

## **REGULATION 7.55 Standard of Performance for New Insulation of Magnet Wire**

### **Air Pollution Control District of Jefferson County Jefferson County, Kentucky**

**Relates To:** KRS Chapter 77 Air Pollution Control

**Pursuant To:** KRS chapter 77 Air Pollution Control

**Necessity and Function:** KRS 77.180 provides that the Air Pollution Control Board may make and enforce all needful orders, rules, and regulations necessary or proper to accomplish the purposes of KRS Chapter 77. This regulation provides for the control of emissions of volatile organic compounds from magnetic wire coatings.

#### **SECTION 1 Applicability**

This regulation applies to each affected facility commenced on or after the effective date of this regulation.

#### **SECTION 2 Definitions**

Terms used in this regulation not defined herein shall have the meaning given them in Regulation 1.02.

- 2.1 "Affected facility" means a coating line for insulation of magnet wire.
- 2.2 "Applicator" means the mechanism or device used to apply the coating, including, but not limited to, a coating bath.
- 2.3 "Coating die" means the device, located between the applicator and the drying oven, that scrapes off excess coating and leaves a thin film of desired thickness.
- 2.4 "Coating line" means a series of equipment and/or operations used to apply, dry, or cure any coatings containing VOCs. This shall include, but is not limited to:
  - 2.4.1 mixing operations;
  - 2.4.2 process storage;
  - 2.4.3 applicators;
  - 2.4.4 drying operations including coating die area evaporation, oven drying, baking, curing, and polymerization;
  - 2.4.5 clean up operations;
  - 2.4.6 leaks, spills and disposal of VOCs; and
  - 2.4.7 processing and handling of recovered VOCs.
- 2.4.8 For the purposes of determining compliance with this regulation, if any equipment or operation could be considered to be a part of more than one coating line, its VOC emissions shall be assigned to each coating line of which it is a part proportionally to the throughput of VOC it receives from or distributes to each coating line.
- 2.4.9 If any portion of the series of equipment and/or operations qualify for an exemption according to section 5, then that portion shall be considered to be a separate coating line.
- 2.5 "Magnet wire" means wire used in such equipment as electrical motors, generators, and transformers which carries an electrical current.
- 2.6 "Process storage" means mixing tanks, holding tanks, and other tanks, drums, or other containers which contain surface coatings, VOCs, or recovered VOCs, but does not mean storage tanks which are subject to Regulation 7.12.

2.7 "Volatile organic compounds net input" means the total amount of VOCs input to the affected facility minus the amount of VOCs that are not emitted into the atmosphere. Volatile organic compounds that are prevented from being emitted to the atmosphere by the use of control devices shall not be subtracted from the total for the purposes of determining VOC net input. When the nature of any operation or design of equipment is such as to permit more than one interpretation of this definition, the interpretation that results in the minimum value for allowable emission shall apply.

**SECTION 3 Standard For Volatile Organic Compounds**

No person shall cause, allow, or permit an affected facility to discharge into the atmosphere more than 10% by weight of the VOC net input into the affected facility.

**SECTION 4 Compliance**

- 4.1 In all cases, the design of any control system is subject to approval by the District.
- 4.2 Compliance with the standard in section 3 shall be demonstrated by a material balance except in those cases where the District determines that a material balance is not possible. For those cases where a material balance is not possible, compliance will be determined based upon an engineering analysis by the District of the control system design, control device efficiency, control system capture efficiency and any other factors that could influence the performance of the system. If so requested by the District, performance tests as specified by the District shall be conducted in order to determine the efficiency of the control device.
- 4.3 With the prior approval of the District, the owner or operator may elect to effect such changes in the affected facility as are necessary to qualify for an exemption under section 5.
- 4.4 Whenever deemed necessary, the District shall obtain samples of the coatings used at an affected facility to verify that the coatings meet the requirements in section 5. The following methods of analyses for coatings shall be used as applicable except in those cases where the District determines that other methods would be more appropriate:
  - 4.4.1 ASTM D 1644-75 Method A;
  - 4.4.2 ASTM D 1475-60(74);
  - 4.4.3 ASTM D 2369-73; or
  - 4.4.4 Federal Standard 141a, Method 4082.1.

**SECTION 5 Exemptions**

An affected facility shall be exempt from section 3 if the VOC content of the coating is less than 0.20 kilograms per liter of coating (1.7 pounds per gallon) excluding water, delivered to the applicators associated with the coating line.

Adopted v1/6-13-79; effective 6-13-79; amended v2/3-17-93.

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	Date Submitted	Date Approved	Federal Register
Original Reg:	06/29/79	01/25/80	45 FR 6092
1st Revision:	05/21/99	[insert date]	[insert FR]