

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

EFFECTIVE DATE: September 10, 2020

ISSUED TO

Gerdau Special Steel North America - Jackson Mill

State Registration Number (SRN): B4306

LOCATED AT

3100 Brooklyn Road, Jackson Michigan 49203

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-B4306-2020

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(1) of Act 451. Pursuant to Rule 214a of the administrative rules promulgated under Act 451, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environment, Great Lakes, and Energy



Scott Miller, Jackson District Supervisor

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A. GENERAL CONDITIONS

Equipment & Design

1. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).² **(R 336.1370)**

Emission Limits

2. Unless otherwise specified, the permittee shall comply with Rule 301, which states, in part, "Except as provided in Subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"² **(R 336.1301(1))**
 - a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
 - b. A limit specified by an applicable federal new source performance standard.

The grading of visible emissions shall be determined in accordance with Rule 303.

3. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
 - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.¹ **(R 336.1901(a))**
 - b. Unreasonable interference with the comfortable enjoyment of life and property.¹ **(R 336.1901(b))**

Testing/Sampling

4. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).² **(R 336.2001)**

Certification & Reporting

5. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified in a manner consistent with the CAA.² **(R 336.1912)**

Permit to Install (PTI)

6. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² **(R 336.1201(1))**

7. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451)**
8. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.² **(R 336.1219)**
9. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

C. EMISSION UNIT SPECIAL CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-HTOV001	30 MMBTU/hr. natural gas fired heat treat furnace. (PTI 24-06)	07-01-1981	FG-STEELMILL
EU-AF01	60.2 MMBTU/hr. annealing furnace #1. (PTI 183-01)	09-08-2001	FG-STEELMILL
EU-AF02	38.4 MMBTU/hr. annealing furnace #2. (PTI 183-01)	09-25-2001	FG-STEELMILL

EU-HTOV001 EMISSION UNIT CONDITIONS
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DESCRIPTION

30 MMBTU/hr. natural gas fired heat treat furnace.

Flexible Group ID: FG-STEELMILL

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	18.4 Tons ²	Per 12-month rolling time period	EU-HTOV001	SC VI.1	R 336.1205(3)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The only fuel the applicant may burn in the EU-HTOV001 is natural gas.² (R 336.1205(3))

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The applicant shall keep natural gas usage records, acceptable to the AQD District Supervisor, indicating the amount of natural gas used, in cubic feet, on a calendar month basis and a 12-month rolling time period basis. The records must indicate the total amount of natural gas used by the EU-HTOV001. Based upon these records, the applicant shall calculate the NOx emissions from the EU-HTOV001. These calculations shall be on a calendar month basis and a 12-month rolling time period basis. In the absence of any actual emissions test data, and unless an alternative emission factor is approved in writing by the AQD District Supervisor, the applicant shall use an emission factor of 140 pounds of NOx emitted per million cubic feet of gas burned.² (R 336.1205(3))

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. None of the operations within the EU-HTOV001 shall be directly vented to the outside atmosphere.¹ **(R 336.1225)**

Footnotes:

¹ This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-AF01
EMISSION UNIT CONDITIONS**

DESCRIPTION

60.2 MMBTU/hr. annealing furnace #1.

Flexible Group ID: FG-STEELMILL

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	4.92 Pounds ²	Per hour, based upon a 24-hour averaging period	EU-AF01	SC VI.1	R 336.1205 40 CFR 52.21(c) & (d)
2. NOx	22 Tons ²	Per 12-month Rolling Time Period	EU-AF01	SC VI.2	R 336.1205 40 CFR 52.21(c) & (d)
3. CO	20 Tons ²	Per 12-month Rolling Time Period	EU-AF01	SC VI.2	R 336.1205 40 CFR 52.21(c) & (d)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural Gas	Not combust more than 527 million cubic feet ²	Per 12 month rolling time period	EU-AF01	SC VI.2	R 336.1205
2. Natural Gas	Not combust more than 0.06 million cubic feet ²	Per hour, based upon a 24-hour averaging period	EU-AF01	SC VI.1	R 336.1205

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The only fuels the applicant may burn in the EU-AF01 are natural gas and propane.² (**R 336.1205, 40 CFR 52.21(c) & (d)**)

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The applicant shall determine the hourly amount of natural gas burned. The hourly natural gas usage rate shall be determined as an average over a 24-hour period. In the absence of any actual emissions data, and unless an alternative emission factor is approved in writing by the AQD District Supervisor, the applicant shall use an emission factor of 82 pounds of nitrogen oxides (NOx) emitted per million cubic feet of gas burned. All data, amounts of natural gas burned and calculations for NOx shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request.² **(R 336.1205)**
2. The applicant shall keep natural gas usage records, acceptable to the AQD District Supervisor indicating the amount of natural gas used, in cubic feet, on a calendar month basis and a 12-month rolling time period basis. The records must indicate the total amount of natural gas used by the EU-AF01. Based upon these records, the applicant shall calculate the NOx and CO emissions from the EU-AF01. These calculations shall be on a calendar month basis and a 12-month rolling time period basis. In the absence of any actual emissions test data, and unless an alternative emission factor is approved in writing by the AQD District Supervisor, the applicant shall use an emission factor of 82 pounds of NOx emitted per million cubic feet of gas burned and an emission factor of 76.1 pounds of CO emitted per million cubic feet of gas burned. All data, amounts of natural gas burned and calculations shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request.² **(R 336.1205)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-001	80 ²	84 ²	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU-AF02 EMISSION UNIT CONDITIONS

DESCRIPTION

38.4 MMBTU/hr. annealing furnace #2.

Flexible Group ID: FG-STEELMILL

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	3.12 Pounds ²	Per hour, based upon a 24-hour averaging period	EU-AF02	SC VI.1	R 336.1205 40 CFR 52.21 (c) & (d)
2. NOx	13.9 Tons ²	Per 12-month Rolling Time Period	EU-AF02	SC VI.2	R 336.1205 40 CFR 52.21 (c) & (d)
3. CO	15 Tons ²	Per 12-month Rolling Time Period	EU-AF02	SC VI.2	R 336.1205 40 CFR 52.21 (c) & (d)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural gas	336 million cubic feet ²	Per 12 month rolling time period	EU-AF02	SC VI.2	R 336.1205
2. Natural gas	0.038 million cubic feet ²	Per hour based upon a 24-hour averaging period	EU-AF02	SC VI.1	R 336.1205

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The only fuels the applicant may burn in the EU-AF02 are natural gas and propane.² (R 336.1205, 40 CFR 52.21 (c) & (d))

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The applicant shall determine the hourly amount of natural gas burned. The hourly natural gas usage rate shall be determined as an average over a 24-hour period. In the absence of any actual emissions test data, and unless an alternative emission factor is approved in writing by the AQD District Supervisor, the applicant shall use an emission factor of 82 pounds of NOx emitted per million cubic feet of gas burned. All data, amounts of natural gas burned and calculations for NOx shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request.² **(R 336.1205)**
2. The applicant shall keep natural gas usage records, acceptable to the AQD District Supervisor, indicating the amount of natural gas used, in cubic feet, on a calendar month basis and a 12-month rolling time period basis. The records must indicate total amount of natural gas used by the EU-AF02. Based upon these records, the applicant shall calculate NOx and CO emissions from the EU-AF02. These calculations shall be on a calendar month basis and a 12-month rolling time period basis. In the absence of any actual emissions test data, and unless an alternative emission factor is approved in writing by the AQD District Supervisor, the applicant shall use an emission factor of 82 pounds of NOx emitted per million cubic feet of gas burned and an emission factor of 76.1 pounds of CO emitted per million cubic feet of gas burned. All data, amounts of natural gas burned and calculations shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request.² **(R 336.1205)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. None of the operations within EU-AF02 shall be directly vented to the outside atmosphere.¹ **(R 336.1225)**

Footnotes:

¹ This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

D. FLEXIBLE GROUP SPECIAL CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-STEELMILL	All equipment at the facility including the equipment covered by other permits, grand-fathered equipment and exempt equipment.	EU-HTOV001, EU-AF01, EU-AF02

FG-STEELMILL FLEXIBLE GROUP CONDITIONS

DESCRIPTION

All equipment at the facility including the equipment covered by other permits, grand-fathered equipment and exempt equipment.

Emission Units: EU-HTOV001, EU-AF01, EU-AF02

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FG-STEELMILL unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and material handling operations, or an alternate plan approved in writing by the AQD District Supervisor, is implemented and maintained.² **(40 CFR 52.21)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state--only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

APPENDICES

Appendix 1. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO ₂ e	Carbon Dioxide Equivalent
CEMS	Continuous Emission Monitoring System	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
Department/ department	Michigan Department of Environment, Great Lakes, and Energy	gr	Grains
EGLE	Michigan Department of Environment, Great Lakes, and Energy	HAP	Hazardous Air Pollutant
EU	Emission Unit	Hg	Mercury
FG	Flexible Group	hr	Hour
GACS	Gallons of Applied Coating Solids	HP	Horsepower
GC	General Condition	H ₂ S	Hydrogen Sulfide
GHGs	Greenhouse Gases	kW	Kilowatt
HVLP	High Volume Low Pressure*	lb	Pound
ID	Identification	m	Meter
IRSL	Initial Risk Screening Level	mg	Milligram
ITSL	Initial Threshold Screening Level	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	NMOC	Non-methane Organic Compounds
MAP	Malfunction Abatement Plan	NO _x	Oxides of Nitrogen
MSDS	Material Safety Data Sheet	ng	Nanogram
NA	Not Applicable	PM	Particulate Matter
NAAQS	National Ambient Air Quality Standards	PM10	Particulate Matter equal to or less than 10 microns in diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	%	Percent
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.