

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Site Review**

N178155527

FACILITY: Magna Mirrors Corporation		SRN / ID: N1781
LOCATION: 3575 128th Aveune, HOLLAND		DISTRICT: Grand Rapids
CITY: HOLLAND		COUNTY: OTTAWA
CONTACT: Andy Garceau , EHS Specialist		ACTIVITY DATE: 09/28/2020
STAFF: April Lazzaro	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On-site Partial Compliance Inspection.		
RESOLVED COMPLAINTS:		

AQD staff, April Lazzaro, arrived at Magna Mirrors located at 3575 128th Avenue, Holland, MI at 9:00 AM for an unannounced, scheduled on-site inspection and met with Andy Garceau, Senior Environmental Health and Safety Supervisor. Mr. Garceau was accompanied by Samantha Philips, Environmental Health & Safety Manager and Jared Kimmitt, Environmental Coordinator of the Magna Engineered Glass facility which is located at 3501 John F. Donnelly Drive, Holland, MI. It was raining lightly, and the temperatures were in the mid-50's. No odors were identified outside at any of the facilities. Proper PPE and social distancing were maintained to the extent possible.

FACILITY DESCRIPTION

Magna Mirrors, SRN N1781, is an automotive parts supplier that consists of four buildings. Two are located at 3501 John F. Donnelly (JFD) Drive (north and south) and are named Magna Engineered Glass. This facility is currently operating 3 shifts, 7 days a week and employs approximately 850 people. The other two buildings are located at 3575 128th Avenue (north and south) and are named Magna Mirrors Holland. This facility is currently operating 3 shifts, 7 days a week and employs approximately 750 people. The facilities operate pursuant to Opt-out Permit to Install No. 188-04G.

COMPLIANCE EVALUATION

The compliance evaluation began at Magna Mirrors Holland, with Mr. Garceau taking the lead as he is the responsible Environmental staff for this facility. Ms. Philips and Mr. Kimmitt accompanied us. This portion of the inspection lasted from 9:00 AM to ~ 11:10 AM. The second half of the inspection took place at Magna Engineered Glass from ~11:15- ~12:30 with Ms. Philips and Mr. Kimmitt with the lead. Mr. Garceau did not accompany us due to prior commitments.

I learned through discussions with Magna staff that they continue to utilize the services of the consultants of Environmental Partners, Inc. specifically, Bruce Connell. Each month both facilities send their emissions to Mr. Connell, who compiles the information and sends it back to them for review.

I also learned that the facilities share no parts with each other, and do not provide support to each other in any way. Ms. Philips indicated that they may investigate conducting an evaluation to see if the operations are eligible to split into two stationary sources again.

EU-RIMPRIME

This emission unit is described as five prime coat spray booths where a glass preparatory coating is applied prior to the molding operation at the John F. Donnelly Drive, Magna Engineered Glass north or south facility. Three prime coat spray booths have been removed from the facility. Two remain and are used for service parts only, and any use is very infrequent. Only non-VOC mold release agent is used during service part production.

EU-SILVERLINE

This emission unit is located at the 128th north facility of Magna Mirrors Holland and is a coating line which applies layers of coating onto a piece of glass to form the silver reflective coating and makes the mirror surface. Each of the two glass pre-treat areas utilize an automated spray bar with six spray nozzles to pre-treat the glass. These two application areas are vented externally uncontrolled via a stack. Next, the glass moves through the flow coaters and cure ovens which are controlled via a thermal oxidizer. Mild coating odors were noted in this area, which is consistent with prior inspections. An 85% capture efficiency factor is utilized in the recordkeeping. We observed the digital control panel, which is equipped with a circular temperature recording chart. The temperature observed was 1,496°F, and a setpoint of 1,500°F is utilized by the company. A review of the chart in the recorder indicates a steady temperature right around the 1,500°F mark. Mr. Garceau indicated that they supplement with natural gas to maintain the temperature, and they do not shut the unit down when the line is not operating to ensure stability of the oxidizer.

I conducted a visual inspection of the thermal oxidizer, with Ms. Philips accompanying me while it was raining steadily. There were several spots that appeared to show thermal wear on the exterior of the unit. (see attached photos.) I did not smell or hear any indication of significant issues, although my inspection was slightly shortened due to the rain. Mr. Garceau indicated that last year (October 2019) an annual inspection was conducted by Durr that included thermal imaging of the unit. This report was provided to the AQD, and the spots that indicate thermal wear did not show up as hot spots in the thermal images. It is noted however, that the Durr inspection did not include an internal inspection because the unit was operating. It is recommended that the next inspection be conducted at a time the unit is off and cooled down enough for an internal inspection including photos of the interior condition to ensure operational integrity.

EU-MIRSEAMING

This emission unit is located at the 128th north facility of Magna Mirrors Holland and consists of a cartridge filter dust collector system that is located inside the building. The exterior of the unit was in good condition, and the area surrounding the unit was clean and free of debris. The particulate collection barrel at the base is replaced approximately every 9 months. The pressure drop gauge was in good condition, and the pressure drop reading was 3.8" H₂O. This was within the alarm ranges identified on the gauge. The monthly hours of use are also recorded to use in emissions calculations.

FG-RIMPRESS

This flexible group allows for three RIM (reaction injection molding) presses that are used to attach molding to automobile glass windows and associated VOC emissions that are permitted for use at either of the John F. Donnelly Drive, Magna Engineered Glass north or south

facilities. Currently there are two RIM presses in use.

FG-BONDINGPROCESS

This flexible group allows for 20 work cells that apply either a primer to the automotive glass surface or an adhesive to the plastic fixture. There are currently 17 bonding cells in use at the John F. Donnelly Drive, Magna Engineered Glass north facility and each cell utilizes a combination of robotic and human manufacture/assembly activities. Emissions are generated by the use of primer or adhesive and are applied by hand using small quantity applicators. There is one main materials cabinet that is stocked with small containers of adhesive and primer that are dispensed by lab staff, and employees must sign out each item as it is removed for use. Line workers do not have access to bulk materials. Emissions are tracked on a per cell basis as part of a continuing improvement process being conducted by Ms. Philips and Mr. Kimmitt to implement reductions in use and to lower emissions.

FG-PLASTICPARTSCOATING

This flexible group covers any plastic parts coating operations at the John F. Donnelly Drive, Magna Engineered Glass north or south facility. There are currently no plastic parts coating operations taking place. This has been correctly identified in the annual emissions report as "did not operate this year".

FG-ECMIRRORS

This flexible group covers the electro-chromatic (EC) mirror production lines at the 128th south facility of Magna Mirrors Holland. There are three EC mirror production lines (or cells) identified as FF5, FF6 and FF8 at the facility. These cells consist of a series of operations that create a dimming mirror for interior use. At the start of the interior mirror line, the glass comes in as a sheet and is cut to size, and the cutting robot uses a mineral spirits based cutting lubricant. (EU-GLASSCUT) At the start of the exterior mirror line, the glass comes in and is sent through the glass bending process which is an electrically heated induction oven that bends the glass to the required shape for exterior mirrors. Any excess glass is nipped off and discarded. Typically, this glass has gone to a landfill, but soon the glass will be sent to be recycled for end of life use in another product. Next, the glass is sent through a wash sequence and is dried (EU-WASHER). Following the wash, a coating is applied under vacuum (EU-COATER). The glass is then sandwiched together using a small amount of epoxy to seal the edges and is vacuum bagged then baked to cure the epoxy (EU-VACFILL). Finally, in a special chamber the auto dimming mirror fluid is injected into the small space between the glass and sealed. During the various stations, isopropyl alcohol is utilized as a cleaning agent. The IPA is purchased by the drum and cloths are purchased separately. Then the cloths and some IPA are placed into a plastic container with a tightly sealed lid and are used as needed (EU-INSPECTION).

Mr. Garceau uses purchase records for the monthly emissions of IPA for FG-ECMIRRORS. This seems like it could be appropriate since the VOC emission limit is for all mirror manufacturing operations combined. He indicated they are fairly uniform on the monthly usage, purchasing 5 or 6 drums. The wipes are disposed of in a hazardous waste collection can with a lid, and Mr. Garceau indicated that he determined that a portion of the IPA remains on the cloths each month. As such, he is able to subtract around 3 drums worth of IPA emissions as it is going out as waste. This methodology should be closely evaluated by AQD in the future.

General Permit to Install No. 184-19 covers a small burn-off oven that is used to burn off powder coat paint from racks at the 128th north facility. The unit was in cool down mode during the inspection, and I took photos of the temperature display for the afterburner and the oven main chamber. This is a new Pollution Control Products unit, that operates per the design parameters. Photos were taken of the unit as well as the temperature displays (see attached photos). It is noted that this unit was permitted in November last year, and the annual MAERS emissions report needs to be updated going forward to remove the old unit and reflect that this is a new unit, and operates pursuant to PTI No. 184-19 and not the Rule 290 exemption.

EXEMPT EQUIPMENT OBSERVATIONS

The 128th north facility produces all interior mirrors and includes a variety of ancillary exempt equipment and the following processes were observed during the inspection.

The Blanchard Grinding operation (EU-128-BLANCHRDS) utilizes the Rule 290 exemption, and there appeared to be no notable changes in that area from the previous inspection. The blanchard chuck repair room (EU-128-CHCKREPAR) that utilizes the Rule 290 exemption was also observed, and there were no notable changes from the previous inspection. The phosphating cleaning process (EU-128-PHOSLINE) was observed and is believed to use the Rule 285(2)(l)(iii) exemption and there were no notable changes from the previous inspection. The basket strip unit (EU128BASKETSTRP) was observed in the small room next to the boiler and there were no notable changes from the previous inspection. We observed the small boiler and found that it was hard to access due to a cabinet partially in front of the door as well as the basket strip unit. The boiler is a small 2.25 mmBtu/hr natural gas fired unit that is exempt per Rule 282(2)(b)(i). The Contour Grinding (EU-128-CONTRGRND) area was observed that utilizes the Rule 290 exemption and there were no notable changes from the previous inspection. The die cast room makes the metal rear view mirror attachment part, which is then painted black on the powder coat line. The die cast operations are exempt per Rule 285(2)(l)(ii) and the powder coat operation is exempt per Rule 287(2)(d).

The John F. Donnelly Drive, Magna Engineered Glass north and south have some new equipment that has been installed in the last two years. At the north facility, there is a Minster blanking press that was installed in 2016 which cold forms metals and does not use any solvent in the process. This has been identified as exempt per Rule 285(2)(l)(i), which seems to be appropriate. At the south facility, there have been six (6) additional stamping (blanking & forming) presses that were installed in 2016, 2017 and 2018. Based on a review of the annual emissions report (MAERS) the facility had lumped these into one emission unit (EU-SGS-StampPres). These presses collectively reported 29,670.8 pounds, or 14 tons of VOC emissions in 2019, and based on the spreadsheet in the report the company identified that they are exempt per Rule 285(2)(l)(i). The VOC emissions are generated through the use of IPA cleaning wipes. One wipe is used on each metal part after it is pressed to ensure a clean surface.

A review of the AQD Rule background information found that the Rule 285(2)(l)(i) exemption was created because metal bending or pressing operations "are not sources of air contaminants". While the presses themselves may be exempt utilizing that exemption, the use of IPA is not appropriate to attribute to this exemption. There are other exemptions that may work for the use of the IPA wipes on an emission unit basis, however that information is unknown at this time. Ms. Philips indicated that they have been working very hard on process improvements to reduce the amount of IPA wipes that are used. They have been successful in reducing emissions in this area. They are beginning to implement some additional wipe disposal methods in the hopes that they can begin to deduct some of the IPA emissions as part of the waste stream. At this time, I am uncertain as to the feasibility of this approach.

A new lab to manufacture the dimming solution is in the beginning stages. We discussed that they would need to determine a permit exemption or apply for a permit for this process. I also noted that there is an approximately 6-month wait time to receive a permit after a complete application is received. Mr. Garceau indicated it will not be ready for about a year and they will apply for a permit if needed.

The product storage and waste storage areas were observed at each facility. Each area appeared well maintained, and no issues were identified.



Image 1(Mirrors Oxidizer) : Photo shows paint wear on sides of unit.



Image 2(Burn off oven) : Image of burn off oven installed in 2019



Image 3(Burn off oven temp): Burn off oven in cool down- top is AB temp, bottom is oven temp.

NAME April Lazzaro

DATE 09/30/2020

SUPERVISOR HH