Title 40—Protection of Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

SUBCHAPTER C—AIR PROGRAMS

[FRL 407-3]

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Electric Arc Furnaces in the Steel Industry

On October 21, 1974 (39 FR 37466), under section 111 of the Clean Air Act, as amended, the Environmental Protection Agency (EPA) proposed standards of performance for new and modified electric arc furnaces in the steel industry. Interested persons participated in the rulemaking by submitting written comments to EPA. A total of 19 comment letters was received, seven of which came from the industry, eight from State and local air pollution control agencies, and four from Federal agencies. The Freedom of Information Center, Room 202 West Tower, 401 M Street, S.W., Washington, D.C., has copies of the comment letters received and a summary of the issues and Agency responses available for public inspection. In addition, copies of the issue summary and Agency responses may be obtained upon written request from the EPA Public Information Center (PM-215), 401 M Street, S.W., Washington, D.C. 20460 (specify—Public Comment Summary: Electric Arc Furnaces in the Steel Industry). The comments have been carefully considered, and where determined by the Administrator to be appropriate, changes have been made to the proposed regulation and are incorporated in the regulation promulgated herein.

The bases for the proposed standards are presented in "Background Information for Standards of Performance: Electric Arc Furnaces in the Steel Industry," (EPA-450/2-74-017a, b). Copies of this document are available on request from the Emission Standards and Engineering Division, Environmental Protection Agency, Research Triangle Park, N.C. 27711, Attention: Mr. Don R. Goodwin.

Summary of Regulation

The promulgated standards of performance for new and modified electric arc furnaces in the steel industry limit particulate matter emissions from the control device, from the shop, and from the dust-handling equipment. Emissions from the control device are limited to less than 12 mg/dscm (0.0052 gr/dscf) and 3 percent opacity. Furnace emissions escaping capture by the collection system and exiting from the shop are limited to zero percent opacity, but emissions greater than this level are allowed during charging periods and tapping periods. Emissions from the dust-handling equipment are limited to less than 10 percent opacity. The regulation requires monitoring of flow rates through each separately ducted emission capture hood and monitoring of the pressure inside the electric arc furnace for direct shell evacuation systems. Additionally, continuous monitoring of opacity of emissions from the control device is required.

Significant Comments and Changes Made to the Proposed Regulation

All of the comment letters received by EPA contained multiple comments. The most significant comments and the differences between the proposed and promulgated regulations are discussed below. In addition to the discussed changes, a number of paragraphs and sections of the proposed regulation were reorganized in the regulation promulgated herein.

(1) *Applicability.* One commentator questioned whether electric arc furnaces that use continuous feeding of prereduced ore pellets as the primary source of iron can comply with the proposed standards of performance since the standards were based on data from conventionally charged furnaces. Electric arc furnaces that use prereduced ore pellets were not investigated by EPA because this process was still being researched by the steel industry during development of the standard and was several years from extensive use on commercial sized furnaces. Emissions from this type of furnace are generated at different rates and in different amounts over the steel production cycle than emissions from conventionally charged furnaces. The proposed standards were structured for the emission cycle of a conventionally charged electric arc furnace. The standards, consequently, are not suitable for application to electric arc furnaces that use prereduced ore pellets as the primary source of iron. Even with use of best available control technology, emissions from these furnaces may not be controllable to the level of all of the standards promulgated herein; however, over the entire cycle the emissions may be less than those from a well-controlled conventional electric arc furnace. Therefore, EPA believes that standards of performance for electric arc furnaces using prereduced ore pellets require a different structure than do standards for conventionally charged furnaces. An investigation into the emission reduction achievable and best available control technology for these furnaces will be conducted in the future and standards of performance will be established. Consequently, electric arc furnaces that use continuous feeding of prereduced ore pellets as the primary source of iron are not subject to the requirements of this subpart.

(2) *Concentration standard for emissions from the control device.* Four commentators recommended revising the concentration standard for the control device effluent to 18 mg/dscm (0.008 gr/dscf) from the proposed level of 12 mg/dscm (0.0052 gr/dscf). The argument for the higher standard was that the proposed standard had not been demonstrated on either carbon steel shops or on combination direct shell evacuation-canopy hood control systems. Emission measurement data presented in "Background Information for Standards of Performance: Electric Arc Furnaces in the Steel Industry" show that carbon steel shops as well as alloy steel shops can reduce particulate matter emissions to less than 12 mg/dscm by application of well-designed fabric filter collectors. These data also show that combination direct shell evacuation-canopy hood systems can control emission levels to less than 12 mg/dscm. EPA believes that revising the standard to 18 mg/dscm would allow relaxation of the design requirements of the fabric filter collectors which are installed to meet the standard. Accordingly, the standard promulgated herein limits particulate matter emissions from the control device to less than 12 mg/dscm.

Two commentators requested that specific concentration and opacity standards be established for emissions from scrubber controlled direct shell evacuation systems. The argument for a separate concentration standard was that emissions from scrubber controlled direct shell evacuation systems can be reduced to only about 50 mg/dscm (0.022 gr/dscf) and, thus, even with the proposed proration provisions under § 60.274(b), it is not possible to use scrubbers and comply with the proposed concentration standard. The commentators also argued that a separate opacity standard was necessary for scrubber equipped systems because the effluent is more concentrated and, thus, reflects and scatters more visible light than the effluent from fabric filter collectors.

EPA would like to emphasize that use of venturi scrubbers to control the effluent from direct shell evacuation systems is not considered to be a "best system of emission reduction considering costs." The promulgated standards of performance for electric arc furnaces reflect the degree of emission reduction achievable for systems discharging emissions through fabric filter collectors. EPA believes, however, that the regulation does not preclude use of control systems that discharge direct shell evacuation system emissions through venturi scrubbers. Available information indicates that effluent from a direct shell evacuation system can be controlled to 0.01 gr/dscf or less using a high energy venturi scrubber (pressure drop greater than 60 in. w.g.). If the scrubber reduces particulate matter emissions to 0.01 gr/dscf, then the fabric filter collector is only required to reduce the emissions from the canopy hood to about 0.004 gr/dscf in order for the emission rates to be less than 0.0052 gr/dscf. Therefore, it is technically feasible for a facility to use a high energy scrubber and a fabric filter to control the combined furnace emissions to less than 0.0052 gr/dscf. A concentration standard of 0.022 gr/dscf for scrubbers would not require installation of control devices which have a collection efficiency comparable to that of best control technology (well-designed and well-operated fabric filter collector). In addition, electric arc furnace particulate matter emissions are invisible to the human eye at effluent concentrations less than 0.01 gr/dscf

when emitted from average diameter stacks. For the reasons discussed above, neither a separate concentration standard nor a separate opacity standard will be established as suggested by the commentators.

(3) *Control device opacity standard.* Four commentators suggested that the proposed control device opacity standard either be revised from less than five percent opacity to less than ten percent opacity based on six-minute average values or that a time exemption be provided for visible emissions during the cleaning cycle of shaker-type fabric filter collectors.

EPA's experience indicates that a time exemption to allow for puffing during the cleaning cycle of the fabric filter collector is not necessary. For this application, a well-designed and well-maintained fabric filter collector should have no visible emissions during all phases of the operating cycle. The promulgated opacity standard, therefore, does not provide a time exemption for puffing of the collector during the cleaning cycle.

The suggested revision of the proposed opacity standard to ten percent (based on six-minute average values) was considered in light of recent changes in Method 9 of Appendix A to this part (39 FR 39872). The revisions to Method 9 require that compliance with opacity standards be determined by averaging sets of 24 consecutive observations taken at 15-second intervals (six-minute averages). All six-minute average values of the opacity data used as the basis for the proposed opacity standard are zero percent. EPA believes that the ten percent standard suggested by the commentators would allow much less effective operation and maintenance of the control device than is required by the concentration standard. On the basis of available data, a five percent opacity standard (based on six-minute average values) also is unnecessarily lenient.

The proposed opacity standard of zero percent was revised slightly upward to be consistent with previously established opacity standards which are less stringent than their associated concentration standards without being unduly lax. The promulgated opacity standard limits emissions from the control device to less than three percent opacity (based on averaging sets of 24 consecutive observations taken at 15-second intervals). Use of six-minute average values to determine compliance with applicable opacity standards makes opacity levels of any value possible, instead of the previous method's limitation of values at discrete intervals of five percent opacity.

(4) *Standards on emissions from the shop.* Twelve commentators questioned the value of the shop opacity standards, arguing that the proposed standards are unenforceable, too lenient, or too stringent.

Commentators arguing for less stringent or more stringent standards suggested various alternative opacity values for the charging or tapping period standards, different averaging periods, and a different limitation on emissions from the shop during the meltdown and refining period of the EAF operation. Because of these comments, the basis for these standards was thoroughly reevaluated, including a review of all available data, and follow-up contacts with commentators who had offered suggestions. The follow-up contacts revealed that the suggested revisions were opinions only and were not based on actual data. The reevaluation of the data bases of the proposed standards reaffirmed that the standards represented levels of emission control achievable by application of best control technology considering costs. Hence, EPA concluded that the standards are reasonable (neither too stringent nor too lenient) and that revision of these standards is not warranted in the absence of specific information indicating such a need.

Four commentators believed that the proposed standards were impractical to enforce for the following reasons:

(1) Intermingling of emissions from non-regulated sources with emissions from the electric arc furnaces would make enforcement of the standards impossible.

(2) Overlap of operations at multi-furnace shops would make it difficult to identify the periods in which the charging and tapping standards are applicable.

(3) Additional manpower would be required in order to enforce these standards.

(4) The standards would require access to the shop, providing the source with notice of surveillance and the results would not be representative of routine emissions.

(5) The standards would be unenforceable at facilities with a mixture of existing and new electric arc furnaces in the same shop.

EPA considered all of the comments on the enforceability of the proposed standards and concluded that some changes were appropriate. The proposed regulation was reconsidered with the intent of developing more enforceable provisions requiring the same level of control. This effort resulted in several changes to the regulation, which are discussed below.

The promulgated regulation retains the proposed limitations on the opacity of emissions exiting from the shop except for the exemption of one minute/hour per EAF during the refining and meltdown periods. The purpose of this exemption was to provide some allowance for puffs due to "cave-ins" or addition of iron ore or burnt lime through the slag door. Only one suspected "cave-in" and no puffs due to additions occurred during 15 hours of observations at a well-controlled facility; therefore, it was concluded that these brief uncontrolled puffs do not occur frequently and whether or not a "cave-in" has occurred is best evaluated on a case-by-case basis. This approach was also necessitated by recent revisions to Method 9 (39 FR 39872) which require basing compliance on six-minute averages of the observations. Use of six-minute averages of opacity readings is not consistent with allowing a time exemption. Determination of whether brief puffs of emissions occurring during refining and meltdown periods are due to "cave-ins" will be made at the time of determination of compliance. If such emissions are considered to be due to a "cave-in" or other uncontrollable event, the evaluation may be repeated without any change in operating conditions.

The purpose of the proposed opacity standards limiting the opacity of emissions from the shop was to require good capture of the furnace emissions. The method for routinely enforcing these capture requirements has been revised in the regulation promulgated herein in that the owner or operator is now required to demonstrate compliance with the shop opacity standards just prior to conducting the performance test on the control device. This performance evaluation will establish the baseline operating flow rates for each of the canopy hoods or other fume capture hoods and the furnace pressures for the electric arc furnace using direct shell evacuation systems. Continuous monitoring of the flow rate through each separately ducted control system is required for each electric arc furnace subject to this regulation. Owners or operators of electric arc furnaces that use a direct shell evacuation system to collect the refining and meltdown period emissions are required to continuously monitor the pressure inside the furnace free space. The flow rate and pressure data will provide a continuous record of the operation of the control systems. Facilities that use a building evacuation system for capture and control of emissions are not subject to the flow rate and pressure monitoring requirements if the building roof is never opened.

The shop opacity standards promulgated herein are applicable only during demonstrations of compliance of the affected facility. At all other times the operating conditions must be maintained at the baseline values or better. Use of operating conditions that will result in poorer capture of emissions constitutes unacceptable operation and maintenance of the affected facility. These provisions of the promulgated regulation will allow evaluation of the performance of the collection system without interference from other emission sources because the non-regulated sources can be shut down for the duration of the evaluation. The monitoring of operations requirements will simplify enforcement of the regulation because neither the enforcing agency nor the owner or operator must show that any apparent violation was or was not due to operation of non-regulated sources.

The promulgated regulation's monitoring of operation requirements will add negligible additional costs to the total cost of complying with the promulgated standards of performance. Flow rate monitoring devices of sufficient accuracy to meet the requirements of § 60.274(b) can be installed for $600–$4000 depending on the flow profile of the area being monitored and the complexity of the monitoring device. Devices that monitor

the pressure inside the free space of an electric arc furnace equipped with a direct shell evacuation system are installed by most owners or operators in order to obtain better control of the furnace operation. Consequently, for most owners or operators, the pressure monitoring requirements will only result in the additional costs for installation and operation of a strip chart recorder. A suitable strip chart recorder can be installed for less than $600.

There are no data reduction requirements in the flow rate monitoring provisions. The pressure monitoring provisions for the direct shell evacuation control systems require recording of the pressures as 15-minute integrated averages. The pressure inside the electric arc furnace above the slag and metal fluctuates rapidly. Integration of the data over 15-minute periods is necessary to provide an indication of the operation of the system. Electronic and mechanical integrators are available at an initial cost of less than $600 to accomplish this task. Electronic circuits to produce a continuous integration of the data can be built directly into the monitoring device or can be provided as a separate modular component of the monitoring system. These devices can provide a continuous integrated average on a strip chart recorder.

(5) *Emission monitoring.* Three commentators suggested deletion of the proposed opacity monitoring requirements because long path lengths and multiple compartments in pressurized fabric filter collectors make monitoring infeasible. The proposed opacity monitoring requirements have not been deleted because opacity monitoring is feasible on the control systems of interest (closed or suction fabric filter collectors). This subpart also permits use of alternative control systems which are not amenable to testing and monitoring using existing procedures, providing the owner or operator can demonstrate compliance by alternative methods. If the owner or operator plans to install a pressurized fabric filter collector, he should submit for the Administrator's approval the emission testing procedures and the method of monitoring the emissions of the collector. The opacity of emissions from pressurized fabric filter collectors can be monitored using present instrumentation at a reasonable cost. Possible alternative methods for monitoring of emissions from pressurized fabric filter collectors include: (1) monitoring of several compartments by a conventional path length transmissometer and rotation of the transmissometer to other groups of collector compartments on a scheduled basis or (2) monitoring with several conventional path length transmissometers. In addition to monitoring schemes based on conventional path length transmissometers, a long path transmissometer could be used to monitor emissions from a pressurized fabric filter collector. Transmissometers capable of monitoring distances up to 150 meters are commercially available and have been demonstrated to accurately monitor opacity. Use of long path transmissometers on pressurized fabric filter collectors has yet to be demonstrated, but if properly installed there is no reason to believe that the transmissometer will not accurately and representatively monitor emissions. The best location for a long path transmissometer on a fabric filter collector will depend on the specific design features of both; therefore, the best location and monitoring procedure must be established on an individual basis and is subject to the Administrator's approval.

Two commentators argued that the proposed reporting requirements would result in excessive paperwork for the owner or operator. These commentators suggested basing the reporting requirements on hourly averages of the monitoring data. EPA believes that one-hour averaging periods would not produce values that would meaningfully relate to the operation of the fabric filter collector and would not be useful for comparison with Method 9 observations. In light of the revision of Method 9 to base compliance on six-minute averages, all six-minute periods in which the average opacity is three percent or greater shall be reported as periods of excess emissions. EPA does not believe that this requirement will result in an excessive burden for properly operated and maintained facilities.

(6) *Test methods and procedures.* Two commentators questioned the precision and accuracy of Method 5 of Appendix A to this part when applied to gas streams with particulate matter concentrations less than 12 mg/dscm. EPA has reviewed the sampling and analytical error associated with Method 5 testing of low concentration gas streams. It was concluded that if the recommended minimum sample volume (160 dscf) is used, then the errors should be within the acceptable range for the method. Accordingly, the recommended minimum sample volumes and times of the proposed regulation are being promulgated unchanged.

Three commentators questioned what methodology was to be used in testing of open or pressurized fabric filter collectors. These commentators advocated that EPA develop a reference test method for testing of pressurized fabric filter collectors. From EPA's experience, development of a single test procedure for representative sampling of all pressurized fabric filter collectors is not feasible because of significant variations in the design of these control devices. Test procedures for demonstrating compliance with the standard, however, can be developed on a case-by-case basis. The promulgated regulation does require that the owner or operator design and construct the control device so that representative measurement of the particulate matter emissions is feasible.

Provisions in 40 CFR 60.8(b) allow the owner or operator upon approval by the Administrator to show compliance with the standard of performance by use of an "equivalent" test method or "alternative" test method. For pressurized fabric filter collectors, the owner or operator is responsible for development of an "alternative" or "equivalent" test procedure which must be approved prior to the determination of compliance.

Depending on the design of the pressurized fabric filter collector, the performance test may require use of an "alternative" method which would produce results adequate to demonstrate compliance. An "alternative" method does not necessarily require that the effluent be discharged through a stack. A possible alternative procedure for testing is representative sampling of emissions from a randomly selected, representative number of compartments of the collector. If the flow rate of effluent from the compartments or other conditions are not amenable to isokinetic sampling, then subisokinetic sampling (that is, sampling at lower velocities than the gas stream velocity, thus biasing the sample toward collection of a greater concentration than is actually present) should be used. If a suitable "equivalent" or "alternative" test procedure is not developed by the owner or operator, then total enclosure of the collector and testing by Method 5 of Appendix A to this part is required.

A new paragraph has been added to clarify that during emission testing of pressurized fabric filter collectors the dilution air vents must be blocked off for the period of testing or the amount of dilution must be determined and a correction applied in order to accurately determine the emission rate of the control device. The need for dilution air correction was discussed in "Background Information for Standards of Performance: Electric Arc Furnaces in the Steel Industry" but was not an explicit requirement in the proposed regulation.

(7) *Miscellaneous.* Some commentators on the proposed standards of performance for ferroalloy production facilities (39 FR 37470) questioned the rationale for the differences between the electric arc furnace regulation and the ferroalloy production facilities regulation with respect to methods of limiting fugitive emissions. The intent of both regulations is to require effective capture and control of emissions from the source. The standards of performance for electric arc furnaces regulate collection efficiency by placing limitations on the opacity of emissions from the shop. The performance of the control system is evaluated at the shop roof and/or other areas of emission to the atmosphere because it is not possible to evaluate the performance of the collection system inside the shop. In electric arc furnace shops, collection systems for capture of charging and tapping period emissions must be located at least 30 or 40 feet above the furnace to allow free movement of the crane which charges raw materials to the furnace. Fumes from charging, tapping, and other activities rise and accumulate in the upper areas of the building, thus obscuring visibility. Because of the poor visibility within the shop, the performance of the emission collection system can only be evaluated at the point where emissions are discharged to the atmosphere. Ferroalloy electric submerged arc fur-

nace operations do not require this large free space between the furnace and the collection device (hood). Visibility around the electric submerged arc furnace is good. Consequently, the performance of the collection device on a ferroalloy furnace may be evaluated at the collection area rather than at the point of discharge to the atmosphere.

Effective date. In accordance with section 111 of the Act, these regulations prescribing standards of performance for electric arc furnaces in the steel industry are effective on September 23, 1975, and apply to electric arc furnaces and their associated dust-handling equipment, the construction or modification of which was commenced after October 21, 1974.

Dated: September 15, 1975.

JOHN QUARLES,
Acting Administrator.

Part 60 of Chapter I, Title 40 of the Code of Federal Regulations is amended as follows:

1. The table of sections is amended by adding subpart AA as follows:

* * * * *

Subpart AA—Standards of Performance for Steel Plants: Electric Arc Furnaces

* * * * *

2. Part 60 is amended by adding subpart AA as follows:

* * * * *

Subpart AA—Standards of Performance for Steel Plants: Electric Arc Furnaces

§ 60.270 Applicability and designation of affected facility.

The provisions of this subpart are applicable to the following affected facilities in steel plants: electric arc furnaces and dust-handling equipment.

§ 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 any furnace that produces molten steel and heats the charge materials with electric arcs from carbon electrodes. Furnaces from which the molten steel is cast into the shape of finished products, such as in a foundry, are not affected facilities included within the scope of this definition. Furnaces which, as the primary source of iron, continuously feed prereduced ore pellets are not affected facilities within the scope of this definition.

(b) "Dust-handling equipment" means any equipment used to handle particulate matter collected by the control device and located at or near the control device for an EAF subject to this subpart.

(c) "Control device" means the air pollution control equipment used to remove particulate matter generated by an EAF(s) from the effluent gas stream.

(d) "Capture system" means the equipment (including ducts, hoods, fans, dampers, etc.) used to capture or transport particulate matter generated by an EAF to the air pollution control device.

(e) "Charge" means the addition of iron and steel scrap or other materials into the top of an electric arc furnace.

(f) "Charging period" means the time period commencing at the moment an EAF starts to open and ending either three minutes after the EAF roof is returned to its closed position or six minutes after commencement of opening of the roof, whichever is longer.

(g) "Tap" means the pouring of molten steel from an EAF.

(h) "Tapping period" means the time period commencing at the moment an EAF begins to tilt to pour and ending either three minutes after an EAF returns to an upright position or six minutes after commencing to tilt, whichever is longer.

(i) "Meltdown and refining" means that phase of the steel production cycle when charge material is melted and undesirable elements are removed from the metal.

(j) "Meltdown and refining period" means the time period commencing at the termination of the initial charging period and ending at the initiation of the tapping period, excluding any intermediate charging periods.

(k) "Shop opacity" means the arithmetic average of 24 or more opacity observations of emissions from the shop taken in accordance with Method 9 of Appendix A of this part for the applicable time periods.

(l) "Heat time" means the period commencing when scrap is charged to an empty EAF and terminating when the EAF tap is completed.

(m) "Shop" means the building which houses one or more EAF's.

(n) "Direct shell evacuation system" means any system that maintains a negative pressure within the EAF above the slag or metal and ducts these emissions to the control device.

§ 60.272 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from an electric arc furnace any gases which:

(1) Exit from a control device and contain particulate matter in excess of 12 mg/dscm (0.0052 gr/dscf).

(2) Exit from a control device and exhibit three percent opacity or greater.

(3) Exit from a shop and, due solely to operations of any EAF(s), exhibit greater than zero percent shop opacity except:

(i) Shop opacity greater than zero percent, but less than 20 percent, may occur during charging periods.

(ii) Shop opacity greater than zero percent, but less than 40 percent, may occur during tapping periods.

(iii) Opacity standards under paragraph (a)(3) of this section shall apply only during periods when flow rates and pressures are being established under § 60.274 (c) and (f).

(iv) Where the capture system is operated such that the roof of the shop is closed during the charge and the tap, and emissions to the atmosphere are prevented until the roof is opened after completion of the charge or tap, the shop opacity standards under paragraph (a)(3) of this section shall apply when the roof is opened and shall continue to apply for the length of time defined by the charging and/or tapping periods.

(b) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from dust-handling equipment any gases which exhibit 10 percent opacity or greater.

§ 60.273 Emission monitoring.

(a) A continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the control device(s) shall be installed, calibrated, maintained, and operated by the owner or operator subject to the provisions of this subpart.

(b) For the purpose of reports under § 60.7(c), periods of excess emissions that shall be reported are defined as all six-minute periods during which the average opacity is three percent or greater.

§ 60.274 Monitoring of operations.

(a) The owner or operator subject to the provisions of this subpart shall maintain records daily of the following information:

(1) Time and duration of each charge;

(2) Time and duration of each tap;

(3) All flow rate data obtained under paragraph (b) of this section, or equivalent obtained under paragraph (d) of this section; and

(4) All pressure data obtained under paragraph (e) of this section.

(b) Except as provided under paragraph (d) of this section, the owner or operator subject to the provisions of this subpart shall install, calibrate, and maintain a monitoring device that continously records the volumetric flow rate through each separately ducted hood. The monitoring device(s) may be installed in any appropriate location in the exhaust duct such that reproducible flow rate monitoring will result. The flow rate monitoring device(s) shall have an accuracy of ±10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. The Administrator may require the owner or operator to demonstrate the accuracy of the monitoring device(s) relative to Methods 1 and 2 of Appendix A of this part.

(c) When the owner or operator of an EAF is required to demonstrate compliance with the standard under § 60.272 (a)(3) and at any other time the Administrator may require (under section 114 of the Act, as amended), the volu-

metric flow rate through each separately ducted hood shall be determined during all periods in which the hood is operated for the purpose of capturing emissions from the EAF using the monitoring device under paragraph (b) of this section. The owner or operator may petition the Administrator for reestablishment of these flow rates whenever the owner or operator can demonstrate to the Administrator's satisfaction that the EAF operating conditions upon which the flow rates were previously established are no longer applicable. The flow rates determined during the most recent demonstration of compliance shall be maintained (or may be exceeded) at the appropriate level for each applicable period. Operation at lower flow rates may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility.

(d) The owner or operator may petition the Administrator to approve any alternative method that will provide a continuous record of operation of each emission capture system.

(e) Where emissions during any phase of the heat time are controlled by use of a direct shell evacuation system, the owner or operator shall install, calibrate, and maintain a monitoring device that continuously records the pressure in the free space inside the EAF. The pressure shall be recorded as 15-minute integrated averages. The monitoring device may be installed in any appropriate location in the EAF such that reproducible results will be obtained. The pressure monitoring device shall have an accuracy of ±5 mm of water gauge over its normal operating range and shall be calibrated according to the manufacturer's instructions.

(f) When the owner or operator of an EAF is required to demonstrate compliance with the standard under § 60.272 (a)(3) and at any other time the Administrator may require (under section 114 of the Act, as amended), the pressure in the free space inside the furnace shall be determined during the meltdown and refining period(s) using the monitoring device under paragraph (e) of this section. The owner or operator may petition the Administrator for reestablishment of the 15-minute integrated average pressure whenever the owner or operator can demonstrate to the Administrator's satisfaction that the EAF operating conditions upon which the pressures were previously established are no longer applicable. The pressure determined during the most recent demonstration of compliance shall be maintained at all times the EAF is operating in a meltdown and refining period. Operation at higher pressures may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility.

(g) Where the capture system is designed and operated such that all emissions are captured and ducted to a control device, the owner or operator shall not be subject to the requirements of this section.

§ 60.275 Test methods and procedures.

(a) Reference methods in Appendix A of this part, except as provided under § 60.8(b), shall be used to determine compliance with the standards prescribed under § 60.272 as follows:

(1) Method 5 for concentration of particulate matter and associated moisture content;

(2) Method 1 for sample and velocity traverses;

(3) Method 2 for velocity and volumetric flow rate; and

(4) Method 3 for gas analysis.

(b) For Method 5, the sampling time for each run shall be at least four hours. When a single EAF is sampled, the sampling time for each run shall also include an integral number of heats. Shorter sampling times, when necessitated by process variables or other factors, may be approved by the Administrator. The minimum sample volume shall be 4.5 dscm (160 dscf).

(c) For the purpose of this subpart, the owner or operator shall conduct the demonstration of compliance with 60.272(a)(3) and furnish the Administrator a written report of the results of the test.

(d) During any performance test required under § 60.8 of this part, no gaseous diluents may be added to the effluent gas stream after the fabric in any pressurized fabric filter collector, unless the amount of dilution is separately determined and considered in the determination of emissions.

(e) When more than one control device serves the EAF(s) being tested, the concentration of particulate matter shall be determined using the following equation:

$$C_s = \frac{\sum_{n=1}^{N} (C_s Q_s)_n}{\sum_{n=1}^{N} (Q_s)_n}$$

where:

C_s = concentration of particulate matter in mg/dscm (gr/dscf) as determined by method 5.

N = total number of control devices tested.

Q_s = volumetric flow rate of the effluent gas stream in dscm/hr (dscf/hr) as determined by method 2.

$(C_s Q_s)_n$ or $(Q_s)_n$ = value of the applicable parameter for each control device tested.

(f) Any control device subject to the provisions of this subpart shall be designed and constructed to allow measurement of emissions using applicable test methods and procedures.

(g) Where emissions from any EAF(s) are combined with emissions from facilities not subject to the provisions of this subpart but controlled by a common capture system and control device, the owner or operator may use any of the following procedures during a performance test:

(1) Base compliance on control of the combined emissions.

(2) Utilize a method acceptable to the Administrator which compensates for the emissions from the facilities not subject to the provisions of this subpart.

(3) Any combination of the criteria of paragraphs (g)(1) and (g)(2) of this section.

(h) Where emissions from any EAF(s) are combined with emissions from facilities not subject to the provisions of this subpart, the owner or operator may use any of the following procedures for demonstrating compliance with § 60.272 (a)(3):

(1) Base compliance on control of the combined emissions.

(2) Shut down operation of facilities not subject to the provisions of this subpart.

(3) Any combination of the criteria of paragraphs (h)(1) and (h)(2) of this section.

* * * * *

(Secs. 111 and 114 of the Clean Air Act, as amended by sec. 4(a) of Pub. L. 91-604, 84 Stat. 1678 (42 U.S.C. 1857c-6, 1857c-9))

[FR Doc.75-25133 Filed 9-22-75;8:45 am]