



EXAMPLE INSPECTION REPORT

ALL NAMES & DATA FICTITIOUS

INSPECTION REPORT • MAINTENANCE PROGRAM

PACKAGED FIRETUBE BOILER BLR-01

Lakeshore Packaging Co. — Plant 2 • Marion, Ohio

■ OVERALL • HIGH — ACTION REQUIRED

■ UNIT OPERATIONAL

CLIENT Lakeshore Packaging Co.	SITE Plant 2 • Marion, OH	ASSET BLR-01 • 150 HP firetube	INSPECTION DATE July 28, 2026
TECHNICIAN M. Alvarez	FINDINGS 4 (1 high • 2 med • 1 OK)	ACTION ITEMS 4	REPORT TURNAROUND 4 min after last photo

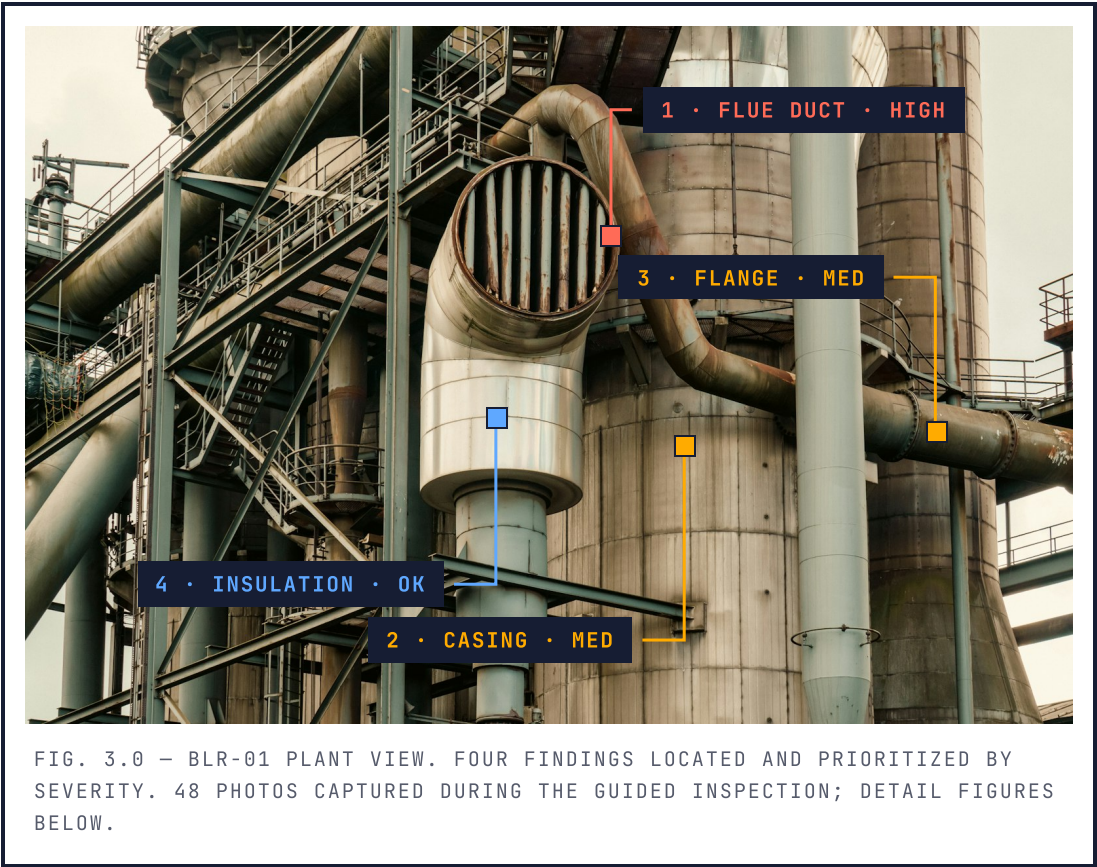
01 EXECUTIVE SUMMARY

IM-2026-0147

Unit **BLR-01** remains operational. The inspection identified **one high-severity issue** — heavy corrosion at the flue-duct elbow — requiring repair within **72 hours**. Surface corrosion on the vessel-shell casing is trending up against six years of inspection history; a recoat should be scheduled for the next outage. A minor weep was found at the riser-pipe flange. Insulation jacketing is sound. All other systems are within tolerance. **Every finding was reviewed and confirmed on-site by the technician of record**, whose field notes are attached to each finding and banked to the asset's knowledge history.

AI MACHINE-VISION ANALYSIS **T** TECHNICIAN INPUT — SHADED & ITALIC

P1	Repair flue-duct elbow TARGET • WITHIN 72 HOURS – UT THICKNESS SURVEY, PATCH OR REPLACE BELOW-MINIMUM WALL, RE-COAT	HIGH
P1	Re-torque riser-pipe flange TARGET • NEXT SHUTDOWN – RE-TORQUE TO SPEC, REPLACE GASKET IF WEEP PERSISTS	MED
P2	Schedule casing recoat TARGET • NEXT PLANNED OUTAGE – SPOT-BLAST AND RECOAT VESSEL SHELL	MED
P3	Recheck insulation at next PM TARGET • ROUTINE – NO ACTION REQUIRED NOW	OK



1

FLUE DUCT — HEAVY CORROSION

DUCT ELBOW

■ HIGH



FIG 3.1

AI ANALYSIS — MACHINE VISION

Machine vision flagged advanced surface corrosion across the flue-duct elbow, heaviest on the outer radius and around the louvered intake rim. Scale and pitting are consistent with long-term condensate exposure. History shows this region was repainted in 2023; the recurrence interval indicates coating alone is no longer sufficient.

T TECHNICIAN NOTE · M. ALVAREZ

Recurring since the 2023 repaint — check duct wall thickness at the elbow.

AI RECOMMENDATION

Repair within 72 hours: UT thickness survey at the elbow, patch or replace any wall below minimum, then re-coat. Verify low-point drainage to arrest condensate attack.

2

CASING — SURFACE CORROSION

VESSEL SHELL

■ MED



FIG 3.2

AI ANALYSIS — MACHINE VISION

Uniform surface corrosion and staining across the shell casing. Compared against prior inspections, coverage is trending up year over year. No deep pitting or section loss detected; the condition is cosmetic-to-early-stage and coating-driven.

T TECHNICIAN NOTE · M. ALVAREZ

Staining is heaviest below the upper platform drain — check the gutter discharge before recoating or it will come right back.

AI RECOMMENDATION

Schedule spot-blast and recoat at the next planned outage. Monitor quarterly; escalate if pitting develops.

3

FLANGE WEEP

RISER PIPE

MED



FIG 3.3

AI ANALYSIS — MACHINE VISION

A minor weep at the bolted riser-pipe flange, with wetting and light staining below the joint. Pattern is consistent with gasket relaxation rather than flange-face damage. The system auto-generated a follow-up question; the technician confirmed no active drip at operating pressure.

T TECHNICIAN NOTE · M. ALVAREZ

*Dry to the touch at low fire; weep only shows above ~100 psig.
Marked the two suspect studs with paint pen for the shutdown crew.*

AI RECOMMENDATION

Re-torque to specification at the next shutdown; replace the gasket if the weep persists. Recheck in 30 days.

4

INSULATION JACKET — INTACT

JACKETED COWL

OK



FIG 3.4

AI ANALYSIS — MACHINE VISION

Aluminum jacketing on the transition cowl is sound: joints sealed, no gaps, crush damage or moisture ingress. Surface temperatures nominal for the service.

T TECHNICIAN NOTE · M. ALVAREZ

Jacket was re-banded during the 2024 outage — holding up well.

AI RECOMMENDATION

No action required. Recheck at the next preventive-maintenance interval.

T TECHNICIAN OF RECORD — REVIEWED & CONFIRMED

M. Alvarez

Signed · Jul 28, 2026 · 14:32 EDT

REVIEW RECORD

4 / 4 findings confirmed

4 field notes banked to asset knowledge history

CHECK	READING	REFERENCE	STATUS
Operating pressure	118 psig	MAWP 150 psig	OK
Stack temperature	386 °F	Baseline 355–375 °F	HIGH-NORMAL — recheck post-repair
Safety valve	150 psig set	Tested Mar 2026	OK
Feedwater temp	208 °F	Spec 200–212 °F	OK
Gauge glass	Clear	Visual	OK
Burner O ₂ (high fire)	4.2 %	Spec 3–5 %	OK
Burner CO (high fire)	38 ppm	< 100 ppm	OK

This inspection was performed with the Industria Machina guided-inspection app. The system built the checklist from the unit's own documents — instructions the team can edit and update at any time — then walked the technician through each step and analyzed all 48 captured photos with advanced machine vision, comparing against the O&M manual, general-arrangement drawings and six years of inspection history for this asset.

Every finding was reviewed, confirmed and annotated by the technician of record. Corrections and notes are preserved in the asset's knowledge history and used to sharpen future inspections. This report was generated automatically four minutes after the final photo.

DOCUMENTS REFERENCED

BLR-01-O&M-manual.pdf

PDF · 6.4 MB

GA-drawings-rev4.pdf

DWG · 12 MB

inspection-history.zip

ZIP · 214 FILES

weld-map-photos.zip

IMG · 48 FILES

INDUSTRIA MACHINA	REPORT IM-2026-0147	ASSET BLR-01	REV A	SHEET 1 OF 1	CONFIDENTIAL — FOR THE NAMED CLIENT
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An illustrative example of an Industria Machina inspection report. Client, site, equipment, readings, findings and personnel are fictitious; photography is a stock industrial scene. Request a walkthrough at [industriamachina.ai](#) to see a report on your own equipment.