

217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

Northwestern Steel and Wire Company
Attn: David E. Long, Environmental Manager
121 Wallace Street
Sterling, Illinois 61081

Application No.: 01030022

I.D. No.: 195818AAI

Applicant's Designation: 22" Rolling Mill

Date Received: March 8, 2001

Subject: 22" Rolling Mill

Date Issued:

Location: 121 Wallace Street, Sterling

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a 22" rolling mill and associated equipment as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

1. Description

Northwest Steel and Wire Company is proposing to install a new rolling mill to replace two older, less efficient mills at its steel plant in Sterling. This permit authorizes the construction of a new 22" roll mill (roll mills form products of different sizes from heated steel "blanks".). The new mill will replace the existing 14" and 24" mills.

2. Emission Units and Pollution Control Equipment

Emission Unit	Emission Control Equipment
22" Roll Mill	N/A

3. Applicability Provisions

- a. The "affected Roll Mill" for the purpose of this permit is the new 22" roll mill, as described in condition 2 unless otherwise stated in the following conditions.
- b. At all times, the Permittee shall, to the extent practicable, maintain and operate the affected roll mill, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
- c. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere. [35 IAC 212.123]

- d. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source. [35 IAC 212.301]
- e. The total particulate emissions from the affected roll mill shall not exceed the allowable emission rate specified by 35 IAC 212.321 [35 IAC 212.448]. Accordingly, the emissions of particulate matter into the atmosphere from the affected roll mill in any one hour period shall not exceed the allowable emission rate specified by the following equation

$$E = A(P)^B$$

where:

P = process weight rate; and,

E = allowable emission rate; and,

A. For process weight rates up to 408 MG/hr (450 T/hr):

A	2.54
B	0.534

B. For process weight rates in excess of (450 T/hr):

A	24.8
B	0.16

4. Non-Applicability of Regulations of Concern

- a. This permit is issued based on the construction of the affected roll mill not constituting a major modification subject to 40 CFR 52.21, Prevention of Significant Deterioration, PSD. The Permittee has addressed the applicability of PSD, demonstrating that the new construction will not result in a significant increase in emissions, subject to the limitations in conditions 5 and 6. See Attachment 1

5. Operational and Production Limitations

- a. Natural gas shall be the only fuel used by the affected roll mill reheat furnace.
- b. Annual natural gas usage shall not exceed 1661.1 million SCF.
- c. This permit allows for a transition period where the 14" and 24" mills will be in concurrent operation with the new 22" rolling mill. However, total annual natural gas usage of the three mills

shall not exceed the annual limit as stated above for the 22" mill.

6. Emission Limitations

- a. Emissions from the affected roll mill shall not exceed the following limits:

Pollutant	Tons/Month	Tons/Year
PM	0.64	6.4
CO	7.04	70.4
NO _x	23.4	234.6
VOM	0.46	4.6
SO ₂	0.05	0.5

These limits are based on the usage limits in Condition 5, and information supplied in the permit application.

- b. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

7. Testing Requirements

N/A

8. Monitoring Requirements

N/A

9. Recordkeeping Requirements

- a. The Permittee shall maintain records of the following items for the affected roll mill:
- i. Emissions of: PM, SO_x, NO_x, VOM, and CO in tons/month and Tons/year
 - ii. Natural gas usage (MMSCF/month and MMSCF/year), these records shall include natural gas usage for the 14" and 24" mills during the transition period of concurrent operation.
- b. The Permittee shall maintain records for the transition period operating times (dates and duration of operation) for the 14" and 24" roll mills as well as the shutdown date for each of these mills.

10. Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA, Compliance Section of any exceedance of the emission limitation in this permit of the affected roll mill with the permit requirements.

These reports shall be submitted within 30 days of the exceedance and shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

11. Two copies of required reports and notifications concerning equipment operation or repairs, performance testing or continuous monitoring systems shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
5415 North University
Peoria, Illinois 61614

12. Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 9 and the emission factors and formulas listed below:

- a. Compliance with Condition 6 shall be calculated based on the following emission factors:

Pollutant	Emission Factor LB/MMSCF
PM	7.6
NO _x	280
SO ₂	0.6
VOM	5.5
CO	84

If you have any questions on this permit, please call Kevin Smith at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:KLS:psj

cc: Region 2

Attachment 1

PSD Applicability

Table I - Past Actual Emissions for 14" and 24" Roll Mills
Tons/Year

<u>CO</u>	<u>SO₂</u>	<u>VOM</u>	<u>NO_x</u>	<u>PM</u>
71.3	0.5	4.6	230.5	6.4

Table II - Future Potential Emissions for 22" Roll Mill

<u>CO</u>	<u>SO₂</u>	<u>VOM</u>	<u>NO_x</u>	<u>PM</u>
74.9	0.5	4.9	238.7	6.8

Table III - Contemporaneous Increases and Decreases

<u>Source</u>	<u>CO</u>	<u>SO₂</u>	<u>VOM</u>	<u>NO_x</u>	<u>PM</u>
EAF #8	53.91	39.05	30.98	36.99	-31.5
EAF Cooling tower	---	---	---	---	5.3
Wire Mill and Nail	-4.38	-0.03	-0.29	-5.21	- 0.4
22" mill cooling tower	---	---	---	---	1.6

Table IV - Net Emissions Change From This Project (Tons/Year)

	<u>CO</u>	<u>SO₂</u>	<u>VOM</u>	<u>NO_x</u>	<u>PM</u>
Table I	71.3	0.5	4.6	230.5	6.4
Table II	74.9	0.5	4.9	238.7	6.8
Totals	3.6	0.0	0.3	8.2	0.4

Table V - Net Contemporaneous Emissions Change (Tons/Year)

	<u>CO</u>	<u>SO₂</u>	<u>VOM</u>	<u>NO_x</u>	<u>PM</u>
Table IV	3.6	0.0	0.3	8.2	0.4
Table III	49.53	39.02	30.69	31.78	-25
Totals	53.13	39.02	30.99	39.98	-24.6