

2.24 Steel Plants: Electric Arc Furnaces

2.24. 1 Applicability and Designation of Affected Facility

The provisions of this source category are applicable to each electric arc furnace (EAF) in steel mills which are not subject to Federal New Source Performance Standards (40CFR60, Subpart AA or Subpart AAa).

2.24.2 Test Methods and Procedures

- (a) During performance tests required in Section 1.2, the owner or operator shall not add gaseous diluent to the effluent gas after the fabric in any pressurized fabric collector, unless the amount of dilution is separately determined and considered in the determination of emissions.
- (b) When emissions from any EAF(s) are combined with emissions from facilities not subject to the provisions of this source category but controlled by a common capture system and control device, the owner or operator shall use either or both of the following procedures during a performance test:
 - (1) Determine compliance using the combined emissions.
 - (2) Use a method that is acceptable to the Director and that compensates for the emissions from the facilities not subject to the provisions of this source category.
- (c) When emissions from any EAF(s) are combined with emissions from facilities not subject to the provisions of this source category, the owner or operator shall use either or both of the following procedures to demonstrate compliance with applicable visible emissions standards:
 - (1) Determine compliance using the combined emissions.
 - (2) Shut down operation of facilities not subject to the provisions of this source category during the performance test.
- (d) In conducting the performance tests required in Section 1.2, the owner or operator shall use as reference methods 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 Section 1.2(b).
- (e) The owner or operator shall determine compliance with the particulate matter standards as follows:
 - (1) Method 5 shall be used for negative-pressure fabric filters and other types of control devices, and Method 5D shall be used for positive-pressure fabric filters to determine the particular matter concentration and, if applicable, the volumetric flow rate of the effluent gas. The sampling time and sample volume for each run shall be at least 4 hours and 4.5 dscm (160 dscf) and, when a single EAF is sampled, the sampling time shall include an integral number of heats.
 - (2) When more than one control device serves the EAF(s) being tested, the concentration of particulate matter shall be determined using the following equation:

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

Where:

- C_{st} = average concentration of particulate matter, mg/dscm (gr/dscf).
- C_{si} = concentration of particulate matter from control device "i", mg/dscm (gr/dscf).
- n = total number of control devices tested.
- Q_{sdi} = volumetric flow rate of stack gas from control device "i", dscm/hr (dscf/hr).

- (3) Method 9 and the procedures of Section 1.3 shall be used to determine opacity.
- (4) To demonstrate compliance with applicable opacity standards except for dust handling systems, the test runs shall be conducted concurrently, unless inclement weather interferes.