-	25.94	-	-	MAN WAY	
	90°	-	26.60	-	-	MAN WAY	
	180°	-	25.80	-	-	MAN WAY	
	270°	-	26.14	-	-	MAN WAY	

REPORT FORMAT APPLICABLE ONLY FOR AUH & FUJ FACILITY

LEVEL II TECHNICIAN		CLIENT REP.		AI/TPI	
Name :	SIVANESAN & MURALI MANOJ	Name :		Name :	
Sign :		Sign :		Sign :	
Date :	17.03.2020	Date :		Date :	
<small>Dubai Branch : P.O. Box 6120, Dubai, U.A.E. Tel : 04 3241955 Fax: 04 3241957 Email: inspec.dxbcoor@intertek.com</small> <small>Sharjah Branch : P.O. Box 6120, Sharjah, U.A.E. Tel : 06 5361300 Fax: 06 5361173 Email: inspec.shjcoor@intertek.com</small> <small>Abu Dhabi Branch : P.O. Box 1947, Hujairan, U.A.E. Tel : 02 6225830 Fax: 02 6225830 Email: inspec.adhcoor@intertek.com</small> <small>Fujairah Branch : P.O. Box 194, P.O. 131, Sultanate of Oman Tel : 09 2238754 Fax: 09 2238754 Email: inspec.fujcoor@intertek.com</small> <small>Oman Branch : P.O. Box 194, P.O. 131, Sultanate of Oman Tel : 00968 2448 2391 Fax: 00968 2448 5855 Email: inspec.muscat@intertek.com</small> <small>Registered Office : 33-37 Athol Street, Douglas, IM1, 1LB, Isle of Man. Company Number 010728V.</small>		<small>INSPEC IS PART OF INTERTEK GROUP</small> <small>For Complaints &amp; Suggestions: Please email to: suggestions.inspec@intertek.com</small>			

**ULTRASONIC THICKNESS SCANNING DRAWING SHEET**

**ULLAGE TANK**



★ UTG LOCATION

LEVEL II TECHNICIAN

Name :- SIVANESAN & MURALI MANOJ

Sign :-

Date :- 17.03.2020