

SHAMS POWER COMPANY
ENGINEERING DIVISION
INSPECTION & CORROSION SECTION
SHAMS 1

LOCATION : R1GHC0102BG001-MF
KKS : R1GHC0102BG001-MF
GRADE & CLASSIFICATION : 2

CERTIFICATE OF INSPECTION

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

ITEM : GRMS boiler-2

LOCATION : SHAMS Plant

TYPE OF INSPECTION : Major

DATE OF INSPECTION : Jan, 2020

PLACE OF INSPECTION : IN-SITU

DATE OF LAST INSPECTION : Jan, 2018

REPORT :

1.0. SUMMARY

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

2.0. SUBJECT

2.1. This fire tube boiler consisted of main water horizontal vessel, inside it a fire tube where burner mounted on it. Flaw gases goes inside one inch diameters tubes making two passes inside main water vessel before going to the atmosphere through vertical chimney

Size	
Design pressure	
Design temperature	
Operation pressure	
Operation temperature	
Fire tube material	
Shell material	

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

NEXT MAJOR INSPECTION DUE :

INSPECTED : Osman Ismail

ENDORSEMENT: 48 MONTHS

REVIEWED : Ali Al Masabai

3.0 HISTORY

This boiler was commissioned in 2013. It was experienced repeated leaks from welding tubes to tube sheet welding. It was re-welded, tested and almost problem eliminated.

4.0. SCOPE OF INSPECTION

4.1. Visual Inspections were carried out on internal & external surfaces of the boiler following removal burner and internal cleaning. Internal surface condition of fire tube found satisfactory without any evidence of overheating, flame impingement, creep, or any dimension changes.

4.2. Visual Inspection of

4.3 Ultrasonic thickness survey on fire tube

5.0. CONDITIONS FOUND

5.1. External

- Insulation along with its cladding, connecting piping, safety valves, ladders, walkways, concrete foundation, burner, tube sheet covers, chimney all found in satisfactory condition.

5.2. Internal

- Internal surface condition of fire tube found satisfactory without any evidence of overheating, flame impingement, creep, or any dimension changes.
- welding of tube to tube sheet along with accessible parts of tube internal surfaces found in satisfactory condition.
- Some combustion products found deposited inside duct (outside boiler) under chimney.
- dividing plates inside fire tubes found in satisfactory condition.

5.3 NDT

- Thickness survey of fire tube carried found in satisfactory condition with average thickness 7.4 mm. Details in attached thickness survey report.

4.4. Insulation

Found in good condition along with cladding sheet

5.5. Supports

Found in good condition

6.0. Recommendations

Interval of safety valve testing and floating test after major maintenance and opening internals of valves should discussed and agreed.

7.0 Inspection Grade and Interval

In accordance with the latest revision of SHAMS Code of Practice, this boiler 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

8.0 Photos:



General view of GRMS boiler



Fire tube internal surface



Tube sheet, Tubes and its weld – outside boiler



Fire tube dividers and cover refractory

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

ULTRASONIC THICKNESS GAUGING REPORT


Client:	SHAMS POWER COMPANY		
Date:	05.03.2020	Report No.:	AD / 464
Project:	SHAMS OUTAGE MARCH 2020	Job No.:	N/A
Location:	MADINAT ZAYED	Drawing No.:	N/A
Item ID:	GRMS BOILER	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, IIW 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:	05.03.2020	Page:	1 of 1

Description:

ULTRASONIC THICKNESS GAUGING WAS CARRIED OUT ON THE FOLLOWING GRMS BOILER (R1 GHC02 BG001)

LOCATION	ORIENTATION	MEASURED THICKNESS (mm)
1	12 O'CLOCK	7.05
1	3 O'CLOCK	7.10
1	6 O'CLOCK	7.06
1	9 O'CLOCK	7.06
2	12 O'CLOCK	7.67
2	3 O'CLOCK	7.90
2	6 O'CLOCK	7.80
2	9 O'CLOCK	7.52
3	12 O'CLOCK	7.07
3	3 O'CLOCK	7.08
3	6 O'CLOCK	7.06
3	9 O'CLOCK	7.04

REPORT FORMAT APPLICABLE ONLY FOR AUH & FUJ FACILITY

LEVEL II TECHNICIAN		CLIENT REPRESENTATIVE		AI / TPI
Name :	SHYMAL PAUL	Name :		Name :
Sign :		Sign :		Sign :
Date :	05.03.2020	Date :		Date :

Dubai Branch: 2/F O Box 25235, Dubai, U.A.E. Tel: 04 3241955 Fax: 04 3241957 Email: inspec.dubcoor@intertek.com
 Sharjah Branch: 2/F O Box 6130, Sharjah, U.A.E. Tel: 06 5361300 Fax: 06 5361173 Email: inspec.shjcoor@intertek.com
 Abu Dhabi Branch: 2/F O Box 41227, Abu Dhabi, U.A.E. Tel: 02 6225820 Fax: 02 6225830 Email: inspec.adhcoor@intertek.com
 Fujairah Branch: 2/F O Box 7507, Fujairah, U.A.E. Tel: 09 2238754 Fax: 09 2238754 Email: inspec.fujcoor@intertek.com
 Oman Branch: 2/F O Box 197, P.O. 131, Sultanate of Oman Tel: 00968 2448 2391 Fax: 00968 2448 5855 Email: inspec.muscat@intertek.com
 Registered Office: 33-37 Athol Street, Douglas, IM1, 1LB, Isle of Man. Company Number 010728V.

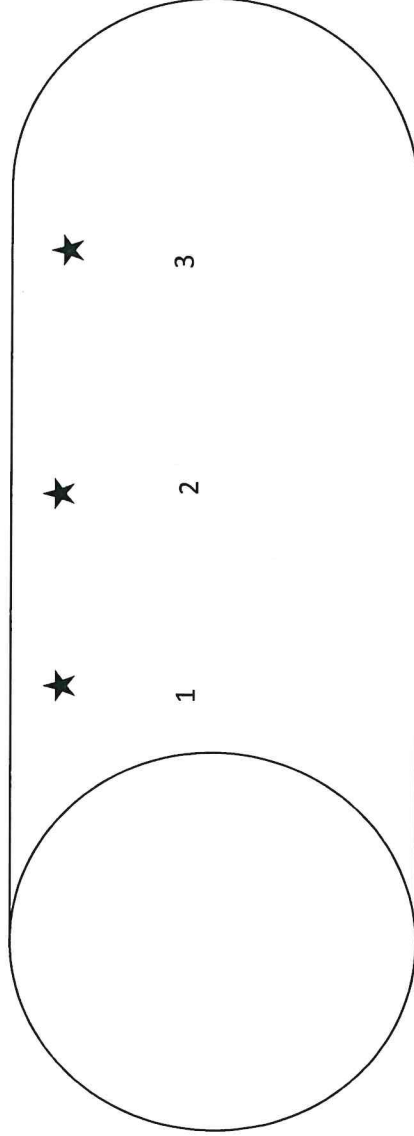
Please see terms & conditions. This report is valid only if signed and stamped (Numbered Stamp) by Level II / Level III.

INSPEC IS PART OF INTERTEK GROUP

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

ULTRASONIC THICKNESS SCANNING DRAWING SHEET

GRMS BOILER



★ UTG LOCATION

LEVEL II TECHNICIAN

Name :- SHYMAL PAUL

Signature No. Sign

Date :- 05.03.2020

