



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
Four Penn Center – 1600 John F Kennedy Blvd
Philadelphia, Pennsylvania 19103-2852

Report Title: Clean Air Act Inspection of Tindall Corporation.
Inspection Date(s): 2/28/2023
Regulatory Program(s): SIP, NSPS
Company Name: Tindall Corporation.
Facility Name: Tindall Corporation.
Facility Location: 5400 Olgers Rd,
Petersburg, VA 23803
Latitude: 37.19709 **Longitude:** -77.52254
County/Parish: Dinwiddie
AFS/ICIS-Air Number: VA0000005105300074
Permit Number: 053-00074
NAICS Code: 327390 **SIC:** 3272
Unique Project #: 3E23CA014A

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EPA Inspector

Signature

Parmatma Adhikari

Date

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Signature

Kristen Hall

Date

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I. Introduction

The United States Environmental Protection Agency (EPA) conducted a Clean Air Act (CAA) inspection at Tindall Corporation (Tindall or Facility) to verify compliance with applicable State and Federal regulations. The Virginia Department of Environmental Quality (VADEQ) was notified of the inspection on Feb 7, 2023, via email. On Feb 23, 2023, EPA notified the Facility of the planned inspection via phone and email. EPA emailed a list of records for review to Patrick Pennell (Operation Manager), prior to the inspection (see Attachment 1). These records are listed in the Records Review section of the report.

A. Summary of the Facility

The Facility is located at 5400 Olgers Road, Petersburg, VA 23803. Tindall manufactures precast concrete material used in various infrastructure like bridges, roads, buildings, etc. The Facility was issued a minor permit (Permit # 50975) by VADEQ on March 4, 2013.

The Facility is subject to, or potentially subject to the following federal regulations:

- **40 CFR Part 60 Subpart OOO** - Standards of Performance for Nonmetallic Mineral Processing Plants.
- **40 CFR Part 63 Subpart XXXXXX** - National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories.

B. Inspection Opening Conference

At 9:00 am on February 28, 2023, EPA inspectors arrived at the Facility for a CAA inspection and conducted a brief opening conference. Tindall was represented by Patrick Pennell (Operation Manager), Jessica Cavarretta (Safety Specialist), David Adams (Maintenance Manager) and Mark Schweizer (Plant Manager). Also, Brad Ricks, an air inspector from VADEQ was present. EPA inspectors, Parmatma Adhikari, Stafford Stewart and Dean Deluca presented their credentials or required identification and explained the purpose of the visit was to conduct an inspection to determine compliance with the permit and any applicable state or federal regulations. Additionally, EPA informed the facility representatives of their right to claim any material obtained during the inspection as confidential business information (CBI). At that time, the Facility did not claim any photos or documentation as CBI; later, Mark Schweizer (Plant Manager) emailed EPA inspector Parmatma Adhikari and claimed the Facility layout as CBI.

II. Site Activity/Process Description

Tindall was established in 1963 in Spartanburg, South Carolina. Tindall's headquarters is also in the South Carolina Division. Tindall Corporation-Virginia Division has been operating at this location since 1988. Tindall has approximately 120 acres on the plant side and about 32 acres on the other side of the road (farmland; no production activity). Tindall Corporation also owns

facilities located in Colney, Georgia; Moss Point, Mississippi; and San Antonio, Texas. Tindall operates 12 hours a day, five days a week, and employs 300 full-time workers. However, business demands occasionally require the facility to operate a half-day on Saturday. During the Christmas season, there is a week-long maintenance shutdown.

Tindall uses sand, stone, cement, and chemical additives to produce concrete components used in various infrastructures, including offices, dormitories, schools, apartments, roads, bridges, etc. Tindall imports white cement by train and the remaining raw materials by truck. However, Tindall only ships finished products by truck.

Nearly an acre of land is used to store the sand and stone that is brought onsite by truck. Grey cement is stored in a horizontal tank, while white cement is kept in a rail car. Depending on the quantity, chemical additives can be kept in either plastic totes or drums. Tindall uses a water sprinkler system to keep the sand and stone in the storage area wet, which helps to reduce the amount of fugitive dust. Front loaders deposit sand and stone into a load hopper, which transports the material to a storage bin via a conveyer belt and then discharges it into storage bins (Tindall uses two elevated sand storage bins and four elevated aggregate storage bins).

The cement is pumped into the cement silo via a pipe and is mixed with sand, gravel, and chemical additive in a mixture. Patrick Pannell, Tindall's Operation Manager, mentioned that the most common types of additives used in Tindall are Super Plasticizers, Calcium Nitrite (Sika CNI, calcium nitrite-based admixture), etc. Tindall's plant manager Mark Schweizer said that the company's automated computer system keeps track of the mix's quality and quantity. Next, the mixture is loaded into a concrete ready-mix truck and taken to the casting bed, where the final product is created. In about 8-10 hours, the finished product is finished curing in the casting bed and can be transported via truck and overhead crane to the storage area.

Particulate Matter (PM) emissions from the cement unloading to the Gray Cement Storage silo and cement or cement additive unloading to the Mertz Storage Silo are controlled by a cartridge filter. Similarly, PM emissions from cement unloading to White Cement Storage Silo is controlled by a fabric filter. PM emissions due to the transfer of cement or cement additive from all three Silos to concrete mixtures and weigh batches are controlled by a total enclosure. The Facility's air operating permit requires the minimum control efficiency of the fabric filter, cartridge filter, and total enclosure to be 99 percent.

Water used in the manufacturing process is collected in an open storage area/pond and pumped to a wastewater collection tank after solid particles have been separated via the sedimentation process. Tindall uses recycled water for truck washes and road spraying to control fugitive dust emissions. Mark Schweizer (Plant Manager) stated that Tindall contracted with Midwest Company for fugitive dust control in addition to the water spray. The Midwest Company applies chemicals to reduce fugitive dust emissions monthly (except during the winter season).

Tindall uses one natural gas-fired boiler, Cleaver-Brooks Model No. CB325-200, rated at 200 hp. The boiler supplies heat up to 70°F-100°F in winter to accelerate the mixing process but the boiler remains idle during summer. Tindall also uses one clean burner waste oil furnace, rated at 250,000 Btu/hour, for the heat supply in the maintenance building, and emissions from the furnace are vented to air without any control. Tindall does not operate additional combustion sources like emergency generators, fire pumps, etc. Tindall also has no underground storage tanks; however, Tindall has one 20,000 gallon diesel storage tank and one 500 gallon gasoline storage tank on site. Tindall has one mechanical shop building and a separate steel shop building. Tindall also uses four blasters: 3 Chemco Blasters and 1 Schmidt Blaster, each rated at 0.6 tons/hour.

The opening conference concluded at 10:15 am.

III. Observations

EPA inspectors were led on a walkthrough of the Facility at 10:15 am by Patrick Pennell (Operation Manager), Mark Schweizer (Plant Manager) and Jessica Cavarretta (Safety Specialist) of Tindall. Brad Ricks of VADEQ was also present for the walkthrough. EPA inspectors noted photos would be taken during the Facility walkthrough (Attachment 2). The photos were taken by EPA inspector Dean DeLuca.

The inspection team began their walkthrough by exiting the conference room and walking toward the casting bed. An overhead crane was observed loading the final product from the casting bed to the truck to transfer it into the storage area. The floor had dust from the material handling, and when the EPA inspector asked about the dust-control plan, Mark Schweizer (Plant Manager) mentioned that the employees frequently sweep the dust. The inspection team then observed the sand and stone storage area. Raw materials (sand and stone) were wet, and the front loader deposited the material in the weigh hopper. Patrick Pennell (Operation Manager) pointed out the water sprinkler system and mentioned that the water keeps the material wet. Then, the inspection team observed the product storage area; a significant portion of the Facility was covered by the finished product (Double Tees, Wall Panels, Columns, Beams, etc.).

The inspection team noticed one Hydrochloric acid (HCl) tank near the product storage area, labeled as 2550/2900-gallon capacity. When the EPA inspector questioned about the use of the HCl, Mark Schweizer (Plant Manager) mentioned that the Facility uses HCl to adjust the pH of the mixture if needed. Next, near the wastewater collection area, the inspection team noticed one horizontal tank (Pig horizontal tank), rated 2000,000 lbs capacity. Mark Schweizer (Plant Manager) mentioned that the tank is filled with gray cement and pumped to the Gray Cement Silo (the tallest Silo) through the pipe. Then, EPA inspector Dean Deluca and Mark Schweizer (Plant Manager) climbed to the Silo area by way of the conveyer belt. EPA inspector Dean Deluca mentioned that he observed some dust accumulated on the gray cement silo top.

The inspection team observed an open wastewater collection area/pond. The water from the process is collected and pumped to the 6000-gallon white tank after being separated through the sedimentation process. Mark Schweizer (Plant Manager) mentioned that Tindall doesn't perform any tests on the wastewater; instead, Tindall recycles water to wash vehicles and spray in the roadway to suppress the fugitive dust. He mentioned the solid material accumulated from the sedimentation process of wastewater is removed manually when necessary.

The inspection team advanced toward the boiler room located under the mixtures and silos. The inspection team observed one natural gas-fired Cleaver-Brooks Model No. CB325-200, rated at 200 hp and installed in 1968. The boiler is not mentioned in Tindall's air permit. VADEQ inspector Brad Ricks mentioned that the small natural gas fire boiler is exempt from the regulation and may not be included in the permit.

Then, the inspection team continued to walk through the blasting area. Tindall has four abrasive Blasters: Chemco Blaster 1-3 (AB-1, AB-2, and AB-3), and one Schmidt Blaster (AB-4, Schmidt Blaster 1), each rated at 0.6 tons/hour. Patrick Pannell (Operations Manager) mentioned that Tindall uses Black Beauty Glass (Extra coarse sandblasting glass) and Black Beauty Iron Abrasive Blend (Medium sandblasting glass) as abrasive materials. The inspection team also observed abrasive blasting media recycled glass storage area. Mark Schweizer (Plant Manager) mentioned that recycled glass is not silica material, and water is used to suppress the dust from the material.

The inspection team was led toward the maintenance room. On the way, Mark Schweizer (Plant Manager) mentioned the ready mix is freshly put in the casting bed and asked if the inspection team is interested in observing how it works. After watching the process in the casting bed, the inspection team advanced toward the maintenance room. The inspection team observed various types of welders and metal presses in the maintenance room. The inspection team couldn't take a close-up picture of the data plate because a clean burner waste oil furnace was hanging from the maintenance room's ceiling; however, zoomed-in images show that it is a Clean Burn CB-2500. Outside the maintenance building, the inspection team observed a waste oil storage tank, one 20,000 gallon diesel storage tank, and one 500 gallon gasoline storage tank. The final area observed was the steel shop. The inspection team observed one robotic welding booth (auto welder) and a few manual welding booths equipped with an exhaust vent in steel shop.

The walk through was completed at 11:55 am.

IV. Records Review

The records review commenced at 1:30 pm. EPA inspectors reviewed documents requested in the Feb 23, 2023, email to Patrick Pannell (Operation Manager) (see Attachment 1). Records were provided at the time of the inspection by Patrick Pannell (Operation Manger) and Mark Schweizer (Plant Manager). Below are the records requested and what was provided:

1. Facility plot plan, which details the process and emissions points.

Tindall provided printed copy plot plan and claimed as CBI.

2. Copy of current Clean Air Act (CAA) operating permit and all installation/construction permits issued to the facility. In addition, copy of any permit applications or amendments submitted to VADEQ since March 4, 2013.

Tindall provided a copy of the current CAA operating permit and a copy of the Virginia Pollutant Discharge Elimination System (VPDES) General Permit for Concrete Product Facilities.

3. Monthly concrete production from the concrete batch plant in tons per year (and cubic yards per year) for the years 2020-present.

Tindall provided raw material (sand, stone, and cement) usage data on a monthly basis from January 2020 to February 2023. The information is shown in the table below.

Year	Raw Materials	Weight in Tons
2020	Sand	56,238.35
	Stone	710,19.232
	Cement	33,734.1
2021	Sand	61,702.15
	Stone	779,19.048
	Cement	37,011.5
2022	Sand	89,334.92
	Stone	112,814.424
	Cement	53,586.9

According to Tindall's air operating permit, the concrete batch plant's annual production cannot be more than 400,000 tons/year, calculated monthly as the sum of each consecutive 12-month period.

4. Monthly throughput of abrasive blast media in all abrasive blasters (AB-1 to AB-4) in tons per year for the years 2020-present. Also, provide the Material Safety Data Sheet (MSDS) for each type of blasting media used.

Tindall provided monthly throughput of abrasive blast media in all abrasive blaster from January 2020 to February 2023. The information is shown in the table below. Also, material safety data sheets (MSDS) for Black Beauty Glass and Black Beauty Iron Abrasive Blend (abrasive media) were provided during the inspection.

Year	Part Description	Weight in Tons
2020	Medium and extra-coarse sandblasting glass	432

2021	Medium and extra- coarse sandblasting glass	450
2021	Medium and extra- coarse sandblasting glass	882

According to Tindall's air operating permit, the total throughput of abrasive blast media in all abrasive blasters (AB-1 to AB-4) shall not exceed 1,404 tons/year, calculated monthly as the sum of each consecutive 12-month period.

5. Visible emission observation (VEO) records for each fabric filter and cartridge filter, including any maintenance or corrective action performed from 2020 -present.

Tindall provided a daily visual inspection log for the batch plant. The inspection team reviewed the data on-site and collected a copy of the record.

6. Copies of any Notice of Compliance Status, Initial Notifications, or Semiannual/annual reports submitted to either VADEQ or EPA for any regulations under 40 CFR Part 60, 61, or 63.

Tindall stated there are no such records available.

V. Closing Conference

After the records review, EPA inspectors, VADEQ Inspector, Patrick Pennell (Operation Manager), Jessica Cavarretta (Safety Specialist), and Mark Schweizer (Plant Manager) of Tindall had a brief closing conference to ask additional questions and discuss observations. The EPA inspectors noted that the investigation is ongoing, and any areas of concern identified in the final report do not necessarily reflect a violation or deviation, rather, they are areas that will require further investigation. EPA also noted that they would issue an inspection report within 60 days, with a copy to the State. Simultaneously, EPA will perform a detailed review of records and may have additional questions. The inspection concluded at 2:50 pm.

The following have been identified as potential issues during the inspection. They are issues that require either further investigation by EPA or additional information or explanation by the Facility.

- While EPA did not identify any specific issues with Tindall during the inspection, a thorough review of the records collected during the inspection is being conducted, and EPA may generate additional questions.
- The natural gas-fired boiler, Cleaver-Brooks Model No CB325-200, is not in Tindall's operating air permit issued by VADEQ on March 4, 2013; additional information may be required by EPA.

VI. List of Attachments

Attachment 1: Email correspondence to Patrick Pennell (Operation Manager) of records requested to review during inspection.

Attachment 2: Photo Log

Adhikari, Parmatma

From: Adhikari, Parmatma
Sent: Thursday, February 23, 2023 1:25 PM
To: patpennell@tindallcorp.com
Cc: Stewart, Stafford; Deluca, Dean; Ricks, Bradford (DEQ); Reinhardt, John (DEQ)
Subject: EPA Inspection on Tindall Corporation – Virginia Division

Hello Patrick,

Per our conversation today, EPA Region 3 is planning to conduct a Clean Air Act (CAA) inspection of the Tindall Corporation – Virginia Division located in Petersburg VA, on February 28, 2023. We will begin the inspection at 9:00 AM. It will be myself, Stafford Stewart and Dean Deluca from EPA and at least one inspector from Virginia Department of Environmental Quality. The inspection will consist of an opening meeting to discuss the facility process, a plant walkthrough, and a brief closing meeting. EPA will also take photographs during the walkthrough. I wanted to confirm that the following PPE is required on-site: Hard hat, safety glasses, and safety shoes.

In an effort to facilitate the inspection, please have copies of the following records available:

1. Facility plot plan, which details the process and emissions points.
2. Copy of current Clean Air Act (CAA) operating permit and all installation/construction permits issued to the facility. In addition, copy of any permit applications or amendments submitted to VADEQ since March 4, 2013.
3. Monthly concrete production from the concrete batch plant in tons per year (and cubic yards per year) for the years 2020-present.
4. Monthly throughput of abrasive blast media in all abrasive blasters (AB-1 to AB-4) in tons per year for the years 2020-present. Also, provide the Material Safety Data Sheet (MSDS) for each type of blasting media used.
5. Visible emission observation (VEO) records for each fabric filter and cartridge filter, including any maintenance or corrective action performed from 2020 -present.
6. Copies of any Notice of Compliance Status, Initial Notifications, or Semiannual/annual reports submitted to either VADEQ or EPA for any regulations under 40 CFR Part 60, 61, or 63.

Electronic copies of these records are preferred, and I can provide a link to upload the records. Please let me know if you have any questions. I can be reached at 215-814-2161.

Please let me know if you have any questions regarding the inspection.

Thanks!

Parmatma Adhikari

Environmental Engineer
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215-814-2161

Attachment 2: PHOTO LOG

Facility: Tindall Corporation.

Location: 5400 Olgers Rd, Petersburg, VA 23803

Inspection Date: 02/28/2023

EPA Inspector(s): Parmatma Adhikari, Stafford Stewart and Dean DeLuca

Photographer: Dean DeLuca



Photo Number: 1

Photo Description: Bay 1 of Main Building



Photo Number: 2

Photo Description: Column work center in main building



Photo Number: 3

Photo Description: Silos area



Photo Number: 4

Photo Description: Ready mix truck being loaded



Photo Number: 5

Photo Description: Conveyer belt to silos



Photo Number: 6

Photo Description: Product storage yard



Photo Number: 7

Photo Description: Hydrochloric Acid (HCl) tank



Photo Number: 8

Photo Description: Pig Tank filled with gray cement



Photo Number: 9

Photo Description: Conveyor belt outlet



Photo Number: 10

Photo Description: Product storage yard from the top of the conveyor belt



Photo Number: 11

Photo Description: Closeup of tallest cartridge collector



Photo Number: 12

Photo Description: Ground on tallest silo



Photo Number: 13

Photo Description: Underside of tallest silo cartridge



Photo Number: 14

Photo Description: Quarry from the silo top



Photo Number: 15

Photo Description: Top of silos

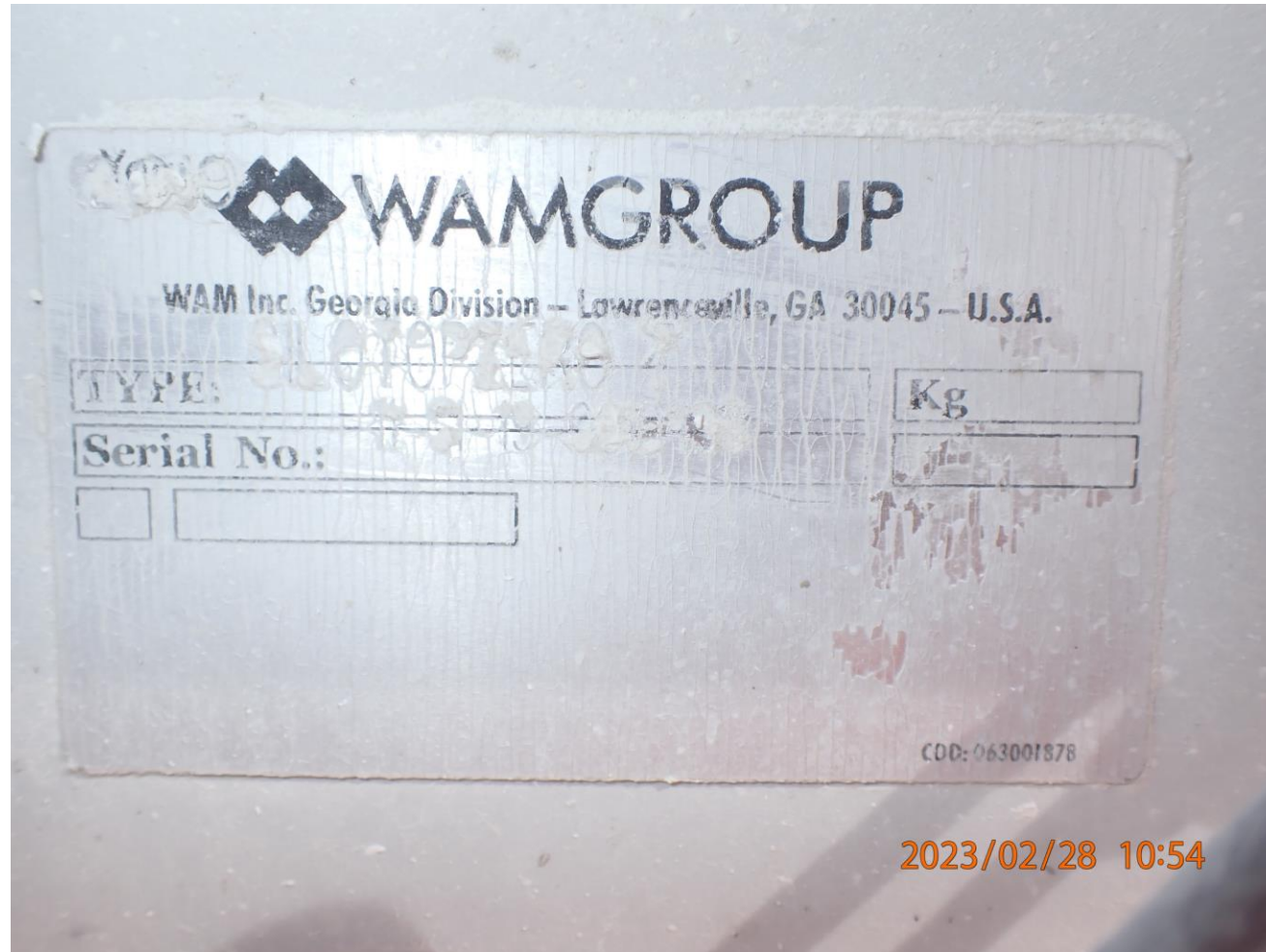


Photo Number: 16

Photo Description: Data plate of middle silo



Photo Number: 17

Photo Description: Abrasive blasting lines from silo top



Photo Number: 18

Photo Description: Waste water retention near silo



Photo Number: 19

Photo Description: Abrasive blasting recycled glass storage

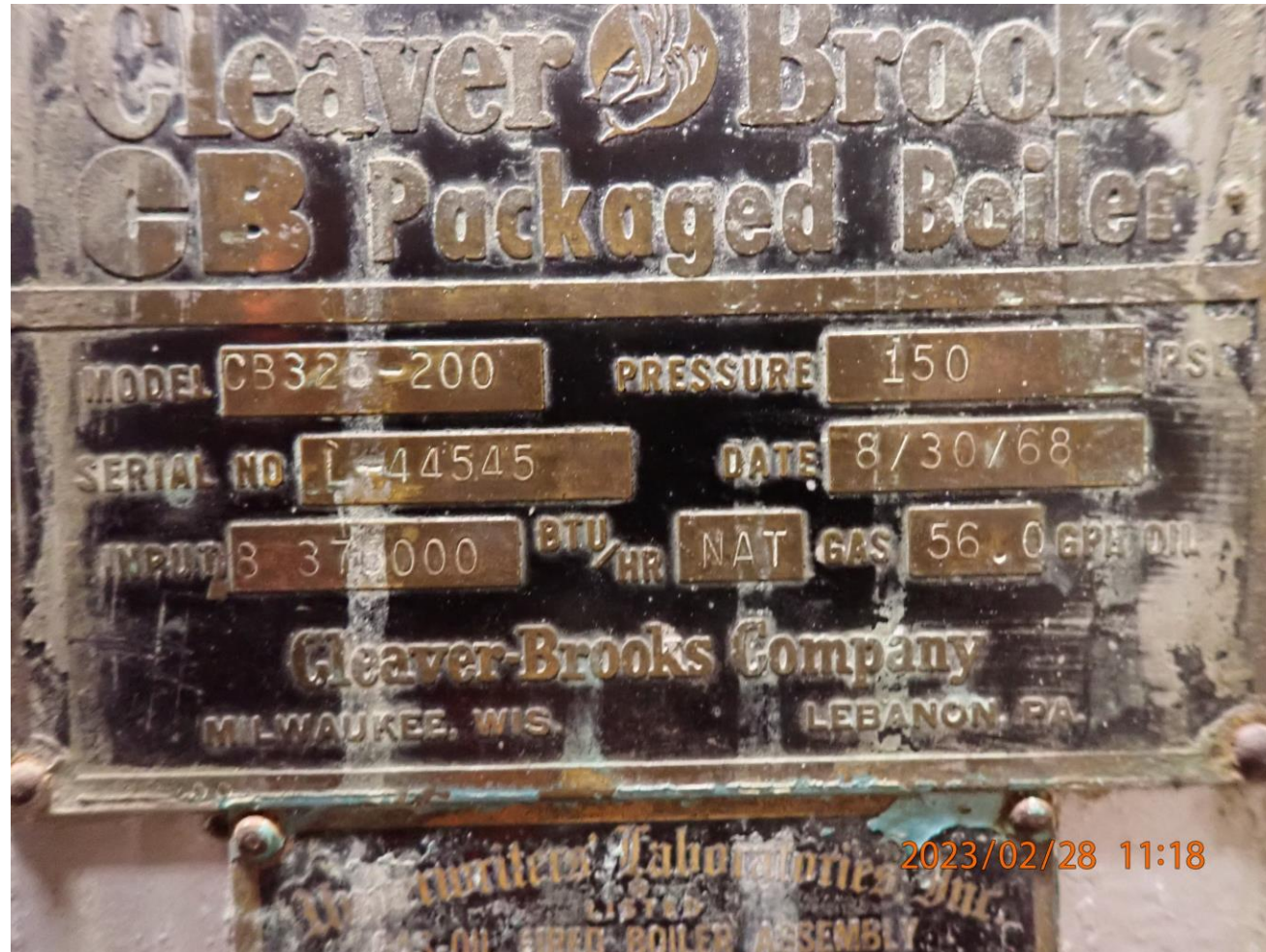


Photo Number: 20

Photo Description: Cleaver Brooks boiler data plate



Photo Number: 21

Photo Description: Cleaver Brooks boiler overview



Photo Number: 22

Photo Description: Waste oil furnace (CB-2500)



Photo Number: 23

Photo Description: Manufacturer shop



Photo Number: 24

Photo Description: Diesel and gasoline storage tank



Photo Number: 25

Photo Description: Waste oil tank located outside manufacturer shop



Photo Number: 26

Photo Description: Auto/robotic welder in steel shop



Photo Number: 27

Photo Description: Ducting above manual welding area in the steel shop



Photo Number: 28

Photo Description: Filter bag for CNC (Computer Numerical Control) router