PART 216

IRON AND/OR STEEL PROCESSES

EFFECTIVE: MAY 20, 1984

2I6.1 Definitions. (a) The definitions in this section are specific to this Part. Additional definitions applying to this Part and other parts in this chapter are found in section 200.1.

(b) Lancing. The process where oxygen is blown into a charged basic oxygen furnace vessel.

(c) Basic oxygen furnace tapping. The process where molten steel is poured from a basic oxygen furnace vessel into a teeming ladle.

(d) Fluxing. The process where flux materials are added to a basic oxygen furnace vessel during lancing.

(e) Blast furnace tapping. The process where molten iron and slag drain from a blast furnace tap hole.

216.2 Applicability. This Part applies for all iron and/or steel processes except for ferrous jobbing foundries subject to Part 213 and ferro alloy production furnaces subject to Part 212.

216.3 Particulate emissions. Owners or operators of any iron and/or steel process must not cause or allow emissions of particulates from any confined process to exceed the limits contained in Table 1.

216.4 Opacity of emissions. (a) Owners or operators of any iron and/or steel process must not cause or allow emissions from that process to have an opacity, determined by the method of 216.4(b), which exceed the limits contained in Table 2, unless exempted under 216.10(b) or (c).

(b) Compliance with the opacity standards will be determined by observing visible emissions discharged during the

operation of the iron and/or steel process. The observer must stand at a distance sufficient to provide a clear view of the visible emissions with the sun oriented in the 140° sector of his back. The opacity of emissions will be computed by averaging the results of 24 consecutive opacity observations made at 15 second intervals. For cyclic processes that generate emissions for less than six minutes per cycle, observations will be made only during the operation of the process when visible emissions are generated. A sufficient number of process cycles must be observed to accumulate the required minimum of 24 consecutive opacity readings.

(c) The fugitive opacity limits in Table 2 are applicable to emissions emanating from building openings.

216.5 Gaseous emissions. Part 212, or other applicable Parts of this Subchapter, will apply to gaseous emissions from all iron and/or steel processes.

216.6 Monitoring operation of basic oxygen furnaces. This section will apply only to basic oxygen furnaces for which an application for a permit to construct was received by the commissioner after June 11, 1973.

(a) Owners and operators of basic oxygen furnaces must install, maintain and continuously operate the monitoring equipment in a manner acceptable to the commissioner. The methods specified in Subpart N, and/or revised Subpart (a), of Part 60 of Title 40 of the Code of Federal Regulations as in effect at the time of commencement of construction and all future technical revisions, additions, or corrections made thereto shall be considered acceptable except where the commissioner has required a specific method.

(b) Any application for a certificate to operate a basic oxygen furnace must specify:

(1) the minimum accuracy of monitoring devices and chart recorders;

(2) the minimum chart speed;

(3) the minimum frequency of synchronization and calibration; and

(4) the method of summarizing and tabulating the information collected.

The commissioner will determine the acceptability of the proposed specifications before issuing the certificate to operate.

(c) All records and summaries, required in connection with the acceptable installation, maintenance and operation methods specified in section 216.6(a), must be retained by the source owner for at least three years. These records must be furnished to the commissioner upon request.

216.7 Monitoring operation of electric arc furnaces. This section will apply only to electric arc furnaces for which an application for a permit to construct was received by the commissioner after October 21, 1974.

(a) Owners and operators of electric arc furnaces must install, maintain and continuously operate the monitoring equipment in a manner acceptable to the commissioner. The methods specified in Subpart AA, and/or revised Subpart(s), of Part 60 of Title 40 of the Code of Federal Regulations as in effect at the time of commencement of construction and all future technical revisions, additions, or corrections made thereto shall be considered acceptable except where the Commissioner has required a specific method.

(b) Any application for a certificate to operate an electric arc furnace must specify:

(1) the minimum accuracy of monitoring devices and chart recorders; and

(2) the minimum frequency of calibration required; and

(3) the method of summarizing and tabulating the information collected.

The commissioner will determine the acceptability of the proposed specifications before issuing the certificate to operate.

(c) All records and summaries, required in connection with the acceptable installation, maintenance, and operation methods specified in section 216.7(a), must be retained by the source owner for at least three years. These records must be furnished to the commissioner upon request.

216.8 Equipment Requirements. (a) Owners and operators of a blast furnace must not cause or allow emissions of particulates unless the blast furnace is equipped with:

(1) An exhaust system to capture and contain the emissions from the iron notch and trough between the furnace and skimmer during the tapping of hot metal. The captured particulate emissions must be conveyed to and be collected by an air cleaning device. In addition to the other requirements of this Part, the exhaust gas must be cleaned by the air cleaning device so that gas released to the atmosphere complies with the emissions limitations in Table 1; or

(2) An emission suppression and shrouding containment system extending from the tap hole to the ends of all molten metal and slag runners. Containment of the emissions must be effectively maintained during the tapping operation except when drilling and plugging the tap hole. Suppression measures sufficient to adequately control the emissions must be applied during tapping at the discharge

points of the molten metal and slag runners and during drilling and plugging at the tap hole.

(b) In addition to the requirements of paragraph 216.8(a)(1), owners and operators of a blast furnace constructed after December 31, 1981 must not cause or allow emissions of particulates unless the blast furnace is equipped with an exhaust system to capture and contain the emissions from all molten metal and slag runners and discharge points during the tapping of hot metal. The captured particulate emissions must be conveyed to and collected by an air cleaning device. In addition to the other requirements of this Part, the exhaust gas must be cleaned by the air cleaning device so that gas released to the atmosphere complies with the emission limitations in Table 1.

(c) Owners and operators of a basic oxygen furnace must not cause or allow emissions of particulates unless the basic oxygen furnace is equipped with both a primary exhaust system to capture and contain all particulate emissions from the lancing and fluxing operations and a secondary hood or a modification of the primary hood to capture and contain all particulate emissions from the tapping operation. The captured particulate emissions must be cleaned by an air cleaning device that causes the exhaust gas emitted to the atmosphere to be in compliance with the emissions limitations in Table 1.

(d) Any person who constructs or modifies an iron and/or steel process which is not a confined process must control the emissions of particulates to the outdoor atmosphere using best available control technology.

(e) Control device systems serving more than one emission source must be capable of controlling all simultaneously generated emissions at the limits contained in Table 1.

216.9 Test procedures. (a) Compliance with the mass emission standards in Table 1 will be determined by stack testing in a manner acceptable to the commissioner. Method 5 as described in Appendix A of Part 60 of Title 40 of the Code of Federal Regulations shall be considered an acceptable method. The sampling rate shall be at least 0.9 dry standard cubic meters per hour (0.53 dry standard cubic feet per minute). The sampling for each run must continue for an integral number of cycles with a total duration of at least 60 minutes except where shorter sampling times as necessitated by process variables or other factors are approved by the commissioner. In order to obtain this approval, the source owner must make a written request describing the factors which make sampling for sixty minutes of operation impractical. This written request may be submitted with the testing notification required by 6 NYCRR Part 202.

(b) For blast furnace tapping operations, sampling must be conducted during the blast furnace tapping period.

(c) For basic oxygen furnaces, sampling of the lancing and fluxing cycles must start at the beginning of the oxygen blow and must terminate at the end of the oxygen blow prior to tapping. Sampling of flue gases must be discontinued whenever oxygen lancing is terminated (such as when the vessel is outside of the main hood for temperature measurements and sampling) and must resume when oxygen lancing is reinitiated. The sampling cycle for tapping must start when the molten steel begins flowing into the ladle and must end when the molten steel flow stops.

216.10 Exemptions. (a) A source owner required to install the blast furnace emission reduction equipment specified in subdivision 216.8(a) may be exempted from such equipment requirements upon the acceptance by the commissioner of an alternative emission reduction plan submitted by the source owner. The plan shall become effective upon approval by the Environmental Protection Agency. For such a plan to be acceptable to the commissioner, the following requirements must be met:

(1) A complete plant wide particulate emission inventory for both traditional and non-traditional sources must be included in the alternative emission reduction plan; and

(2) The alternative emissions reduction plan must include air quality dispersion modeling results which show attainment of air quality standards off-plant property when the plant-wide emissions inventory required by paragraph 216.10(a)(1) is modeled in place of the plant's emission inventory in the State Implementation Plan; and

(3) The emission reductions in the alternative emission reduction plan must be permanent; and

(4) The alternative emission reduction plan must be included in a legally binding agreement which allows future state and federal enforcement of the credited emission reductions.

(b) Source owners subject to the opacity requirements of 216.4 may apply for and be granted an equivalent opacity which will replace the opacity listed in Table 2 for that source, if either of the following conditions are met:

(1) If the source owner can demonstrate through acceptable tests for any confined source that the source is in compliance with all applicable emission requirements other than the opacity standard and that the source and any associated emission controls are being operated and maintained in a manner acceptable to the commissioner; or

(2) The source owner has obtained approval of an alternative emission reduction plan under subdivision 216.10(a) which covers the source for which equivalent opacity is desired.

(c) For sources, other than blast furnaces equipped with emission shrouding and suppression systems, that are not subject to the mass emission limits shown in Table 1, source owners may apply to the commissioner for an opacity standard for that source. The assigned opacity standard shall be based on operation of the source in a manner to minimize the generation of visible emissions consistent with normal operating practices.

TABLE 1
MAXIMUM ALLOWABLE PARTICULATE
EMISSION CONCENTRATIONS FOR CONFINED SOURCES

Source Category	Date Application for Permit to Construct Received	Mass Emission Limits in Grains/Cubic Foot of Exhaust Gas at Standard Conditions on a Dry Gas Basis
Blast Furnace Cast House	All	0.010
Basic Oxygen Furnace	On or Before 6/11/73	0.050, except 0.010 for any tapping or charging emissions connected to a separate secondary system for control of fugitive emissions.
Basic Oxygen Furnace	After 6/11/73	0.022, except 0.010 for any tapping or charging emissions connected to a separate secondary system for the control of fugitive emissions.
Electric Arc Furnace	On or Before 7/1/73	0.15
	After 7/1/73 but on or before 10/21/74	0.050
	After 10/21/74	0.0052
Other Confined Iron and/or Steel Processes	On or Before 7/1/73	0.15
	After 7/1/73	0.050

TABLE 2
MAXIMUM ALLOWABLE VISIBLE EMISSION OPACITY LIMITS

Source Category	Date Application for Permit to Construct Received	Emission Point	Six Minute Average Opacity Shall Not Exceed
Basic Oxygen Furnace	On or Before 6/11/73	Stack	20%
	After 6/11/73	Stack	*10%
	All	Fugitive	20%
Electric Arc Furnace	On or Before 10/21/74	Stack	10%
		Fugitive	20%
	After 10/21/74	Stack	3%
		Fugitives During Tapping	40%
		Fugitives During Charging	20%
		Fugitives at Other Times	**0%
Blast Furnaces	All	Stack	20%
If Equipped with Exhaust Hoods (216.8(a)(1) and (b))	All	Fugitives	20%
If Equipped with an Emission Shrouding and Supression System (216.8(a)(2))	All	Fugitives During Drilling & Plugging of Tap Hole	40%
		Fugitives All Other Times	15%
All Other Iron and/or Steel Industry Sources	All	Stack and Fugitives	20%

*Except that an average of opacity exceeding 10% but less than 20% may occur once during the steel production cycle.
**Except 10% for emissions associated with particulate storage and transfer equipment collected by an air cleaning device.