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BUREAU OF AIR REGULATION

APPLICATION FOR AIR CONSTRUCTION PERMIT GERDAU AMERISTEEL JACKSONVILLE MILL

Prepared for:

Gerdau Ameristeel
16770 Rebar Road
Baldwin, FL 32234

Prepared By:

Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

October 2003
0337590

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2 Copies - Golder Associates Inc.

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

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I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: **Gerdau Ameristeel**
2. Site Name: **Jacksonville Steel Mill**
3. Facility Identification Number: **0310157**
4. Facility Location...:
   Street Address or Other Locator: **16770 Rebar Road**
   City: **Baldwin** County: **Duval** Zip Code: **32234**
5. Relocatable Facility? ☐ Yes ☒ No
6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **James P. Wold**
2. Application Contact Mailing Address:
   Organization/Firm: **Gerdau Ameristeel**
   Street Address: **16770 Rebur Road**
   City: **Baldwin** State: **FL** Zip Code: **32234**
3. Application Contact Telephone Numbers...
   Telephone: **(904) 226-4261** ext.**133** Fax: **(904) 266-2996**
4. Application Contact Email Address: **jwold@gerdauameristeel.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	10/3/03
2. Project Number(s):	0310157-005-AC
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

☒ Air construction permit.

Air Operation Permit

☐ Initial Title V air operation permit.

☐ Title V air operation permit revision.

☐ Title V air operation permit renewal.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

☐ Air construction permit and Title V permit revision, incorporating the proposed project.

☐ Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

☐ I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

See Attachment GA-FI-AC.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
001	Electric Arc Furnace	AC1B	

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :

   Donald R. Shumake, Vice President/General Manager

2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **Gerdau Ameristeel**
   Street Address: **16770 Rebar Road**
   City: **Baldwin** State: **FL** Zip Code: **32234**

3. Owner/Authorized Representative Telephone Numbers...
   Telephone: **(904) 266-4261** ext.**100** Fax: **(904) 266-4244**

4. Owner/Authorized Representative Email Address: **dshumake@gerdauameristeel.com**

5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

   Donald R. Shumake — Signature

   10-2-03 — Date

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):

   ☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

   ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

   ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

   ☐ The designated representative at an Acid Rain source.

3. Application Responsible Official Mailing Address...
   Organization/Firm:
   Street Address:
   City: State: Zip Code:

4. Application Responsible Official Telephone Numbers...
   Telephone: ( ) - ext. Fax: ( ) -

5. Application Responsible Official Email Address:

6. Application Responsible Official Certification:

   I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

   Signature Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **Kennard F. Kosky**
   Registration Number: **14996**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653-1500**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336-5600** ext. Fax: **(352) 336-6603**
4. Professional Engineer Email Address: **KKosky@golder.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Kennard F. Kosky — Signature

10/2/03 — Date

(seal) KK

* Attach any exception to certification statement.

** **Board of Professional Engineers Certificate of Authorization #00001670**

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **405.7** North (km) **3,350.2**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **30/16/52** Longitude (DD/MM/SS) **81/58/50**	
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **33**	6. Facility SIC(s): **3390**
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: **James P. Wold**
2. Facility Contact Mailing Address... Organization/Firm: **Gerdau Ameristeel** Street Address: **16770 Rebar Road** City: **Baldwin** State: **FL** Zip Code: **32234**
3. Facility Contact Telephone Numbers: Telephone: **(904) 226-4261** ext.**133** Fax: **(904) 266-2996**
4. Facility Contact Email Address: **wold@gerdauameristeel.com**

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name: **Donald R. Shumake, Vice President/General Manager**
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: **Gerdau Ameristeel** Street Address: **16770 Rebar Road** City: **Baldwin** State: **FL** Zip Code: **32234**
3. Facility Primary Responsible Official Telephone Numbers... elephone: **(904) 226-4261** ext.**100** Fax: **(904) 266-4244**
4. Facility Primary Responsible Official Email Address: **shumake@gerdauameristeel.com**

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☐ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☐ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☐ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
NO_x	A	N
CO	A	N
VOC	A	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☒ Attached, Document ID: **GA-FI-C1** ☐ Previously Submitted, Date:____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☒ Attached, Document ID:**GA-FI-C2** ☐ Previously Submitted, Date:____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☒ Attached, Document ID:**GA-FI-C3** ☐ Previously Submitted, Date:____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: ☐ Attached, Document ID:____ ☒ Not Applicable (existing permitted facility)
2. Description of Proposed Construction or Modification: ☐ Attached, Document ID:____
3. Rule Applicability Analysis: ☐ Attached, Document ID:____
4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.): ☐ Attached, Document ID:____ ☒ Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.): ☐ Attached, Document ID:____ ☒ Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.): ☐ Attached, Document ID:____ ☒ Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.): ☐ Attached, Document ID:____ ☒ Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.): ☐ Attached, Document ID:____ ☒ Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.): ☐ Attached, Document ID:____ ☒ Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): ☐ Attached, Document ID:____ ☒ Not Applicable

FACILITY INFORMATION

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities (Required for initial/renewal applications only):
   ☐ Attached, Document ID:_____ ☒ Not Applicable (revision application)

2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
   ☐ Attached, Document ID:_____
   ☒ Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
   ☐ Attached, Document ID:_____
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
   ☐ Attached, Document ID:_____
   ☐ Equipment/Activities On site but Not Required to be Individually Listed
   ☒ Not Applicable

5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
   ☐ Attached, Document ID:_____ ☒ Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
   ☐ Attached, Document ID:_____ ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT GA-FI-AC

APPLICATION COMMENT

ATTACHMENT GA-FI-AC

APPLICATION COMMENT

This construction permit application is for the proposed replacement of the natural gas burner/oxygen/carbon injection system of the electric arc furnace (EAF), Emission Unit 001. The facility is currently permitted under Title V Permit No. 0310157-002-AV

The Jacksonville Mill uses an EAF to melt steel scrap that eventually are cast into billets and rolled into rebar and wire. The primary energy in the EAF is delivered through carbon electrodes into the bath. Currently, four sidewall natural gas fired burners assist in the melting process. Carbon and oxygen injection into the bath is accomplished manually through the slag door. To remove impurities, lime is added to the bath and results in a foamy slag formed at the top of the EAF. The foamy slag has a secondary function of insulating the molten steel bath reducing the energy released from the top of the EAF.

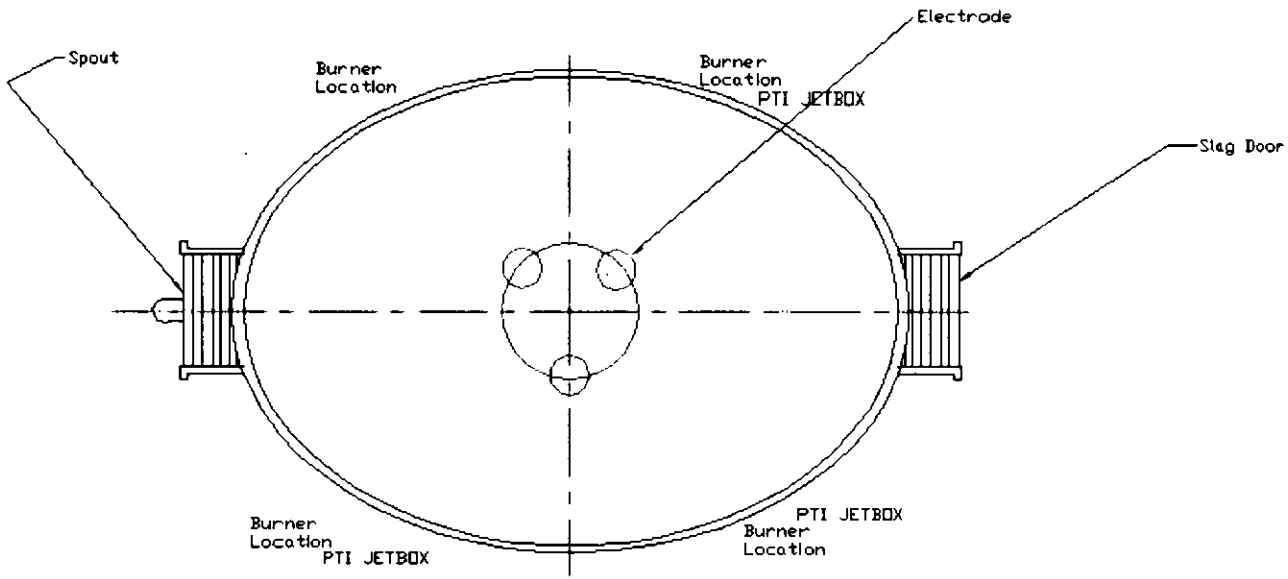
The proposed replacement equipment is functionally equivalent to the current 4 burners, 2 oxygen lances and carbon injection but will result in lower energy and material usage. The new equipment consists of 3 sets of Process Technology International (PTI) sidewall injectors (natural gas, oxygen and carbon). Figure 1 displays the location of PTI burners versus current system. The new sidewall injectors allow better control of the process resulting in a more homogeneous steel bath. This results in lower electric energy, lower natural gas usage and lower material (carbon electrodes, lime and magnesium oxide) usage. See PTI expected operational results, Attachment A. The sidewall injectors will also eliminate the manual injection of carbon and allows automatic sampling. This eliminates the need for furnace-men injecting carbon and taking samples in front of the furnace. Attachment B contains additional figures of the PTI system.

The project will not increase annual emissions since no production increase will result of this project. Indeed, the lower use of natural gas and material usage will generally lower particulate loads. In addition, closing the slag door will decrease ambient air infiltration into the furnace and result in lower NOx emissions. It will also improve safety by eliminating manual injection of carbon, oxygen and sampling.

Currently, the burners have to be replaced frequently given the harsh environment of the EAF. It is estimated that the replacement costs are about $12,000 every 3 to 6 weeks or about $144,000 per year. The replacement system has better position and will result in less frequent change (about once every 2 to 4 months). This results in an approximate cost of $48,000 per year.

This project is not a "modification" as defined under the Department's rules in 62-210.200 F.A.C. and is allowed under the provisions of the existing Title V Permit Pursuant to Rule 62-213.410(3) and Condition 32 of Appendix TV-3 of the Title V Permit. The rule provision, Changes Without Permit Revision, requires that 7 days written notice be given to the Department and EPA concerning the use of the additive and any changes resulting from its use.

Figure 1. Current Burner Locations Versus Proposed PTI Burner /Carbon/Oxygen Injection Locations



ATTACHMENT A

PTI EXPECTED OPERATIONAL RESULTS

Operating Results

Expected operational results

Utility Consumption			
For the PTI combustion system			
Fuel: Nat. Gas Company – Gerdau AmeriSteel Jacksonville			
	Unit	Current	PTI system
Power on time	min	47	47
Tap to tap time	min	74	74
Power off time	min	27	27
Tapping weight	tons	93	93
Hourly production	tons/hr	75.4	75.4
Electric power consumption	(kwh/ton)	384	350
Oxygen consumption, sump & sidewall lances	(scf/ton)	689	0.0
Oxygen consumption, burner's lance mode	(scf/ton)	0	875
Oxygen consumption, burner's firing mode	(scf/ton)	411	325
Total oxygen consumption	(scf/ton)	1100	1200
Fuel consumption (Natural Gas)	(scf/ton)	323	200
Electrode consumption	(lb/ton)	4.0	3.5
Carbon consumption	(lb/ton)	8.0	8.0
Carbon injection consumption	(lb/ton)	15.1	18.0
Average transformer power	MW	45.57	41.57
Average oxygen flow rate	(scf/hr)	82,980	90,500

Source: PTI, 2003

Note: The current operational results are average statistical. If these numbers are incorrect, the expected results and savings have to be adjusted.

Summary of calculation for the performance			
Fuel: Nat. Gas. Company – Gerdau AmeriSteel Jacksonville			
Consumables	Unit	Current	PTI System
Electrical power	kwh/ton	384	350
Electrode consumption	lb/ton	4.0	3.5
Fuel (Natural Gas)	scf/ton	323	200
Oxygen	scf/ton	1100	1200
Charged carbon	lb/ton	8.0	8.0
Carbon injection	lb/ton	15.1	18.0
Power on time	minutes	47	47

Source: PTI, 2003

Note: The consumption figures for the existing operation were taken from the information given to PTI by Gerdau AmeriSteel Jacksonville. The present total oxygen consumption is 1100 scf/ton which includes both lance and burner oxygen. The flow rate for each of the existing sidewall burners is 315 scfm for oxygen and 150 scfm for CH_4 (Natural Gas). The flow rate for the slag door burner is 875 scfm for oxygen and 400 scfm for CH_4. All the present burners operate for 30 minutes during the heat cycle. The tapping weight is 93 tons. Based on these numbers PTI calculates the burner oxygen to be 689 scf/ton and the burner CH_4 to be 323 scf/ton. The balance of the oxygen 411 scf/ton (1100 – 689) goes through the lance.

Description	Unit	Current	PTI System
Electrical power	$US	11.52	10.50
Electrode consumption	$US	3.60	3.15
Fuel (Natural Gas)	$US	1.10	0.68
Oxygen	$US	2.20	2.40
Charged carbon	$US	0.56	0.56
Carbon injection	$US	0.80	0.95
Cost of pipes for consumable lances	$US	0.00	0.00
Cost of spare tips for water-cooled lances	$US	0.15	0.00
Saving per ton	$US	X	1.68
Production per hour	ton	75.4	75.4
Production per year	ton	633,405	633,405
Saving per year on consumables	$US/year	X	1,064,120

Source: PTI, 2003

ATTACHMENT B

PTI DIAGRAMS

Key Elements

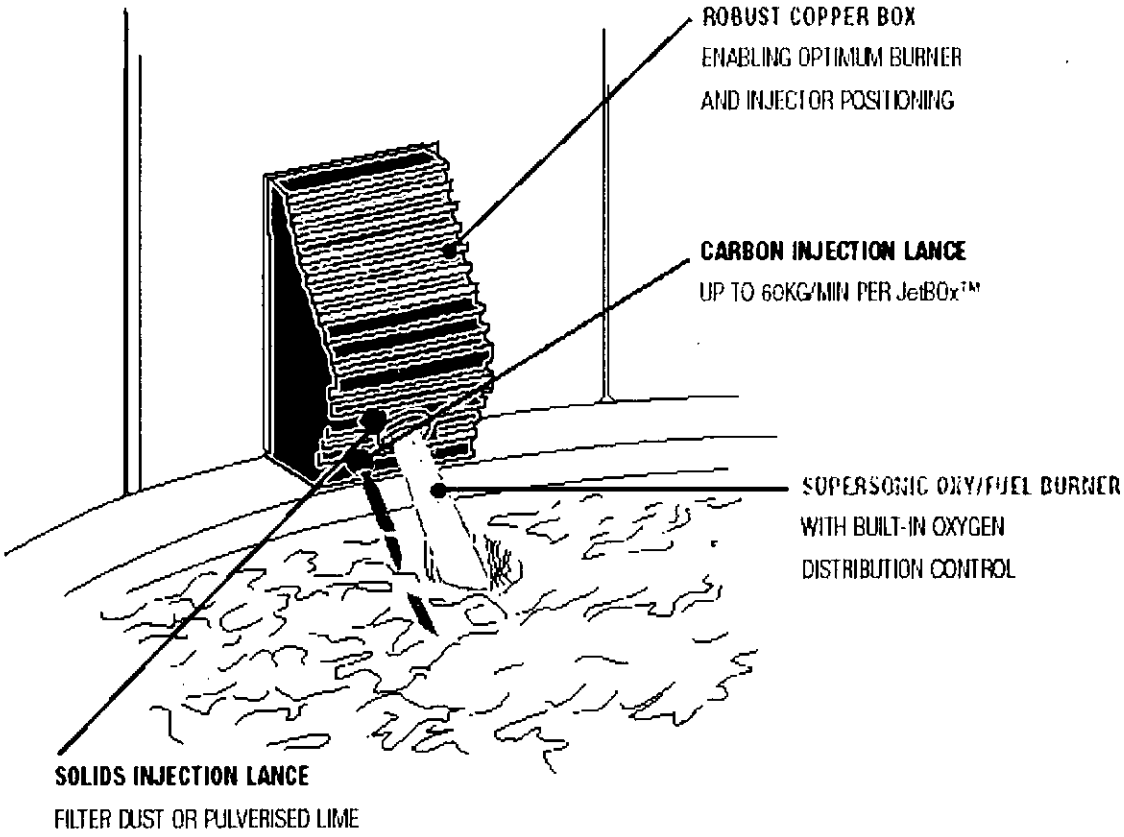
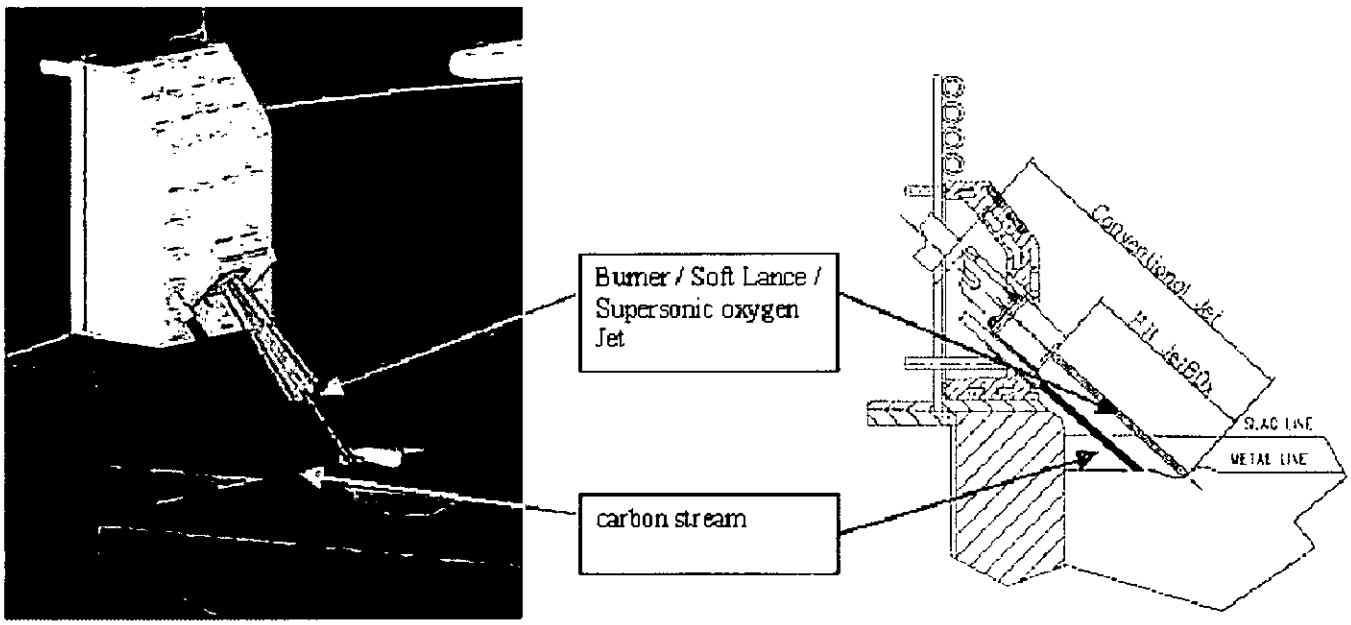
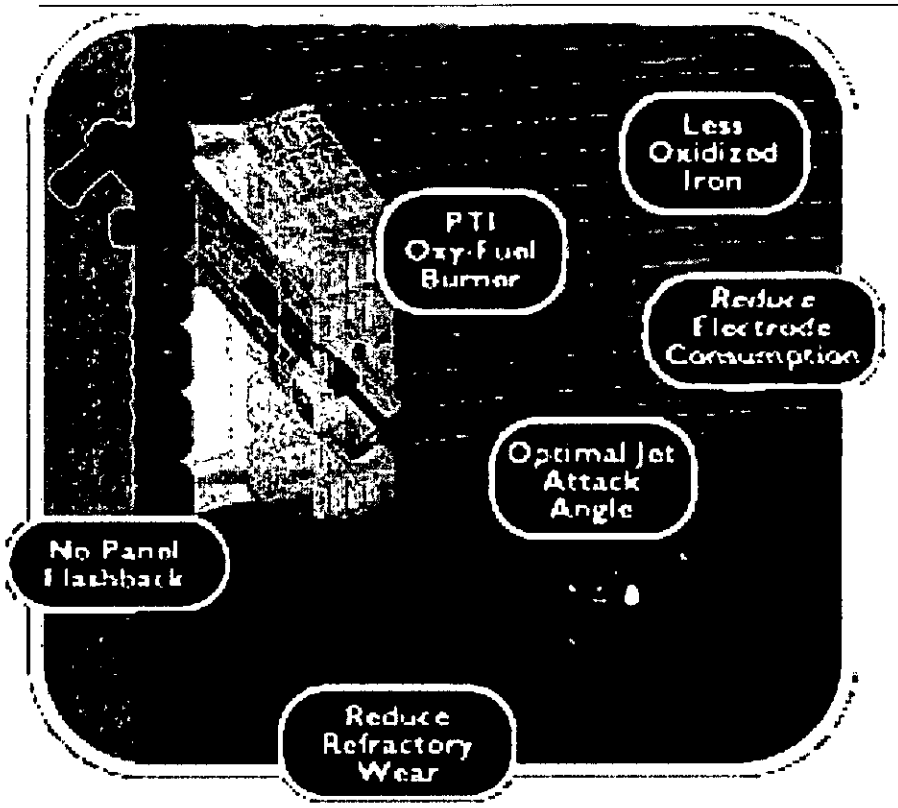
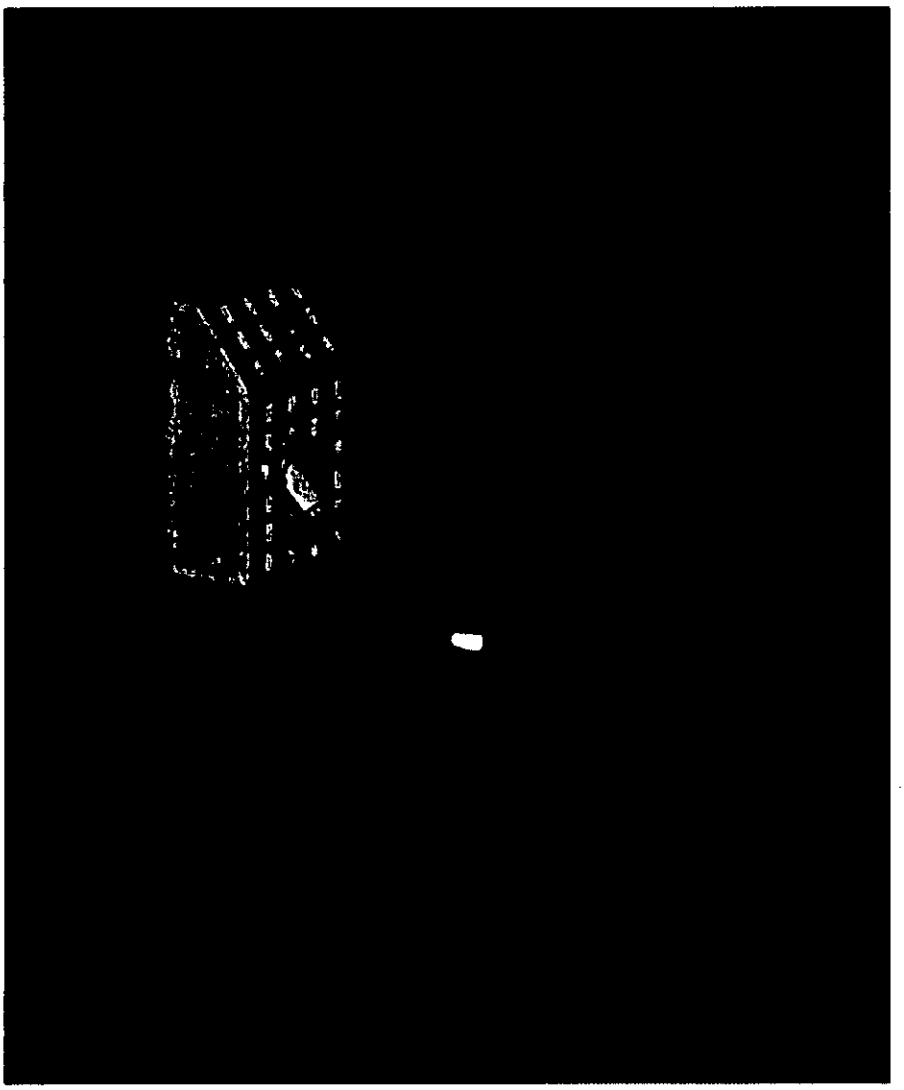
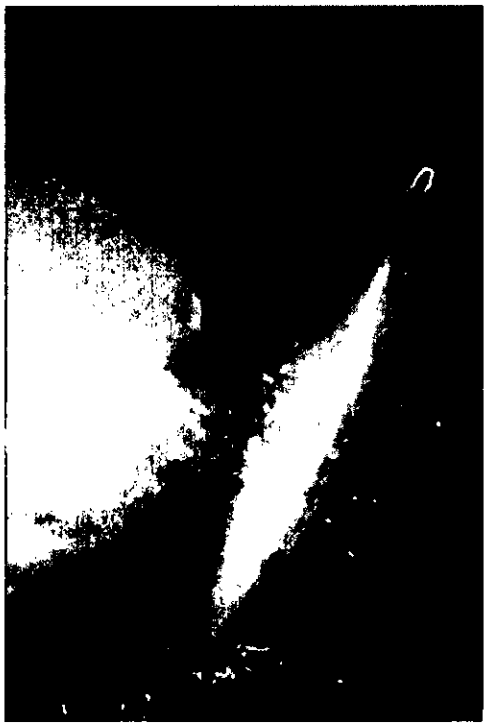


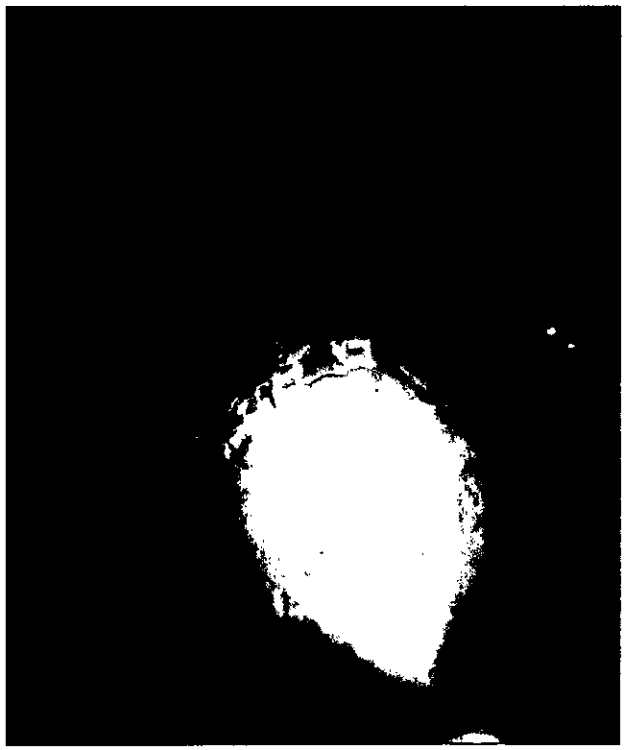
Figure 2 – JetBOx™ principle




Less Oxidized Iron
PTI Oxy-Fuel Burner
Reduce Electrode Consumption
Optimal Jet Attack Angle
No Panel Flashback
Reduce Refractory Wear

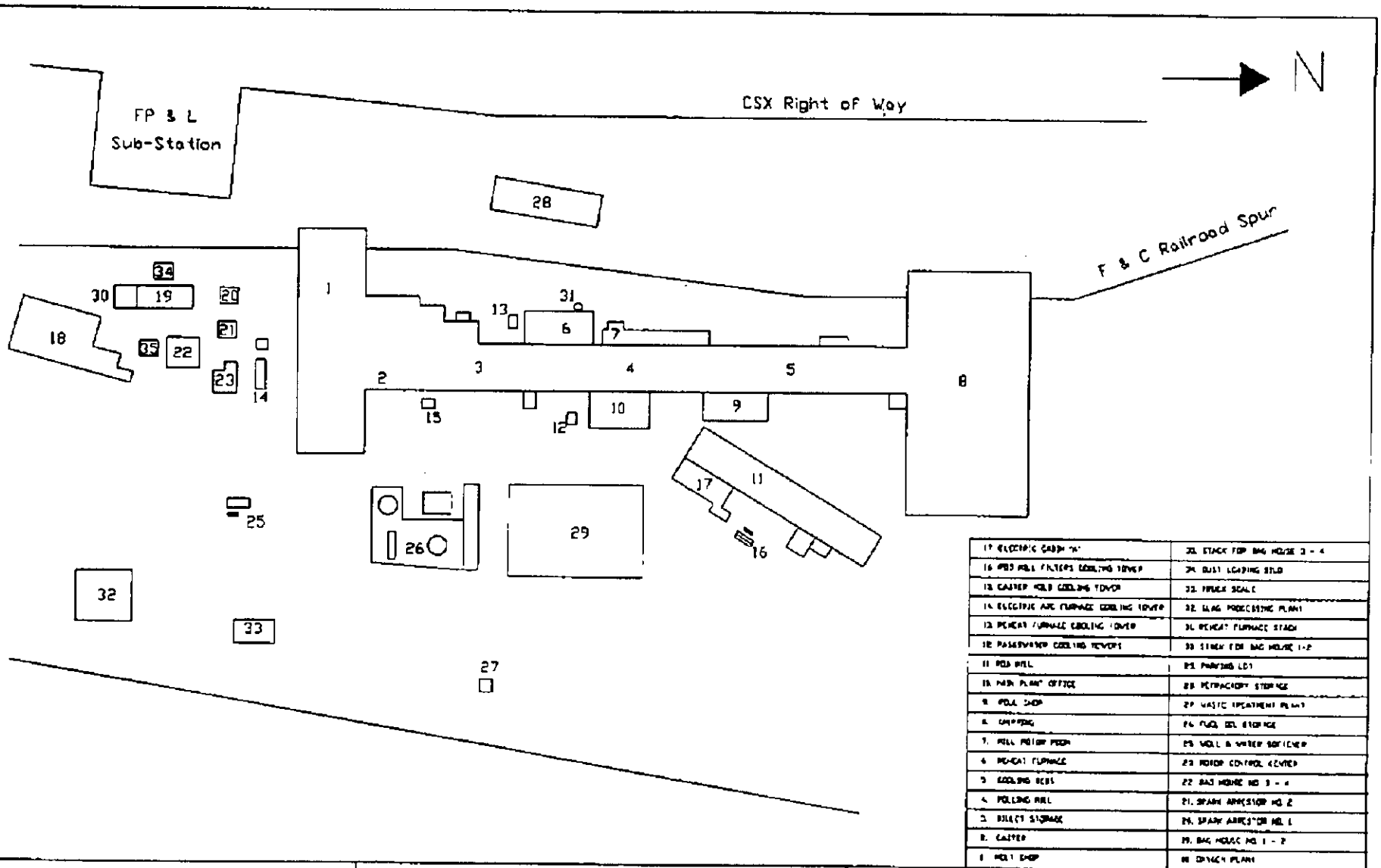






ATTACHMENT GA-FI-C1

FACILITY PLOT PLAN



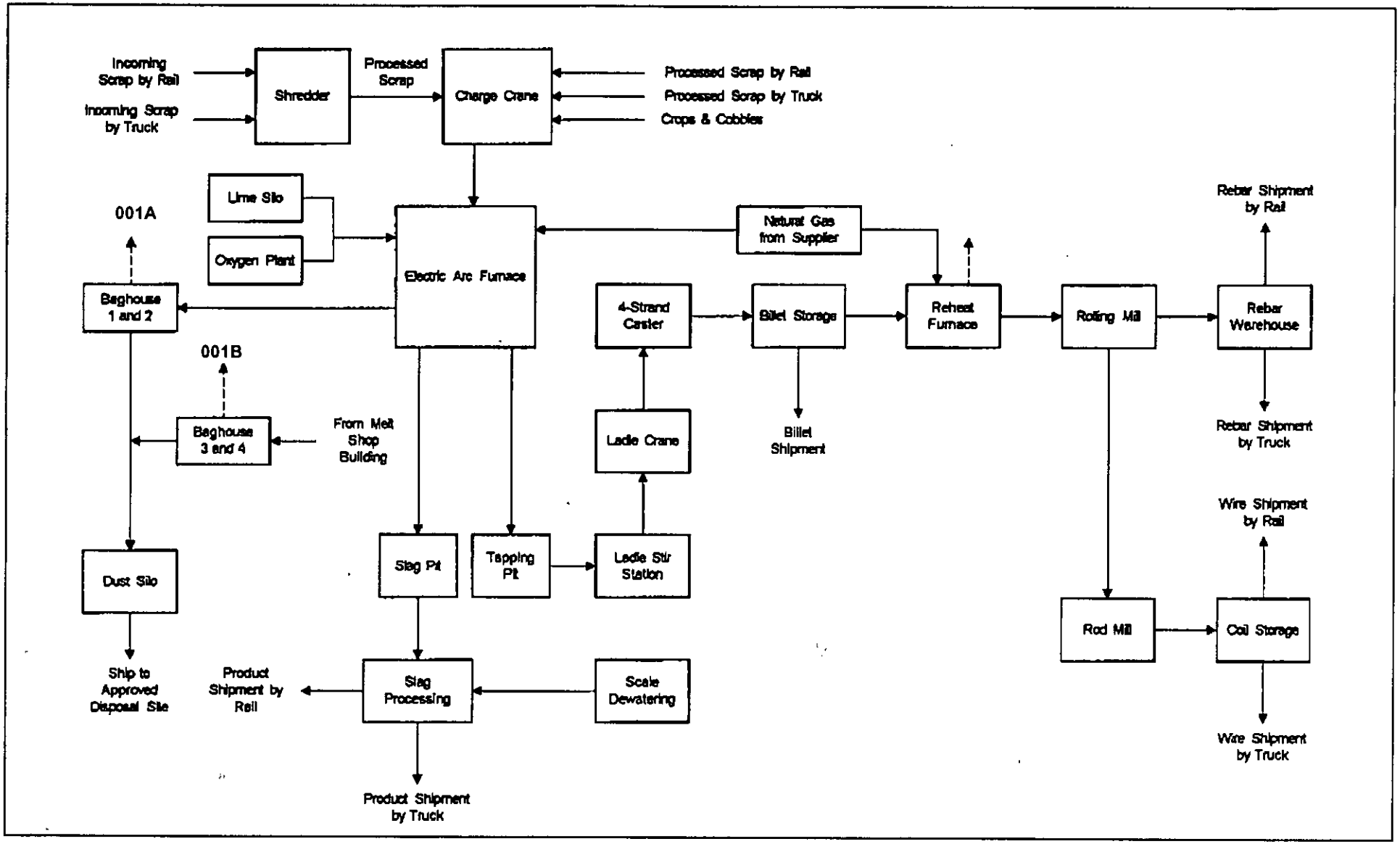
17 ELECTRIC CABIN "A"	35 STACK FOR BAG HOUSE 3 - 4
16 MES ROLL FILTERS COOLING TOWER	34 DUST LOADING SILO
13 CASTER MOLD COOLING TOWER	33 TRUCK SCALE
14 ELECTRIC ARC FURNACE COOLING TOWER	32 SLAG PROCESSING PLANT
12 REHEAT FURNACE COOLING TOWER	31 REHEAT FURNACE STACK
10 BASEMENT COOLING TOWERS	30 STACK FOR BAG HOUSE 1-2
11 ROLL MILL	29 PARKING LOT
15 MAIN PLANT OFFICE	28 REFRACTORY STORAGE
9 ROLL SHOP	27 WASTE TREATMENT PLANT
8 CHIPPING	26 FUEL OIL STORAGE
7 MILL MOTOR ROOM	25 WELL & WATER SOFTENER
6 REHEAT FURNACE	24 MOTOR CONTROL CENTER
5 COOLING BEDS	22 BAG HOUSE NO 3 - 4
4 ROLLING MILL	21 SPARK ARRESTOR NO 2
3 BILLET STORAGE	20 SPARK ARRESTOR NO 1
2 CASTER	19 BAG HOUSE NO 1 - 2
1 MOLD SHOP	18 SCRAP PLANT

AmeriSteel Corporation
Plant Layout

Process Area:	Miscellaneous/Utilities
Filename:	0337590\4\4.4\4.4.2\GA-FI-C1.pdf
Latest Revision:	10/1/2003 by JEJ

ATTACHMENT GA-FI-C2

PROCESS FLOW DIAGRAM



Attachment GA-FI-C2
Process Flow Diagram
Gerdau Ameristeel – Jacksonville Plant

Source: Golder, 2003.

Process Flow Legend

Solid/Liquid ——→

Gas - - - - - →

Golder Associates

ATTACHMENT GA-FI-C3

PRECAUTIONS TO PREVENT EMISSIONS OF CONFINED PARTICULATE MATTER

ATTACHMENT GA-FI-C3

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

Unconfined particulate matter emissions from yard operations, open stock-piling of materials, and/or materials handling operations shall be controlled by using the following reasonable precautions when visible emissions exceed 20 percent opacity. Reasonable precautions may include, but shall not be limited to, any combination of the following:

1. Reduced speed for vehicular traffic in the plant to 5 miles per hour.
2. Use of liquid resinuous adhesive or other liquid (water) dust suppressants or wetting agents;
3. Use of paving or other asphaltic materials;
4. Removal of particulate matter from paved roads and/or other paved areas by vacuum cleaning or otherwise by wetting prior to sweeping;
5. Covering of trucks, trailers, front-end loaders, and other vehicles or containers to prevent spillage of particulate matter during transport;
6. Use of mulch, hydroseeding, grassing, and/or other vegetative ground cover on barren areas to prevent or reduce particulate matter from being windblown;
7. Use of hoods, fans, filters, land similar to equipment to contain, capture, and vent particulate matter; and
8. Enclosure of covering conveyor systems.

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [1] of [1]
Electric Arc Furnace

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Meltshop Building (EAF, Continuous Caster)

3. Emissions Unit Identification Number:

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		**Oct 03**	**3390**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: **Fuchs** Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
Meltshop Building houses electric arc furnace and continuous caster; emissions controlled by Baghouse Nos. 1-2, 3-4.

EMISSIONS UNIT INFORMATION
Section [1] of [1]
Electric Arc Furnace

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Baghouse (Fabric filter – medium temperature)
   Baghouse Nos. 1-2, 3-4

2. Control Device or Method Code(s): **017**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **110 TPH (scrap steel)**	
2. Maximum Production Rate: **100 billet TPH**	
3. Maximum Heat Input Rate: **81.6** million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,000** hours/year
6. Operating Capacity/Schedule Comment: **100 billet tons steel per hour – maximum daily average** **90 billet tons steel per hour – maximum monthly average** **720,000 billet tons of steel per year.**	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **001A, 001B**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **Emissions from Baghouse Nos. 1, 2, 3, 4 that control emissions from EAF, caster, and meltshop.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **115** feet	7. Exit Diameter: **10** feet
8. Exit Temperature: **230**°F	9. Actual Volumetric Flow Rate: **305,540** acfm	10. Water Vapor: **5**%
11. Maximum Dry Standard Flow Rate: **232,000** dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Data for Baghouse No. 1-2.** **Baghouse No. 3-4 data: 115 ft stack height; 10 ft stack diameter; 320,000 acfm; 292,000 dscfm.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Industrial Process, Natural Gas**		
2. Source Classification Code (SCC): **3-90-006-99**	3. SCC Units: **MMCuft**	
4. Maximum Hourly Rate: **0.08**	5. Maximum Annual Rate: **640**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,019**
10. Segment Comment: **Permit No. 0310157-002-AV** **81.6 MMBtu/hr x 8,000 hr/yr = 652,800 MMBtu/yr** **= 640 MMCuft/yr**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	017		EL
PM_{10}	017		EL
CO			EL
NO_x			EL
VOC			EL
Lead (Pb)	017		EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **99%**
3. Potential Emissions: **15.27** lb/hour **61.1** tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0034 gr/dscf** Reference: **Permit No. 0310157-002-AV**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.0034 gr/dscf x (232,000 + 292,000 dscfm) x 60 min/1 hr x 1 lb/7,000 gr = 15.27 lb/hr = 61.1 TPY**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Total from Baghouse Nos. 1-2, 3-4. Limited to 8,000 hr/yr operation.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0034 gr/dscf**	4. Equivalent Allowable Emissions: **15.27** lb/hour **61.1** tons/year
5. Method of Compliance: **EPA Method 5.**	
6. Allowable Emissions Comment (Description of Operating Method): **Total from Baghouse Nos. 1, 2, 3, and 4. 8,000 hr/yr operation.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control: **99%**
3. Potential Emissions: **15.27** lb/hour **61.1** tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0034 gr/dscf** Reference: **Permit No. 0310157-002-AV**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.0034 gr/dscf x (232,000 + 292,000 dscfm) x 60 min/1 hr x 1 lb/7,000 gr = 15.27 lb/hr = 61.1 TPY**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Total from Baghouse Nos. 1-2, 3-4. Limited to 8,000 hr/yr operation.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0034 gr/dscf**	4. Equivalent Allowable Emissions: **15.27** lb/hour **61.1** tons/year
5. Method of Compliance: **EPA Method 5.**	
6. Allowable Emissions Comment (Description of Operating Method): **Total from Baghouse Nos. 1-2, 3-4. 8,000 hr/yr operation.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **300** lb/hour **1,080** tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **3.0 lb/ton of steel** Reference: **Permit No. 0310157-002-AV**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Permit No. 0310157-002-AV 300 lb/hr; 24-hour average**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Total from Baghouse Nos. 1-2, 3-4. Limited to 8,000 hr/yr operation.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **30 lb/ton of steel**	4. Equivalent Allowable Emissions: **300** lb/hour **1,080** tons/year
5. Method of Compliance: **EPA Method 10; 24-hour average.**	
6. Allowable Emissions Comment (Description of Operating Method): **Total from Baghouse Nos. 1-2, 3-4. 8,000 hr/yr operation.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **33** lb/hour **118.8** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.33 lb/ton of steel** Reference: **Permit No. 0310157-002-AV**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Limit from Permit No. 0310157-002-AV**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Total from Baghouse Nos. 1-2, 3-4. Limited to 8,000 hr/yr operation.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **33 lb/hr**	4. Equivalent Allowable Emissions: **33** lb/hour **118.8** tons/year
5. Method of Compliance: **EPA Method 7E.**	
6. Allowable Emissions Comment (Description of Operating Method): **Total from Baghouse Nos. 1-2, 3-4. Permit No. 0310157-002-AV.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **29.5** lb/hour **106.2** tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.295 lb/ton of steel** Reference: **Permit No. 0310157-002-AV**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Permit limit in Permit No. 0310157-002-AV.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Total from Baghouse Nos. 1-2, 3-4. Limited to 8,000 hr/yr operation.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.295 lb/ton of steel**	4. Equivalent Allowable Emissions: **29.5** lb/hour **106.2** tons/year
5. Method of Compliance: **EPA Method 18, 25, or 25A.**	
6. Allowable Emissions Comment (Description of Operating Method): **Total from Baghouse Nos. 1-2, 3-4. 8,000 hr/yr operation.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **Lead (Pb)**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.70** lb/hour **2.8** tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions: **Permit Limit in Permit No. 0310157-002-AV.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Total from Baghouse Nos. 1-2, 3-4. Limited to 8,000 hr/yr operation.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.70 lb/hr**	4. Equivalent Allowable Emissions: **0.70** lb/hour **2.8** tons/year
5. Method of Compliance: **EPA Method 12.**	
6. Allowable Emissions Comment (Description of Operating Method): **Total from Baghouse Nos. 1-2, 3-4. 8,000 hr/yr operation.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9.**	
5. Visible Emissions Comment: **Dust handling system (dust captured by baghouse)** **NSPS, 40 CFR 60, Subpart AAa.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE99**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **Best operational practices.**	
5. Visible Emissions Comment: **Excess emissions for startup, shutdown, malfunction not to exceed 2 hours per 24-hour period. Rule 62-210.700(1) and 40 CFR 60.11(c).**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 2

1. Parameter Code: **VE**	2. Pollutant(s):
3. CMS Requirement: ☒ Rule ☐ Other	
4. Monitor Information... Manufacturer: **Spectrum** Model Number: **S41-01** Serial Number: **9935-8003**	
5. Installation Date: **06 Oct 2000**	6. Performance Specification Test Date: **12 Dec 2001**
7. Continuous Monitor Comment: **Rule 62-296.800, F.A.C.; 40 CFR 60.273a(b).** **Baghouse 1-2 stack.**	

Continuous Monitoring System: Continuous Monitor 2 of 2

1. Parameter Code: **VE**	2. Pollutant(s):
3. CMS Requirement: ☐ Rule ☐ Other	
4. Monitor Information... Manufacturer: **Spectrum** Model Number: **S41-01** Serial Number: **9947-8014**	
5. Installation Date: **06 Oct 2000**	6. Performance Specification Test Date: **12 Dec 2001**
7. Continuous Monitor Comment: **Rule 62-296.800, F.A.C.; 40 CFR 60.273a(b).** **Baghouse 3-4 stack.**	

EMISSIONS UNIT INFORMATION
Section [1] of [1]
Electric Arc Furnace

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: GA-FI-C2 ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION

Section [1] of [1]

Electric Arc Furnace

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID: _____
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☒ Not Applicable

Additional Requirements Comment

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

Golder Associates

October 2, 2003

Florida Department of Environmental Protection
Twin Tower Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Attention: Mr. A.A. Linero, P.E. Administrator New Source Review Section

RE: Gerdau Ameristeel – Jacksonville Steel Mill Minor Source Permit Application
PTI Burner\Injection System

Dear Al:

Pursuant to our discussions attached you will find a minor source permit application for Gerdau Ameristeel's Jacksonville Steel Mill. The application is for the replacement of the existing EAF natural gas fired sidewall burners and slag door oxygen and carbon lances with a PTI Burner\Injection system.

Your expeditious review of this permit application will be greatly appreciated. If you have any questions or need additional information, please do not hesitate to contact Jim Wold, Gerdau Ameristeel, at 904-266-4261 Ext 133, or myself at the letterhead number.

Sincerely,

Kennard F. Kosky, P.E.
Principal

David T. Larocca
Project Engineer

Enclosures

cc: James P. Wold, Gerdau Ameristeel.
C. Kirts, NED
R. Robinson, RESD