



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

DATE: AUG 16 2019

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Skana Aluminum Co., Manitowoc, Wisconsin

FROM: Jason Schenandoah, Environmental Engineer
AECAB (IL/IN)

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

TO: File

BASIC INFORMATION

Facility Name: Skana Aluminum Co.

Facility Location: 2009 Mirro Drive, Manitowoc, Wisconsin

Date of Inspection: July 2, 2019

EPA Inspector(s):

1. Jason Schenandoah, Environmental Engineer
2. Linda Rosen, Environmental Engineer

Other Attendees

1. Dave Houser, VP manufacturing
2. Daniel Todd, Director of engineering

Contact Email Address: dave.houser@skanaaluminum.com

Purpose of Inspection: To ensure compliance with the Clean Air Act

Facility Type: Aluminum manufacturing facility

Arrival Time: 9:00 am

Departure Time: 11:30 am

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Credentials Presented
- ☒ CBI warning to facility provided

The following information was obtained verbally from Skana Aluminum Co. (Skana) personnel unless otherwise noted.

Process Description:

The facility is undergoing a transition in its furnace infrastructure. The old set up involves two sets of furnaces, each set consists of a melting furnace and a holding furnace. The holding furnaces then empty into a casting pit. One new style furnace completed installation by March 2018, while an additional new style furnace and casting pit were under construction at the time of the inspection. The installed new style furnace has a temporary trough that feeds to one of the holding furnaces of the old set up. When the new set up is complete, the new style furnaces will act as a melting and holding furnace in one unit and empty to the new casting pit. To start, aluminum ingot, "run-around" scrap, and hardeners are added to the melting furnace or the new style furnace to initiate the melting process. Run-around scrap is scrap aluminum that is created as a result of other finishing processes throughout the facility. When the molten aluminum reaches the proper temperature, it is transferred to the holding furnaces to maintain temperature. In the holding furnace, argon is injected into the molten aluminum to help remove impurities and samples are taken to test for the required specifications of the batch. The molten aluminum is then poured into a mold to form a slab. Cooling water is pumped through the mold to quench the aluminum as its poured; the cooling water is in a closed loop system with evaporative cooling towers. As the aluminum is poured through the mold a slab forms on the other side. The slabs will be 11-13 inches thick, 36, 42, or 47 inches wide, and 12 feet long. The slabs are then sent to homogenization furnaces to be reheated. The reheating will help to bring impurities toward the edges of the slab. The slab is then shaved on all sides and cut in half. Shavings from this area are air ducted to a briquetting machine to be reintroduced to the melting process. The slabs are then sent through a preheater to bring the slab to approximately 1000 °F. The heated slab is set onto a hot rolling process to be rolled out to a thickness of ¼ inch and extruded from 69 inches out to 400 feet long. After the extrusion process, the sheet will be sent to a coiler to be rolled up into a coil. The rolls are then sent to the cold mill to be processed to customer specifications; multiple passes through the cold mill may occur. Next, the coil is sent to a slitter to cut the coil to the required width. At this point, some of the coils are sent to a stamping process to produce stamped aluminum for a specific end use. Scrap from the stamping and slitting processes are air ducted to the aluminum briquetting machine. Lastly, if required, coils will be sent to annealing furnaces to soften the aluminum. The aluminum is packaged as coiled sheets to be sold to customers.

Staff Interview: The new furnaces are engineered to reduce gas usage by 25% and reduce NO_x emissions by 36%, when both are operational, and the old melting and holding furnaces are shut

down. The new style furnaces will fully empty out molten aluminum after each batch. The old-style furnaces always need a pool of molten aluminum in them to remain functional. The hot mill uses a lubricant to process the aluminum.

TOUR INFORMATION

EPA toured the facility: Yes

Photos and/or Videos: were taken during the inspection.
See Appendix A: Digital Image Log

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

Requested documents:

- Safety data sheets and usage for two years for hot mill lubricant
- Safety data sheets for fluxes
- Information on how emission factors were created and what the emission factors are
- 2 annual emission reports with supporting calculations
- Entire month of method 9 visible emissions observation records for the entire months of April 2018 and May 2019.
- 2 years of compliance reports (if not included in annual emissions reports).
- Safety data sheets for water treatment chemicals used in the cooling towers.

SIGNATURES

Report Author:

Date:

8/12/2019

Section Chief:

Date:

8/14/19

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APPENDICES AND ATTACHMENTS

1. Appendix A: Digital Image Log

Facility Name: Skana Aluminum Co.
Facility Location: 2009 Mirro Drive, Manitowoc, Wisconsin
Date of Inspection: July 2, 2019

CONFIDENTIAL BUSINESS INFORMATION ATTACHMENT

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Linda Rosen	2. Date(s) of Inspection: July 2, 2019
3. Company/Facility Name: Skana Aluminum Co.	4. Street Address, City, State: 2009 Mirro Drive, Manitowoc, Wisconsin
5. Number of Images: 16	6. Archival Record Location: CD-R labeled "Skana Aluminum; Manitowoc, WI; Inspection photos; 7/2/2019"

Image Number	File Name	Date and Time (incl. time zone and DST)	Latitude and Longitude	Description of Image
1	P7020029.JPG	2019:07:02 10:14:11	44.130278, -87.6275	New casting pit construction
2	P7020030.JPG	2019:07:02 10:15:40	44.130512, -87.626887	Run around scrap pile
3	P7020031.JPG	2019:07:02 10:19:13	44.129722, -87.626944	Aluminum ingot label
4	P7020032.JPG	2019:07:02 10:26:51	44.130278, -87.626667	Old melting furnace, not operational
5	P7020033.JPG	2019:07:02 10:27:20	44.13056, -87.626645	Old melting furnace, operational
6	P7020034.JPG	2019:07:02 10:28:11	44.13056, -87.626645	New style furnace
7	P7020035.JPG	2019:07:02 10:30:37	44.130627, -87.626682	Stacks from new style furnace
8	P7020036.JPG	2019:07:02 10:31:47	44.13061, -87.62645	Stacks from furnaces
9	P7020037.JPG	2019:07:02 10:32:57	44.130778, -87.626425	Argon refrigeration unit
10	P7020038.JPG	2019:07:02 10:33:10	44.13078, -87.626425	Evaporative cooling towers
11	P7020039.JPG	2019:07:02 10:34:37	44.130812, -87.626447	Vapor from argon chiller heat exchanger
12	P7020040.JPG	2019:07:02 10:40:26	44.130556, -87.626389	Holding furnace
13	P7020041.JPG	2019:07:02 10:44:06	44.130788, -87.626818	Casting pit
14	P7020042.JPG	2019:07:02 10:50:39	44.130792, -87.627432	Hot mill

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15	P7020043.JPG	2019:07:02 10:51:34	44.130843, -87.627502	Hot mill, closer
16	P7020044.JPG	2019:07:02 10:57:51	44.13064, -87.627995	Annealing furnace