Note: This is a reference cited in *AP 42, Compilation of Air Pollutant Emission Factors, Volume I Stationary Point and Area Sources.* AP42 is located on the EPA web site at www.epa.gov/ttn/chief/ap42/

The file name refers to the reference number, the AP42 chapter and section. The file name "ref02_c01s02.pdf" would mean the reference is from AP42 chapter 1 section 2. The reference may be from a previous version of the section and no longer cited. The primary source should always be checked.

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AIR POLLUTANT CONTROL TECHNIQUES FOR ELECTRIC ARC FURNACES IN THE IRON AND STEEL FOUNDRY INDUSTRY

by

Paul F. Fennelly and Peter D. Spawn

GCA/Technology Division
Burlington Road
Bedford, Massachusetts 01730

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EPA Project Officers: Naum T. Georgieff and Francis L. Bunyard

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TABLE 2.2—TYPICAL DATA ON FURNACE GASES

Type Furnace	Data Source	Size	Product	STACK GAS VOLUME SCF/ Lb Melt	SCF/ Lb Charge	Process Air Lb Air/ Lb Melt	Dilution Ratio	Max. Temp. F	STACK LOSS—SOLIDS Grains/ SCF	Lb/ Hour	Lb/Ton Charge	PARTICLE SIZE—WEIGHT Mesh	Micron	%
Cupola	Note[a]	Av of 3	Gray Iron		32-91			1200-1700	0.8-1.6	69-196	14.8-29	325		13-32
													50-25	4.8-13.3
													25-10	3.4-15.9
													10-5	1.4-13.3
													−5	4.1-10.6
Cupola	L'Anson[b]	54" I.D.	Gray Iron		67.5			1400	1.15	174	22			
Cupola (Pre Heat)	Radcliffe[c]	60" I.D.	Gray Iron					290	0.07-0.32					
Cupola (Melt Down)								914	0.52-0.84					
Cupola (Normal OP)								1076	1.24-3.45					
Cupola	Witheridge[d]		Gray Iron	7.8-23.4 (Combustion Gas)		0.5-1.5	1-10		0.2-13.5				−10	10
													−20	23
												325	−44	47
													−50	50
Cupola (Below Charge)	Wechselblatt	108" I.D.	Gray Iron				1-10		0.2-13.5	15			−10	10
Cupola	Berg	66" I.D.	Nod Iron					1000-1400	0.75-1.7	85-190	5-12	325		35-40
												−325		10-13
													−10	1-3
Arc Furnace	Allen[e]	3-6T	Stl Cstgs		120-180				0.4		6-8		−0.5	95
		50-75T	Stl Ingots							198	12			
Arc Furnace	Kane[f]		Stl Cstgs						1.0*				0.5	90
Arc Furnace	Zang[g]	3T	Stl Cstgs						0.35-0.57*					
Open Hearth	Allen		Sec Metal						0.8					
Open Hearth	Bishop[h]		Stl Mfr						0-2.0				−5.0	50
Open Hearth	Vajda[i]	225-250T	Stl Mfr						1.0	75			−1.0	50
Open Hearth	Roberts[j]	58T	Stl Mfr					1200	0.18-0.44	38-180			1-3	7.3
													0.5-1	28.4
													0.15-0.5	49.5
													−0.15	14.8
Open Hearth	Jones[k]		Stl Mfr										0.25-0.33	Mean
Brass Furnace (Average)	Allen	Variable	Brass Cstgs						0.139*	9.15			0.03-1.0	Range

* At stack temperature

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