BOILER SAFETY REPORT

ONUS DESIGN LTD

Factory ID: 10919

Address: KUNIA,K.B.BAZAR,JOY BANGLA ROAD, Gazipur

GPS Coordinates: 23.935931, 90.387820

Factory List	:	ONUS DESIGN LTD (10919) CITADEL APPARELS LTD. (11419) Onus Garments Ltd (11441) Onus Garments Ltd. Extension Building (23700) Odyssey Dresses Ltd. (23364)
Number of Boilers	:	4
Boiler Registration Numbers	:	BB 9162, BB 2772, BB 3283, BB 8469

RSC RMG SUSTAINABILITY COUNCIL

EXECUTIVE SUMMARY

A comprehensive boiler safety inspection of the factory – **ONUS DESIGN LTD (10919)** was conducted by the RMG Sustainability Council, covering 4 boilers bearing the registration numbers – BB 9162, BB 2772, BB 3283 and BB 8469. The inspection aimed for the safety checks of the boiler and provide recommendations for safe operation and maintenance.

The inspection process was divided into three distinct parts. Firstly, an external visual inspection was carried out to evaluate the overall condition of the boiler and provide guidance for the upcoming full-fledged boiler safety inspection. Next, an internal inspection and hydrostatic pressure test (commonly referred to as a hydrotest) inspection was conducted to assess the safety and structural integrity of the boiler. Sufficient time was allocated to allow the factory to prepare for the final inspection stage, which involved a functional test inspection. This stage required the boiler to be operational to enable the inspection team to verify the functionality of different safety circuits.

The Boiler BB 9162 and BB 8469 are in operable condition, but a few issues - outlined in this report, are to be addressed in a timely manner.

Boiler Registration Number	**External visual inspection**	**Internal & Hydrotest inspection**		**Functional test inspection**	
	Date	Date	Remarks	Date	Remarks
BB 9162	11-Jan-22	25-Feb-25	Satisfactory	15-May-25	
BB 2772		The office of the Chief Inspector of Boilers acknowledged the permanent shutdown application of this boiler as of 29-Jan-23			
BB 3283		The Office of the Chief Inspector of Boilers (CIoB) acknowledged the temporary shutdown application for this boiler on 30-May-23.			
BB 8469	25-Feb-25	7-May-25	Satisfactory	15-May-25	

LIMITATIONS

The information in this boiler safety inspection report was obtained during a factory visit and discussion with local factory management. Services performed by the inspectors are conducted in a manner consistent with the level of care and skill generally exercised by members of the engineering and auditing profession. However, an effort has been made to discover all meaningful areas within the stipulated time.

In evaluating the subject site, the inspector relies on good faith in the information provided by factory management or employees. The inspector assumes that the information provided is factual, accurate and accepts no responsibility for any deficiency, misstatement or inaccuracies contained in this report as a result of omission or misrepresentation of any person interviewed or contacted.

The findings and recommendations in this report are not intended to imply, guarantee, ensure or warrant compliance with any government regulations. Additionally, the results do not imply in any way that compliance with the findings or recommendations, as stated in this report, will eliminate all risks or exposures not referred to in this report. Compliance with the findings and recommendations stated in this report does not relieve the factory from the obligation to comply with specific project requirements, industry standards, or the provisions of any local government regulations.

In case any critical safety concerns are found that require the RSC to recommend an immediate boiler shutdown, for applicable cases, the RSC will inform the Chief Inspector of Boilers (CIoB) office and collaborate with them on all subsequent steps to remediate the issue(s).

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1. EXTERNAL VISUAL INSPECTION

Inspection Date	Boiler Registration Number	Author(s)
11-Jan-22	BB 9162, BB 2772, BB 3283	Md Kamrul Hasan Chowdhury
25-Feb-25	BB 8469	Asif Ahmed

Reviewed by : Faisal Bin Faruk

Approved by : Md. Mehedi Hasan

FINDINGS AND RECOMMENDATIONS

The table below summarizes the identified boiler safety hazards during this inspection. Recommendations have been provided for each finding.

FINDING NO:	B-1	
CATEGORY:	ELECTRICAL WIRING SYSTEM	
BOILER REGISTRATION NO:	BB 9162	
FINDING: No emergency stop push switch was available near the entrance outside of the boiler room and on the boiler control panel.		
RECOMMENDATION: Emergency stop push switches must be installed on the boiler control panel and outside the boiler room near every entrance door.		
PRIORITY:	P3	
REMEDIATION TIME FRAME:	2 MONTHS	

FINDING NO:	B-2	
CATEGORY:	ELECTRICAL WIRING SYSTEM	
BOILER REGISTRATION NO:	BB 2772	
FINDING: No emergency stop push switch was available near the entrance outside of the boiler room and on the boiler control panel.		
RECOMMENDATION: Emergency stop push switches must be installed on the boiler control panel and outside the boiler room near every entrance door.		
PRIORITY:	P3	
REMEDIATION TIME FRAME:	2 MONTHS	

FINDING NO:	B-3	
CATEGORY:	ELECTRICAL WIRING SYSTEM	
BOILER REGISTRATION NO:	BB 3283	
FINDING: No emergency stop push switch was available near the entrance outside of the boiler room and on the boiler control panel.		
RECOMMENDATION: Emergency stop push switches must be installed on the boiler control panel and outside the boiler room near every entrance door.		
PRIORITY:	P3	
REMEDIATION TIME FRAME:	2 MONTHS	

FINDING NO:	B-4	
CATEGORY:	ELECTRICAL WIRING SYSTEM	
BOILER REGISTRATION NO:	BB 8469	
FINDING: No emergency stop push switch was available near the entrance outside of the boiler room and on the boiler control panel.		
RECOMMENDATION: Emergency stop push switches must be installed on the boiler control panel and outside the boiler room near every entrance door.		
PRIORITY:	P3	
REMEDIATION TIME FRAME:	2 MONTHS	

FINDING NO:	B-5
CATEGORY:	MONITORING AND CONTROL SYSTEM
BOILER REGISTRATION NO:	BB 9162
FINDING: Low Low Water Level (LLWL) was not marked properly on water level gauge glass system.	
RECOMMENDATION: The Low Low Water Level (LLWL) should be marked beside the gauge glass on a separate arrangement so that the water level can be visualized and identified clearly.	
PRIORITY:	P3
REMEDIATION TIME FRAME:	2 MONTHS

FINDING NO:	B-6
CATEGORY:	MONITORING AND CONTROL SYSTEM
BOILER REGISTRATION NO:	BB 2772
FINDING: Low Low Water Level (LLWL) was not marked properly on water level gauge glass system.	
RECOMMENDATION: The Low Low Water Level (LLWL) should be marked beside the gauge glass on a separate arrangement so that the water level can be visualized and identified clearly.	
PRIORITY:	P3
REMEDIATION TIME FRAME:	2 MONTHS

FINDING NO:	B-7	
CATEGORY:	MONITORING AND CONTROL SYSTEM	
BOILER REGISTRATION NO:	BB 3283	
FINDING: Low Low Water Level (LLWL) was not marked properly on water level gauge glass system.		
RECOMMENDATION: The Low Low Water Level (LLWL) should be marked beside the gauge glass on a separate arrangement so that the water level can be visualized and identified clearly.		
PRIORITY:	P3	
REMEDIATION TIME FRAME:	2 MONTHS	

FINDING NO:	B-8	
CATEGORY:	MONITORING AND CONTROL SYSTEM	
BOILER REGISTRATION NO:	BB 8469	
FINDING: Low Low Water Level (LLWL) was not marked properly on water level gauge glass system.		
RECOMMENDATION: The Low Low Water Level (LLWL) should be marked beside the gauge glass on a separate arrangement so that the water level can be visualized and identified clearly.		
PRIORITY:	P3	
REMEDIATION TIME FRAME:	2 MONTHS	

FINDING NO:	B-9
CATEGORY:	DOCUMENTATION
BOILER REGISTRATION NO:	BB 3283
FINDING: Boiler's initial registration certificate was not available on-site during the inspection.	
RECOMMENDATION: Boiler registration certificate from the government authority which was provided after the installation shall be available on-site during the inspection.	
PRIORITY:	P3
REMEDIATION TIME FRAME:	2 MONTHS

FINDING NO:	B-10
CATEGORY:	SAFETY VALVE
BOILER REGISTRATION NO:	BB 3283
FINDING: Boiler Safety Valve outlet line was not directed outside of the boiler room.	
RECOMMENDATION: Boiler Safety Valve outlet line should be directed outside of the boiler room with proper support and drainage system.	
PRIORITY:	P2
REMEDIATION TIME FRAME:	1 MONTH

FINDING NO:	B-11	
CATEGORY:	SAFETY VALVE	
BOILER REGISTRATION NO:	BB 2772	
FINDING: Boiler Safety Valve outlet line was not directed outside of the boiler room.		
RECOMMENDATION: Boiler Safety Valve outlet line should be directed outside of the boiler room with proper support and drainage system.		
PRIORITY:	P2	
REMEDIATION TIME FRAME:	1 MONTH	

FINDING NO:	B-12	
CATEGORY:	SAFETY VALVE	
BOILER REGISTRATION NO:	BB 8469	
FINDING: Boiler Safety Valve outlet line was not directed outside of the boiler room.		
RECOMMENDATION: Boiler Safety Valve outlet line should be directed outside of the boiler room with proper support and drainage system.		
PRIORITY:	P2	
REMEDIATION TIME FRAME:	1 MONTH	

FINDING NO:	B-13
CATEGORY:	SAFETY VALVE
BOILER REGISTRATION NO:	BB 8469
FINDING: Boiler Steam Header Safety Valve outlet line was not directed outside of the boiler room.	
RECOMMENDATION: Boiler Steam Header Safety Valve outlet line should be directed outside of the boiler room with proper support and drainage system.	
PRIORITY:	P2
REMEDIATION TIME FRAME:	1 MONTH

FINDING NO:	B-14
CATEGORY:	DOCUMENTATION
BOILER REGISTRATION NO:	BB 3283
FINDING: Necessary technical documents were not available to verify boiler design and operation parameters.	
RECOMMENDATION: Documentation including manufacturing drawings and calculations, Piping and Instrumentation diagram, electrical wiring diagram, commissioning documents, data sheets of mountings, accessories and feed water pump, boiler operational and maintenance log book, operation and maintenance manual, water treatment design and calculation, flue gas analysis report and water treatment report shall be available to verify the present condition of the boiler.	
PRIORITY:	P3
REMEDIATION TIME FRAME:	2 MONTHS

FINDING NO:	B-15
CATEGORY:	DOCUMENTATION
BOILER REGISTRATION NO:	BB 9162
FINDING: Necessary technical documents were not available to verify boiler design and operation parameters.	
RECOMMENDATION: Documentation including manufacturing drawings and calculations, Piping and Instrumentation diagram, electrical wiring diagram, commissioning documents, data sheets of mountings, accessories and feed water pump, boiler operational and maintenance logbook, operation and maintenance manual, water treatment design and calculation, flue gas analysis report and water treatment report shall be available to verify the present condition of the boiler.	
PRIORITY:	P3
REMEDIATION TIME FRAME:	2 MONTHS

FINDING NO:	B-16
CATEGORY:	DOCUMENTATION
BOILER REGISTRATION NO:	BB 2772
FINDING: Necessary technical documents were not available to verify boiler design and operation parameters.	
RECOMMENDATION: Documentation including manufacturing drawings and calculations, Piping and Instrumentation diagram, electrical wiring diagram, commissioning documents, data sheets of mountings, accessories and feed water pump, boiler operational and maintenance logbook, operation and maintenance manual, water treatment design and calculation, flue gas analysis report and water treatment report shall be available to verify the present condition of the boiler.	
PRIORITY:	P3
REMEDIATION TIME FRAME:	2 MONTHS

FINDING NO:	B-17
CATEGORY:	DOCUMENTATION
BOILER REGISTRATION NO:	BB 8469
FINDING: Necessary technical documents were not available to verify boiler design and operation parameters.	
RECOMMENDATION: Documentation including manufacturing drawings and calculations, Piping and Instrumentation diagram, electrical wiring diagram, commissioning documents, data sheets of mountings, accessories and feed water pump, boiler operational and maintenance logbook, operation and maintenance manual, water treatment design and calculation, flue gas analysis report and water treatment report shall be available to verify the present condition of the boiler.	
PRIORITY:	P3
REMEDIATION TIME FRAME:	2 MONTHS

FINDING NO:	B-18	
CATEGORY:	THERMAL INSULATION	
BOILER REGISTRATION NO:	BB 3283	
FINDING: Boiler steam header and steam pipeline were found with improper insulation.		
RECOMMENDATION: Proper insulation of exposed parts of the boiler body and steam distribution pipelines should be provided.		
PRIORITY:	P2	
REMEDIATION TIME FRAME:	1 MONTH	

FINDING NO:	B-19	
CATEGORY:	THERMAL INSULATION	
BOILER REGISTRATION NO:	BB 2772	
FINDING: Boiler steam header and steam pipeline were found with improper insulation.		
RECOMMENDATION: Proper insulation to exposed parts of the boiler body and steam distribution pipelines should be provided.		
PRIORITY:	P2	
REMEDIATION TIME FRAME:	1 MONTH	

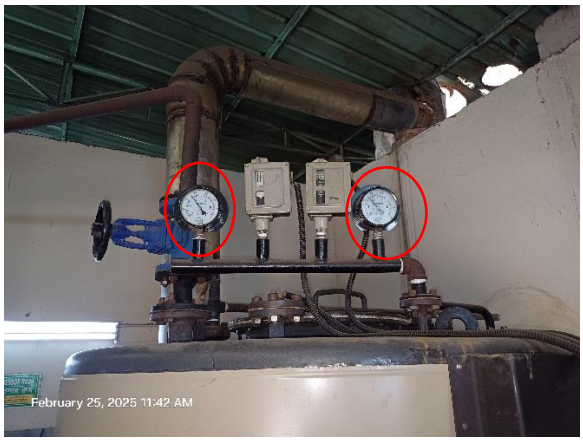
FINDING NO:	B-20
CATEGORY:	THERMAL INSULATION
BOILER REGISTRATION NO:	BB 9162
FINDING: Boiler steam header and steam pipeline were found with improper insulation.	
RECOMMENDATION: Proper insulation to exposed parts of the boiler body and steam distribution pipelines should be provided.	
PRIORITY:	P2
REMEDIATION TIME FRAME:	1 MONTH

FINDING NO:	B-21
CATEGORY:	THERMAL INSULATION
BOILER REGISTRATION NO:	BB 8469
FINDING: Boiler steam header and steam pipeline were found with improper insulation.	
RECOMMENDATION: Proper insulation to exposed parts of the boiler body and steam distribution pipelines should be provided.	
PRIORITY:	P2
REMEDIATION TIME FRAME:	1 MONTH

FINDING NO:	B-22
CATEGORY:	AIR VENT
BOILER REGISTRATION NO:	BB 8469
FINDING: The boiler air vent line was not directed to the outside of the boiler room.	
RECOMMENDATION: The boiler vent line should be directed outside of the boiler room with proper support.	
PRIORITY:	P2
REMEDIATION TIME FRAME:	1 MONTH

FINDING NO:	B-23
CATEGORY:	SUPPORT AND ACCESS
BOILER REGISTRATION NO:	BB 8469
FINDING: A boiler with a height of 8 feet or more was observed with an inadequate platform, ladder, and handrail, making it inaccessible.	
RECOMMENDATION: An operation, maintenance, and inspection platform with a minimum width of 2.5 feet, a railing with a minimum height of 3.5 feet, and a ladder - that does not pose fall hazard - should be provided.	
PRIORITY:	P3
REMEDIATION TIME FRAME:	2 MONTHS

FINDING NO:	B-24
CATEGORY:	MONITORING AND CONTROL SYSTEM
BOILER REGISTRATION NO:	BB 8469
FINDING: The steam pressure gauge range was insufficient.	
RECOMMENDATION: The boiler pressure gauge range should be at least twice the boiler's maximum allowable working pressure mentioned in the boiler license or in accordance with any recognized international standard.	
PRIORITY:	P2
REMEDIATION TIME FRAME:	1 MONTH



FINDING NO:	B-25
CATEGORY:	SAFETY VALVE
BOILER REGISTRATION NO:	BB 9162
FINDING: Boiler Safety Valve outlet line was not directed outside of the boiler room.	
RECOMMENDATION: Boiler Safety Valve outlet line should be directed outside of the boiler room with proper support and drainage system.	
PRIORITY:	P2
REMEDIATION TIME FRAME:	1 MONTH

FINDING NO:	B-26
CATEGORY:	MONITORING AND CONTROL SYSTEM
BOILER REGISTRATION NO:	BB 9162
FINDING: There is no drainage available for water level gauge glass.	
RECOMMENDATION: A suitable discharge pipe shall be fitted with each water gauge drain cock or valve.	
PRIORITY:	P3
REMEDIATION TIME FRAME:	2 MONTHS

FINDING NO:	B-27
CATEGORY:	LEAKAGE
BOILER REGISTRATION NO:	BB 9162
FINDING: Steam leakage was observed from the water column blowdown valve.	
RECOMMENDATION: The steam leakage shall be repaired to prevent a burn hazard.	
PRIORITY:	P2
REMEDIATION TIME FRAME:	1 MONTH

2. INTERNAL INSPECTION & HYDROSTATIC PRESSURE TEST INSPECTION

Inspection Date	Boiler Registration Number	Author(s)
25-Feb-25	BB 9162	Asif Ahmed
7-May-25	BB 8469	Hossain Shah Arif

Reviewed by : Faisal Bin Faruk

Approved by : Md. Mehedi Hasan

FINDINGS AND RECOMMENDATIONS

The initial inspection of this part of the boiler(s) revealed no safety concerns.

3. FUNCTIONAL TEST INSPECTION

Inspection Date	Boiler Registration Number	Author(s)
15-May-25	BB 9162, BB 8469	Md. Almas Hossain Polash Palash Kumar Paul

Reviewed by : Faisal Bin Faruk

Approved by : Md. Mehedi Hasan

FINDINGS AND RECOMMENDATIONS

The table below summarizes the identified boiler safety hazards during this inspection. Recommendations have been provided for each finding.

FINDING NO:	B-28	
CATEGORY:	MONITORING AND CONTROL SYSTEM	
BOILER REGISTRATION NO:	BB 9162	
FINDING: The Steam Pressure Limiter was not functional.		
RECOMMENDATION: Steam Pressure Limiter shall be kept functional.		
PRIORITY:	P1	
REMEDIATION TIME FRAME:	1 MONTH	

FINDING NO:	B-29	
CATEGORY:	MONITORING AND CONTROL SYSTEM	
BOILER REGISTRATION NO:	BB 8469	
FINDING: The Steam Pressure Limiter was missing.		
RECOMMENDATION: Steam Pressure Limiter shall be installed and kept functional.		
PRIORITY:	P1	
REMEDIATION TIME FRAME:	1 MONTH	

FINDING NO:	B-30
CATEGORY:	ELECTRICAL WIRING SYSTEM
BOILER REGISTRATION NO:	BB 9162
FINDING: There was no acoustic or optical alarm when the limiter was activated, and the flame sensor was disconnected.	
RECOMMENDATION: An acoustic with optical alarm should be installed.	
PRIORITY:	P2
REMEDIATION TIME FRAME:	1 MONTH

FINDING NO:	B-31
CATEGORY:	MONITORING AND CONTROL SYSTEM
BOILER REGISTRATION NO:	BB 9162
FINDING: There was no interlock for the Low Low Water (LLWL) level trip of the boiler.	
RECOMMENDATION: The Low Low Water (LLW) level tripping mechanism should be functional.	
PRIORITY:	P1
REMEDIATION TIME FRAME:	1 WEEK

FINDING NO:	B-32	
CATEGORY:	MONITORING AND CONTROL SYSTEM	
BOILER REGISTRATION NO:	BB 8469	
FINDING: There was no interlock for the Low Low Water (LLWL) level trip of the boiler.		
RECOMMENDATION: The Low Low Water (LLW) level tripping mechanism should be functional.		
PRIORITY:	P1	
REMEDIATION TIME FRAME:	1 WEEK	