

furnace. At all times the electric submerged arc furnace is operated, the owner or operator shall maintain the volumetric flow rate at or above the appropriate levels for that furnace power input level determined during the most recent performance test. If emissions due to tapping are captured and ducted separately from emissions of the electric submerged arc furnace, during each tapping period the owner or operator shall maintain the exhaust flow rates through the capture system over the tapping station at or above the levels established during the most recent performance test. Operation at lower flow rates may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility. The owner or operator may request that these flow rates be reestablished by conducting new performance tests under §60.8 of this part.

(e) The owner or operator may as an alternative to paragraph (c) of this section determine the volumetric flow rate through each fan of the capture system from the fan power consumption, pressure drop across the fan and the fan performance curve. Only data specific to the operation of the affected electric submerged arc furnace are acceptable for demonstration of compliance with the requirements of this paragraph. The owner or operator shall maintain on file a permanent record of the fan performance curve (prepared for a specific temperature) and shall:

(1) Install, calibrate, maintain, and operate a device to continuously measure and record the power consumption of the fan motor (measured in kilowatts), and

(2) Install, calibrate, maintain, and operate a device to continuously measure and record the pressure drop across the fan. The fan power consumption and pressure drop measurements must be synchronized to allow real time comparisons of the data. The monitoring devices must have an accuracy of ± 5 percent over their normal operating ranges.

(f) The volumetric flow rate through each fan of the capture system must be determined from the fan power consumption, fan pressure drop, and fan performance curve specified under paragraph (e) of this section, during

any performance test required under §60.8 to demonstrate compliance with the standards under §§60.262(a)(4) and (5). The owner or operator shall determine the volumetric flow rate at a representative temperature for furnace power input levels of 50 and 100 percent of the nominal rated capacity of the electric submerged arc furnace. At all times the electric submerged arc furnace is operated, the owner or operator shall maintain the fan power consumption and fan pressure drop at levels such that the volumetric flow rate is at or above the levels established during the most recent performance test for that furnace power input level. If emissions due to tapping are captured and ducted separately from emissions of the electric submerged arc furnace, during each tapping period the owner or operator shall maintain the fan power consumption and fan pressure drop at levels such that the volumetric flow rate is at or above the levels established during the most recent performance test. Operation at lower flow rates may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility. The owner or operator may request that these flow rates be reestablished by conducting new performance tests under §60.8. The Administrator may require the owner or operator to verify the fan performance curve by monitoring necessary fan operating parameters and determining the gas volume moved relative to Methods 1 and 2 of appendix A to this part.

(g) All monitoring devices required under paragraphs (c) and (e) of this section are to be checked for calibration annually in accordance with the procedures under §60.13(b).

§ 60.266 Test methods and procedures.

(a) During any performance test required in §60.8, the owner or operator shall not allow gaseous diluents to be added to the effluent gas stream after the fabric in an open pressurized fabric filter collector unless the total gas volume flow from the collector is accurately determined and considered in the determination of emissions.

(b) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods

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and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(c) The owner or operator shall determine compliance with the particulate matter standards in § 60.262 as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E = \left[\left(\sum_{i=1}^N C_{si} Q_{sdi} \right) \right] / (PK)$$

where:

E=emission rate of particulate matter, kg/MW-hr (lb/MW-hr).

n=total number of exhaust streams at which emissions are quantified.

C_{si}=concentration of particulate matter from exhaust stream "i", g/dscm (gr/dscf).

Q_{sdi}=volumetric flow rate of effluent gas from exhaust stream "i", dscm/hr (dscf/hr).

P=average furnace power input, MW.

K=conversion factor, 1000 g/kg (7000 gr/lb).

(2) Method 5 shall be used to determine the particulate matter concentration (C_{si}) and volumetric flow rate (Q_{sdi}) of the effluent gas, except that the heating systems specified in sections 2.1.2 and 2.1.6 are not to be used when the carbon monoxide content of the gas stream exceeds 10 percent by volume, dry basis. If a flare is used to comply with § 60.263, the sampling site shall be upstream of the flare. The sampling time shall include an integral number of furnace cycles.

(i) When sampling emissions from open electric submerged arc furnaces with wet scrubber control devices, sealed electric submerged arc furnaces, or semienclosed electric arc furnaces, the sampling time and sample volume for each run shall be at least 60 minutes and 1.80 dscm (63.6 dscf).

(ii) When sampling emissions from other types of installations, the sampling time and sample volume for each run shall be at least 200 minutes and 5.66 dscm (200 dscf).

(3) The measurement device of § 60.265(b) shall be used to determine the average furnace power input (P) during each run.

(4) Method 9 and the procedures in § 60.11 shall be used to determine opacity.

(5) The emission rate correction factor, integrated sampling procedure of Method 3B shall be used to determine the CO concentration. The sample shall be taken simultaneously with each particulate matter sample.

(d) During the particulate matter run, the maximum open hood area (in hoods with segmented or otherwise moveable sides) under which the process is expected to be operated and remain in compliance with all standards shall be recorded. Any future operation of the hooding system with open areas in excess of the maximum is not permitted.

(e) To comply with § 60.265 (d) or (f), the owner or operator shall use the monitoring devices in § 60.265 (c) or (e) to make the required measurements as determined during the performance test.

[54 FR 6671, Feb. 14, 1989; 54 FR 21344, May 17, 1989, as amended at 55 FR 5212, Feb. 14, 1990; 65 FR 61758, Oct. 17, 2000]

Subpart AA—Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and On or Before August 17, 1983

§ 60.270 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in steel plants that produce carbon, alloy, or specialty steels: electric arc furnaces and dust-handling systems.

(b) The provisions of this subpart apply to each affected facility identified in paragraph (a) of this section that commenced construction, modification, or reconstruction after October 21, 1974, and on or before August 17, 1983.

[49 FR 43843, Oct. 31, 1984]

§ 60.271 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Electric arc furnace (EAF)* means a furnace that produces molten steel and