

Iron and Steel MACT Rule Synopsis (download a larger version at www.moderncasting.com)

Final rule signed August 29, 2003

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Emission Source	Emission Limit or Work Practice Standard	Comment	Monitoring Requirements	Compliance Demonstration	Compliance Date
Cupolas Existing Cupolas	PM limit of 0.006 gr/dscf or total metal HAP of 0.0005 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (Note 2) repeated at least every 5 yr	3 yr from rule publication
New Cupolas	PM limit of 0.002 gr/dscf or total metal HAP of 0.0002 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (Note 2) repeated at least every 5 yr	At start-up of new cupola
All new & existing Cupolas	VOHAP limit of 20 ppmv (corrected to 10% O ₂)	Afterburners at ≈ 1300F (15 min. avg.) (Accommodations for start-up and off blast time)	Afterburner temperature (continuous)	Initial compliance stack test (Note 3) repeated at least every 5 yr	3 yr for existing cupolas, at start-up for new cupolas
Electric Melting Furnaces					
Existing Induction & Electric Arc Furnaces	PM limit of 0.005 gr/dscf or total metal HAP of 0.0004 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (Note 2) repeated at least every 5 yr	3 yr from rule publication
New Induction Furnaces	PM limit of 0.001 gr/dscf or total metal HAP of 0.00008 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (Note 2) repeated at least every 5 yr	At start-up for new furnaces
New Electric Arc Furnaces	PM limit of 0.002 gr/dscf or total metal HAP of 0.0002 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (Note 2) repeated at least every 5 yr	
All Melting Furnaces					
	Scrap Certification or	Supplier Certification: No post-consumer automotive scrap, oily turnings, plastics, mercury switches, lead or organic liquids.			1 yr from rule publication
	Scrap Selection and Inspection Program	Supplier certifies no Hg switches or Pb components and foundry inspects all incoming scrap according to written program and procedures. Also restrictions on oil and free liquids.	Written plan with heavy on-going documentation	Certify that plan has been prepared	1 yr from rule publication
Scrap Preheater					
Existing Scrap Preheaters	PM limit of 0.005 gr/dscf or total metal HAP of 0.0004 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (Note 2) repeated at least every 5 yr	3 yr from rule publication
	a) VOHAP limit of 20 ppmv (good engineering capture system or b) Direct contact gas-fired preheater or c) Scrap Certification	Implies afterburner if not b) of c), if not direct contact = afterburner		Initial compliance stack test (Note 3) Certify direct flame contact type	3 yr from rule publication 3 yr from rule publication 1 yr from rule publication
New Scrap Preheaters	PM limit of 0.001 gr/dscf or total metal HAP of 0.0008 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Start-up performance testing (Note 2) repeated at least every 5 yr	At start-up of new preheaters
	VOHAP limit of 20 ppmv (good engineering capture system) or scrap certification	Possible afterburner, if not heavy flame penetration or scrap certification		Initial compliance stack test (Note 3) Certify that plan has been prepared	1 yr from rule publication
Pouring					
Existing Pouring Stations	PM limit of 0.010 gr/dscf or total metal HAP of 0.0008 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (Note 2) repeated at least every 5 yr	3 yr from rule publication
New Pouring Stations or pouring areas	PM limit of 0.002 gr/dscf or total metal HAP of 0.0002 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Start-up performance testing (Note 2) repeated at least every 5 yr	At start-up for new lines
Mold Vent Light-Off	Mold vents spontaneously ignite or they are manually ignited	Contains procedures for igniting mold vents at pouring stations and areas if it is determined that they do not spontaneously ignite.	Documentation required.	Certify that plan has been prepared	3 yr from rule publication
Fugitive Emissions from a building or structure	Building opacity 20% opacity, except for one 6-min period per hour that does not exceed 27% opacity.	Applies to all building openings (desired to monitor uncollected pouring, cooling & shakeout)	Formal opacity readings	Initial opacity reading (Note 4) repeated every 6 months thereafter	3 yr from rule publication
Cooling and Shakeout					
New Cooling and Shakeout lines	VOHAP limit of 20 ppmv (flow weighted average)	For automated conveyor and pallet lines that use sand mold systems or automated shakeout lines that use sand mold systems	Continuous Emissions Monitoring (CEMS) required	Start-up performance stack test	At start-up
Written Plans					
Operation & Maintenance Plan	Describes capture and control systems, lists system parameters appropriate to evaluate performance and establishes operating limits for those parameters. The plan also must include requirements for system inspections, PM procedures (with schedules), and procedures for corrective actions. Bag leak detectors required on all collection devices with PM limits.	Also must contain many details of system, including damper settings, gauge settings, test points, etc.	Routine documented inspections.	Certify that plan has been prepared and that the foundry will operate equipment according to the plan. Semiannual deviation reports.	3 yr from rule publication
Mold Vent Light Off (Part of O & M Plan)		Contains procedures for igniting mold vents at pouring stations and pouring areas if it is determined that they do not spontaneously ignite.	Documentation required.	Certify that plan has been prepared. Semiannual compliance certification stating that the procedures have been followed.	3 yr from rule publication
Start-up, Shutdown & Malfunction Plan	Must meet requirements of § 63.6 (e) of NESHAP General Provisions (68 FR 32586, May 30, 2003)				3 yr from rule publication
Scrap Selection & Inspection Plan	See above, under "All Melting Furnaces"			Certify that plan has been prepared (if plan is required).	1 yr from rule publication
Furan warm box mold of core making	No methanol, as listed in the MSDS (applies to catalyst portion only)				
Triethylamine (TEA) coldbox mold or core production (new or existing facilities)	Control discharge of scrubber to 1 ppmv TEA or demonstrate a 99% control efficiency (as determined with fresh acid solution)		Scrubber parameters, including pH and liquid flow. PH <4.5 measured at end of shift.	Initial compliance stack test repeated at least every 5 yr	3 yr from rule publication

Note 1: Continuous Parametric Monitoring System (CPMS) required. Implies continuous readings available, but does not mandate continuous record. Recording frequency to be described in O & M Plan.

Note 2: To determine compliance with the metal HAP emissions limits, EPA Method 1 through 4, and either Method 5, 5B, 5D, 5F or 5I, as applicable (to measure PM) or Method 29 (to measure total metal HAP) are required.

Note 3: To determine compliance with the organic HAP limits, use EPA Method 18 to measure VOHAP, Method 25 to measure total gaseous non-methane organics (TBNMO) as hexane, or Method 25A to measure total organic compounds (TOC) as hexane.

Note 4: To measure opacity, use EPA Method 9.