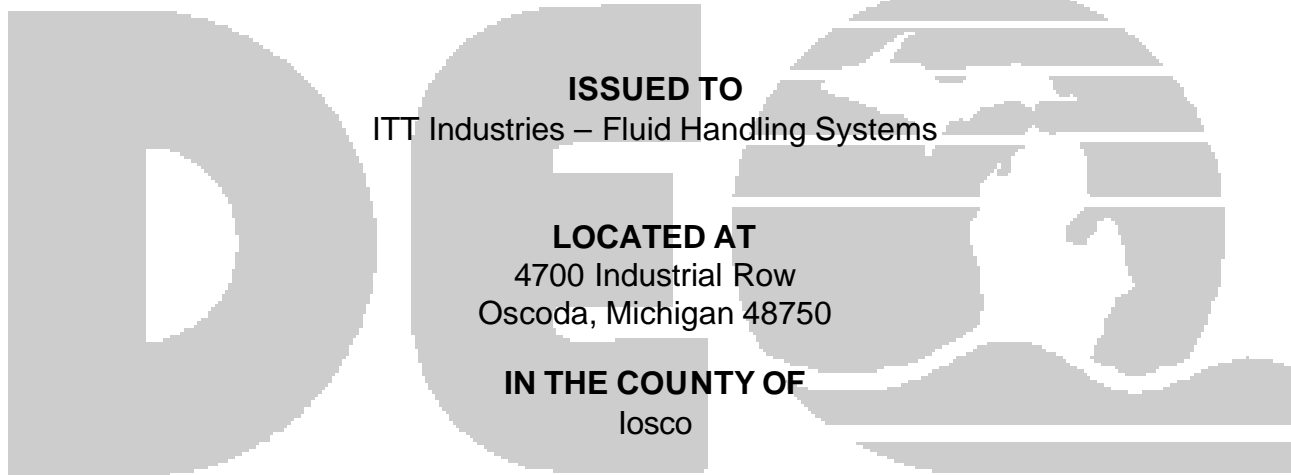


**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

February 6, 2004

NEW SOURCE REVIEW PERMIT TO INSTALL

No. 264-02



ISSUED TO

ITT Industries – Fluid Handling Systems

LOCATED AT

4700 Industrial Row
Oscoda, Michigan 48750

IN THE COUNTY OF

Iosco

STATE REGISTRATION NUMBER

N7240

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Part 5505(1) of Article II, Chapter I, Part 55 (Air Pollution Control) of P.A. 451 of 1994. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: 1/15/2004	
DATE PERMIT TO INSTALL APPROVED: 2/6/2004	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	Btu	British Thermal Unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	NO _x	Oxides of Nitrogen
MAP	Malfunction Abatement Plan	PM	Particulate Matter
MDEQ	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns diameter
MIOSHA	Michigan Occupational Safety & Health Administration	pph	Pound per hour
MSDS	Material Safety Data Sheet	ppm	Parts per million
NESHAP	National Emission Standard for Hazardous Air Pollutants	ppmv	Parts per million by volume
NSPS	New Source Performance Standards	ppmw	Parts per million by weight
NSR	New Source Review	psia	Pounds per square inch absolute
PS	Performance Specification	psig	Pounds per square inch gauge
PSD	Prevention of Significant Deterioration	scf	Standard cubic feet
PTE	Permanent Total Enclosure	sec	Seconds
PTI	Permit to Install	SO ₂	Sulfur Dioxide
RACT	Reasonable Available Control Technology	THC	Total Hydrocarbons
SC	Special Condition Number	tpy	Tons per year
SCR	Selective Catalytic Reduction	µg	Microgram
SRN	State Registration Number	VOC	Volatile Organic Compounds
TAC	Toxic Air Contaminant	yr	Year
VE	Visible Emissions		

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **[R336.1201(1)]**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **[R336.1201(4)]**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **[R336.1201(6)(b)]**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **[R336.1201(8), Section 5510 of Act 451, PA 1994]**
5. The terms and conditions of this Permit to Install 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 this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R336.1219 and the Department approves the request, this permit 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 R336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **[R336.1219]**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **[R336.1901]**
7. 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 Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department 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 condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **[R336.1912]**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.
11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R336.1303. **[R336.1301]**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this permit to install.
12. 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 R336.1370(2). **[R336.1370]**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. **[R336.2001]**

SPECIAL CONDITIONS

Emission Unit Identification

Emission Unit ID	Emission Unit Description	Stack Identification
EUCLEANFURNACE	SEGHERS Fluid Clean Fluidized Bed Type D.866 cleaning furnace for removal of plastic residues from plastic extrusion tooling. Emission controls include a furnace afterburner zone, a lime injection system, and a Ceramic Element Filter.	SVCLEANFURNACE
Changes to the equipment described in this table are subject to the requirements of R336.1201, except as allowed by R336.1278 to R336.1290.		

The following conditions apply to: EUCLEANFURNACE

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirement
1.1	Crystalline Silica	EUCLEANFURNACE	0.15 pph	Test Protocol ^a	General Condition No. 13	R336.1224, R336.1225, R336.1901
a. If testing is requested by MDEQ-AQD, test protocol submitted by applicant shall specify averaging time.						

Visible Emission Limits

1.2 Visible emissions from EUCLEANFURNACE shall not exceed five percent opacity on a six minute average basis. [R 336.1224, R 336.1225, R336.1301, R 336.1901, R 336.1910]

Process/Operational Limits

1.3 The permittee shall not operate EUCLEANFURNACE unless the furnace and afterburner zone are operating properly. [R 336.1224, R 336.1225, R 336.1301, R336.1702(a), R 336.1901, R 336.1910]

1.4 The permittee shall not operate EUCLEANFURNACE unless the Ceramic Element Filter System is installed and operating properly. [R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910]

1.5 The permittee shall not operate EUCLEANFURNACE unless the Lime Injection System is installed and operating properly. [R 336.1224, R 336.1225, R 336.1901, R 336.1910]

1.6 Within 60 days of approval of this permit, the permittee shall evaluate the lime feed system by measuring the lime feed rate at a proposed lime feed setting and submitting a report to the AQD District Supervisor summarizing the measurement data and proposing a minimum lime feed setting and corresponding minimum lime feed rate that will be maintained thereafter. [R 336.1224, R 336.1225, R 336.1901, R 336.1910]

1.7 On and after approval of a minimum lime feed setting and corresponding lime feed rate by the AQD District Supervisor, the permittee shall not operate EUCLEANFURNACE unless the approved minimum

lime feed setting and corresponding minimum lime feed rate are maintained. **[R 336.1224, R 336.1225, R 336.1901, R 336.1910]**

- 1.8 The permittee shall not operate EUCLEANFURNACE unless the Lime Injection System is inspected at least once per each batch to determine whether lime in the feed device hopper is free-flowing or there is a blockage in the lime hopper. A record of each inspection and any corrective action taken shall be kept for each day of furnace operation. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R 336.1224, R 336.1225, R 336.1901, R 336.1910]**
- 1.9 The permittee shall equip and maintain EUCLEANFURNACE with an automatic temperature control system for the furnace. **[R 336.1224, R 336.1225, R 336.1301, R336.1702(a), R 336.1901, R 336.1910]**
- 1.10 The permittee shall not operate EUCLEANFURNACE unless the sand bed is preheated to 850°F before parts are loaded into the sand bed for processing. **[R 336.1224, R 336.1225, R 336.1301, R336.1702(a), R 336.1901, R 336.1910]**
- 1.11 Within 60 days of approval of this permit, the permittee shall evaluate the afterburner zone temperature monitoring data for an evaluation period covering at least two weeks and submit a report to the AQD District Supervisor summarizing the temperature monitoring data and proposing a minimum temperature that will be maintained thereafter. **[R 336.1224, R 336.1225, R 336.1301, R336.1702(a), R 336.1901, R 336.1910]**
- 1.12 On and after approval of a minimum afterburner zone temperature by the AQD District Supervisor, the permittee shall not operate EUCLEANFURNACE unless the approved minimum temperature and a minimum retention time of 0.5 second are maintained in the afterburner zone. **[R 336.1224, R 336.1225, R 336.1301, R336.1702(a), R 336.1901, R 336.1910]**
- 1.13 The permittee shall not load into EUCLEANFURNACE any material other than cured plastics residues on metal parts. However, parts with plastics residues containing the following ingredients shall be restricted by adherence to the Extrusion Operator Technician Tooling Cleaning / Purging Procedure specified in Appendix A:
 1. Halogenated compounds of bromine, chlorine, fluorine, etc. (e.g., ingredients in polyvinyl chloride (PVC), ethylene-tetrafluoroethylene (ETFE), PVDF, Santoprene, certain Nylon 6 HS grades, plastics with bromine-based additives, plastisol, Teflon[®], etc.);
 2. Pigments (other than carbon black or graphite), stabilizers, color compounds, and color concentrates;
 3. Fire retardants, including antimony compounds (e.g., ingredient in Santoprene) or brominated compounds. **[R 336.1224, R 336.1225, R 336.1901]**
- 1.14 The permittee shall not operate EUCLEANFURNACE for more than 1200 hours per 12-month rolling time period as determined at the end of each calendar month. Operation shall be defined as any time during which the sand bed fluidization air is activated including sand bed preheat time plus parts processing time. **[R336.1225, R336.1227(2), R336.1901]**

Equipment

- 1.15 Within 30 days of approval of this permit, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the temperature in the EUCLEANFURNACE afterburner zone on a continuous basis and to record the temperature at least once every 15 minutes. The afterburner temperature sensor shall be installed at the exit of the afterburner zone. **[R336.1224, R336.1225, R336.1301, R336.1702(a), R336.1901, R336.1910]**

1.16 The permittee shall not operate EUCLEANFURNACE unless an interlock system that shuts down the furnace when the automatic temperature control system for the furnace is not operating properly, is installed, maintained and operated in a satisfactory manner. [R336.1224, R336.1225, R336.1301, R336.1702(a), R336.1901, R336.1910]

Monitoring

1.17 The permittee shall calibrate the thermocouples associated with the sand bed and afterburner zone at least once per year. [R336.1201(3), R336.1224, R336.1225, R336.1301, R336.1702(a), R336.1901, R336.1910]

Recordkeeping/Reporting/Notification

All records shall be completed and made available by the 15th day of each calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. [R336.1201(3)]

1.18 The permittee shall keep, in a satisfactory manner, temperature data records for the EUCLEANFURNACE afterburner zone. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1224, R336.1225, R336.1301, R336.1702(a), R336.1901, R336.1910]

1.19 The permittee shall keep, in a satisfactory manner, records of the date, duration, and description of any malfunction of the cleaning furnace, any maintenance performed and any testing results for EUCLEANFURNACE. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1910, R336.1912]

1.20 The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material being removed from the parts being processed in EUCLEANFURNACE. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1224, R336.1225, R336.1901]

1.21 The permittee shall keep, in a satisfactory manner, a record of the annual hours of operation of for EUCLEANFURNACE on a monthly basis. Operation shall be defined as any time during which the sand bed fluidization air is activated including sand bed preheat time plus parts processing time. The annual hours of operation shall be determined on a 12-month rolling time period as determined at the end of each calendar month. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1225, R336.1227(2), R336.1901]

1.22 The permittee shall keep, in a satisfactory manner, a record of the lime feed setting for each batch of material processed in EUCLEANFURNACE. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1224, R336.1225, R336.1901, R336.1910]

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
1.23	SVCLEANFURNACE	8	37	R 336.1225, R 336.1901, and 40 CFR 52.21(c) & (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

Appendix A

Extrusion Operator Technician Tooling Cleaning / Purging Procedure. 1/23/04

Purpose: To provide the guidelines required to restrict processing of the following materials when using the fluidized bed die cleaner:

1. Halogenated materials (e.g., ingredients in PVDF, ETFE, PVC, Santoprene, certain Nylon 6 HS grades);
2. Materials containing pigments (other than carbon black or graphite), stabilizers, color compounds, or color concentrates;
3. Materials containing fire retardants including antimony compounds (e.g., ingredient in Santoprene) or brominated compounds.

Individuals Required to Complete: Operators, Technicians, Mastercrafts, and anyone else who brings tooling to be cleaned to the tool techs.

Process (heads):

Note: This heading applies to all materials except for PVC and Santoprene.

1. Purge the extruders using the provided poly material. Poly material used for purging shall be polypropylene and shall not contain any pigments, stabilizers, fire retardants, or any unidentified ingredients. This will push out any material that is left in the head, and replaced with the purge compound.
2. As you remove the components of the head clean any poly off that is possible. This is best done using the following method:
 - a. Remove the component. Scrape as much of the hot material off the component as possible.
 - b. In difficult to reach portions of the component use the pliers to grab a little piece of the plastic. Using the air nozzle then blow air onto the material that is in the pliers. As you blow air on it pull the material from the component. This will allow the material to cool as you pull, thus removing most all of the remaining material.
3. Place the partially cleaned component to be finished in the die cleaner.

Process (die & pin changes):

Note: This heading applies to all materials.

1. Stop the extruder.
2. Remove the die from the head.
3. After the die has been removed and the pin is visible using the brass scraper scrape as much material from the pin as possible.
4. After you clean the pin clean any material off the die that is possible. This is best done using the following method:
 - a. Remove the die. Scrape as much of the hot material off the die as possible.
 - b. In difficult to reach portions of the die use the pliers to grab a little piece of the plastic. Using the air nozzle, then blow air onto the material that is in the pliers. As you blow air on it pull the

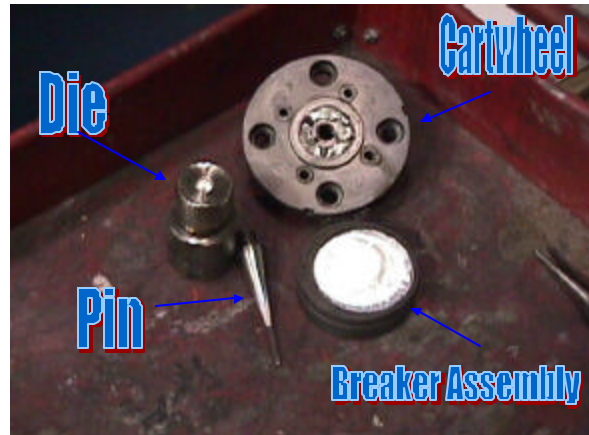
material from the component. This will allow the material to cool as you pull, thus removing most all of the remaining material.

5. Remove the pin from the head.
6. Using the brass scraper remove any material on the sealing surfaces.

Process (PVC and Santoprene tooling):

Note: This heading applies to only PVC and Santoprene materials.

1. Stop the extruder.
2. Remove the die.
3. Using the brass scraper peel all material from the die.
4. Using the brass scraper peel all material from the pin.
5. Remove the pin.



6. Open the head and remove the cartwheel.
7. Using the brass scraper peel all material from the cartwheel.
8. Using the brass scraper punch out the material inside the cartwheel.
9. Remove the breaker plate.
10. Using the brass scraper scrape off all of the material from the exit side of the plate.
11. Allow the breaker to cool for 10 minutes.
12. After the breaker is cooled for 10 minutes pry the screen pack from the backside of the breaker.
When done properly all of the material in the breaker plate holes will come with the screens.

NOTE: ALL PVC AND SANTOPRENE MATERIAL IS TO BE REMOVED BEFORE THE TOOLING IS RETURNED TO THE CAGE.