

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - REVISED

PERMITTEE

Illinois Tool Works - Shakeproof  
Attn: Chuck Fairbanks  
1201 St. Charles Road  
Elgin, Illinois 60120

Application No.: 73040569

I.D. No.: 089807AAD

Applicant's Designation:

Date Received: March 3, 2003

Subject: Cold Metal Forming

Date Issued: April 9, 2003

Expiration Date: March 27, 2006

Location: 1201 St. Charles Road, Elgin

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of six batch and twenty conveyORIZED cold degreaser, four natural gas fired boilers with fuel oil #2 as a back-up, one tempering furnace and one paint booth as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of volatile organic materials (VOM) from the source to less than major source thresholds (i.e., 25 tons/year). As a result, the source is excluded from the requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits for this location.
2. The batch and conveyORIZED cold degreasers shall be operated according to the operating, equipment and material requirements of 35 Ill. Adm. Code 218.182 and 218.184, respectively.
3. Emission and operation of the degreasers shall not exceed the following limits:

| Solvent Usage |            | VOM Emissions |             |
|---------------|------------|---------------|-------------|
| (Gal/Month)   | (Gal/Year) | (Tons/Month)  | (Tons/Year) |
| 1,000         | 6,470      | 3.4           | 22.0        |

These limits are based on the maximum solvent usage, solvent density of 6.8 lb/gal and emission determined by material balance. 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.

Solvent usage shall be determined from the following equation:

$$U = V - W \times C/100$$

Where:

U - solvent usage (gal);

V - virgin solvent added to the process (gal);

W - certified amount of waste shipped off for recycling (gal);

C - certified VOM content of waste solvent (wt %).

4. Operation and emissions of the four boilers and one tempering furnace (combined) shall not exceed the following limits:

a. Natural Gas Usage: 150,000 therms/mo, 1,000,000 therms/yr

| <u>Pollutant</u>                    | <u>Emission Factor<br/>(lb/10<sup>3</sup> therms )</u> | <u>Emissions<br/>(Ton/Mo) (Ton/Yr)</u> |     |
|-------------------------------------|--|--|-----|
| Nitrogen Oxides (NO <sub>x</sub> )  | 10.0   | 0.75                                   | 5.0 |
| Carbon Monoxide (CO)                | 8.4  | 0.63                                   | 4.2 |
| Particulate Matter (PM)             | 0.76   | 0.06                                   | 0.4 |
| Volatile Organic<br>Materials (VOM) | 0.55   | 0.04                                   | 0.3 |

b. Fuel Oil Usage: 325,000 gal/Mo, 325,000 gal/Yr

| <u>Pollutant</u>                   | <u>Emission Factor<br/>(Lb/10<sup>3</sup> gal)</u> | <u>Emissions<br/>(Ton/Mo) (Ton/Yr)</u> |     |
|------------------------------------|--|--|-----|
| Nitrogen Oxides (NO <sub>x</sub> ) | 20   | 3.3                                    | 3.3 |
| Sulfur Dioxide (SO <sub>2</sub> )  | 42.6   | 6.9                                    | 6.9 |

At the above location, the Permittee shall not utilize in the boilers a distillate fuel oil (Grades No.1 and 2) with a sulfur content greater than the 0.3 weight percent pursuant to requirements of 35 Ill. Adm. Code 214.122(b)(2).

These limits are based on the maximum boilers operations and standard emission factors given by AP-42. Compliance with annual limits shall be determined on a monthly basis from a running total of 12 months of data.

5a. This permit is issued based upon painting booth being exempt from the limitations of 35 Ill. Adm. Code Part 218, Subpart F: Coating Operations, provided that actual VOM emissions from the booth never exceed 15 lbs/day (Section 218.208(a)).

- b. Emissions of volatile organic materials from painting operations shall not exceed 100 lbs/mo and 0.5 ton/yr.
6. The Permittee shall maintain daily records and calculations required by 35 Ill. Adm. Code 218.211(b) for painting operations.
7. The Permittee shall maintain monthly records of the following items:
  - a. Cleaning solvent usage in degreaser (gal/mo, gal/yr) calculated as required by Condition 3;
  - b. Natural gas usage (therms/month, therms/year);
  - c. Fuel oil usage ( $10^3$  gal/month,  $10^3$  gal/year) and its sulfur content (Wt.%);
  - d. Paint usage (gal/mo, gal/yr) and its VOM content (lb/gal); and
  - e. VOM emission calculations (ton/mo, ton/yr).
8. All records and logs required by this permit shall be completed by the last day of the month following the reported month and retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to the Illinois EPA or USEPA request for records during the course of a source inspection.
9. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
10. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

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

and one (1) copy shall be sent to the Agency's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency  
Division of Air Pollution Control - Regional Office  
9511 West Harrison  
Des Plaines, Illinois 60016

11. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year:
  - a. Cleaning solvents usage (gal/yr);
  - b. Natural gas usage ( $10^3$  therms/yr);
  - c. Fuel oil usage (gal/yr);
  - d. Paint usage (gal/yr).

It should be noted that this permit has been revised to include operation of one boiler described in Construction Permit 03030005. This revision does not relax monitoring, recordkeeping, or reporting requirements contained in federally enforceable conditions of this permit. These permit conditions assure that this source would not be a major source for purpose of CAAPP.

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

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

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cc: Illinois EPA, FOS Region 1  
Illinois EPA, Compliance Section  
Lotus Notes

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emission from the Cold Metal Forming Plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. This is a usage of 6,470 gal of cleaning solvent, burning of 1,000,000 therms of natural gas and 325,000 gal of fuel oil, and usage of 0.5 tons of solvents in paints per year. The resulting maximum emissions are well below the levels, e.g., 25 tons per year for VOM, at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that material is handled, and control measures are more effective than required in this permit.

1. Emission and operation of the degreasers shall not exceed the following limits:

| <u>Solvent Usage</u> |                   | <u>VOM Emissions</u> |                    |
|----------------------|-------------------|----------------------|--------------------|
| <u>(Gal/Month)</u>   | <u>(Gal/Year)</u> | <u>(Tons/Month)</u>  | <u>(Tons/Year)</u> |
| 1,000                | 6,470             | 3.4                  | 22.0               |

2. Operation and emissions of the four boilers and one tempering furnace (combined) shall not exceed the following limits:

- a. Natural Gas Usage: 150,000 therms/mo, 1,000,000 therms/yr

| <u>Pollutant</u>                    | <u>Emission Factor</u><br><u>(lb/10<sup>3</sup> therms )</u> | <u>Emissions</u> |                 |
|-------------------------------------|--|------------------|-----------------|
|                                     |  | <u>(Ton/Mo)</u>  | <u>(Ton/Yr)</u> |
| Nitrogen Oxides (NO <sub>x</sub> )  | 10.0   | 0.75             | 5.0             |
| Carbon Monoxide (CO)                | 8.4  | 0.63             | 4.2             |
| Particulate Matter (PM)             | 0.76   | 0.06             | 0.4             |
| Volatile Organic<br>Materials (VOM) | 0.55   | 0.04             | 0.3             |

- b. Fuel Oil Usage: 325,000 gal/Mo, 325,000 gal/Yr

| <u>Pollutant</u>                   | <u>Emission Factor</u><br><u>(Lb/10<sup>3</sup> gal)</u> | <u>Emissions</u> |                 |
|------------------------------------|--|------------------|-----------------|
|                                    |  | <u>(Ton/Mo)</u>  | <u>(Ton/Yr)</u> |
| Nitrogen Oxides (NO <sub>x</sub> ) | 20   | 3.3              | 3.3             |
| Sulfur Dioxide (SO <sub>2</sub> )  | 42.6   | 6.9              | 6.9             |

3. Emissions of volatile organic materials from painting operations shall not exceed 100 lbs/mo and 0.5 ton/yr.

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