



REGION 5
CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
ASWPengg, Bedford Heights, OH

FROM: Liam Klaiman, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Supervisor
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: ASWPengg

Facility Location: 26300 Miles Road, Bedford Heights, Ohio 44146

Date of Inspection: 11/14/2023

EPA Inspector(s):

1. Liam Klaiman, Environmental Engineer
2. Meaghan Pashen, Environmental Engineer
3. Dakota Prentice, Environmental Engineer

Other Attendees:

1. Mike Howard; ASWPengg Operations Manager
2. Roland Tutzer: ASWPengg Vice President and Chief Operation Officer

Contact Email Address: rtutzer@aswpengg.com

Purpose of Inspection: Inspection of patenting and tempering furnaces

Facility Type: Spring Steel Wire Manufacturer

Regulations Central to Inspection: ASWPengg's patenting and tempering furnaces are subject to 40 C.F.R. Part 63 Subpart XXXXXX

Arrival Time: 10:15 AM

Departure Time: 11:23 AM

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection.
- ☒ Provided Small Business Resource Information Sheet
- ☐ Small Business Resource Information Sheet not provided
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Mike Howard and Roland Tutzer unless otherwise noted.

Company Ownership: The facility was operated as a joint venture between American Spring Wire and Joh. Pengg AG (Pengg) until 2021 when it was fully acquired by Pengg.

Process Description:

ASWPengg receives phosphate coated steel wire rods from steel mills. The process begins by drawing the steel rods to achieve a desired wire thickness. The wire then moves to the patenting process. Patenting starts at a direct gas fired furnace that operates continuously. The steel is then run through a molten lead bath to change the microstructure of the steel. As the wire moves out of the bath it is exposed to open air resulting in the steel being oxidized so it is cleaned with hydrochloric acid, and then moved into a phosphate tank. The steel wire then begins the tempering process, which hardens the structure of the steel by resetting the elongated structure. This results in higher tensile strength and ductility. The tempering furnaces is indirectly fired by heated pipes running through the furnace. After leaving the furnace, the steel is first quenched to achieve a high tensile strength, it then moves into a lead bath. The process of drawing, patenting, and tempering can be repeated multiple times to achieve desired thickness and material properties.

Staff Interview:

ASWPengg operates 24/7, using four 12-hour crews which total 43 employees. On a typical production day Patenting Furnace 3 (P3) and Tempering Furnace 5 (T5) are running, but on the day of inspection P3 was down. Each line has its own stack, both had a performance test in 2022. The furnaces burners are calibrated once a year. There are no visible emissions observations taken at the facility.

The lead baths at P3 and T5 are covered by a layer of graphite and pea coke for product quality and emission suppression purposes. The layer is kept at a thickness of 2-4". The layer is replenished regularly, and the used material is disposed of by a third party. Records of layer replenishment at both P3 and T5 are maintained by the facility. Lead baths stay heated when units are not in operation. Respirators are worn by facility personnel during "major maintenance" at lead baths which typically happens annually.

ASWPengg used to operate two additional tempering furnaces (T3 and T4) and another patenting furnace (P4), but since it shut down in June of 2020, it has only brought back one of each since October of the same year. There are plans to restart a P4.

ASWPengg requested that all temperature data and images of the facility be classified as CBI.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

The tour of the facility began at the wire drawing area, which was under construction because equipment is being moved. The tour then moved to furnace P3. EPA observed the graphite and pea coke layer on the lead bath. The hydrochloric acid bath has a water curtain on either side to capture process fumes.

Inspectors then moved to furnace T5, which was not in operation during the inspection. Inspectors were informed that T5 is heated by high efficiency combustion burners. There is a hood before the lead bath that captures the emissions from the quenching process.

Photos and/or Videos: were taken during the inspection.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Most recent stack test;
- Most recent permit applications;
- Three months of records for graphite and pea coke layer replenishment;
- Two years of potential to emit calculations; and
- Two years of emissions calculations.

DIGITAL SIGNATURES

LIAM KLAIMAN Digitally signed by LIAM KLAIMAN
Date: 2023.12.04 11:23:54 -06'00'
Report Author: _____

NATHAN FRANK Digitally signed by NATHAN FRANK
Date: 2023.12.07 16:23:12 -06'00'
Section Supervisor: _____

Facility Name: : ASWPengg
Facility Location: 26300 Miles Road, Bedford Heights, OH 44146
Date of Inspection: November 14, 2023

APPENDICES AND ATTACHMENTS

1. Digital Image Log

Facility Name: ASWPengg
Facility Location: 26300 Miles Road, Bedford Heights, OH 44146
Date of Inspection: November 14, 2023

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Meaghan Pashen	2. Archival Record Location: OneDrive - Environmental Protection Agency (EPA)\\Enf_ASWPengg_OH_23\\Enf_ASWPengg_OH_23_InspectionReport\\Inspection photos
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Image Number	File Name	Date and Time (incl. Time zone and DST)	Latitude and Longitude	Description of Image
1	IMG_0437.JPG	2023:11:14 11:55:40		Patenting Furnace 3
2	IMG_0438.JPG	2023:11:14 11:57:50		P3's lead bath
3	IMG_0439.JPG	2023:11:14 12:11:51		Tempering Furnace 4
4	IMG_0440.JPG	2023:11:14 12:12:42		Tempering Furnace 5

Please note ASWPengg requested that all images be treated as CBI