

**Application for NSR Permit
Constellium Rolled Products Ravenswood, LLC
Ravenswood, West Virginia**

Prepared for:

Constellium Rolled Products Ravenswood, LLC
859 Century Road
Ravenswood, WV 26164-0068

Prepared by:

Project Integration, Inc.
116 Hidden Hill Road
Spartanburg, South Carolina 29301

February 2015

Table of Contents

Section 1 Introduction	1
1.1 Facility Location and Contact.....	1
Section 2 Process and Project Description	2
Section 3 Summary of Emissions	3
Section 4 Regulatory Review	4

List of Appendices

Appendix A Application for NSR Permit Forms

Attachment A Current Business Registration Certificate

Attachment B Map/ Process Flow Diagram

Attachment J Emissions Points Data Summary Sheet

Attachment L Emission Unit Data Sheet

Attachment N Emission Calculations

Attachment P Public Notice/Legal Advertisement

Section 1 Introduction

Constellium Rolled Products Ravenswood, LLC (Constellium) operates an aluminum casting and fabrication facility in Ravenswood, West Virginia. As part of the operations Constellium is proposing to install an Ingot Pusher Furnace.

The balance of this application includes the *Application for NSR Permit* for the furnace with the appropriate attachments as Appendix A.

Constellium Rolled Products-Ravenswood, Ravenswood LLC (Constellium) was issued a Title V renewal permit (R30-03500043-2013) for the Ravenswood, West Virginia facility on August 19, 2013 with an effective date of September 2, 2013. In March 2014 Constellium registered an emergency generator with the WV DEP.

Constellium retained Project Integration, Inc. (PI) to assist in preparing this application for installation of the Ingot Pusher Furnace. The application consists of a facility process description, a summary of air emissions, a regulatory review, and the completed West Virginia Department of Environmental Protection (WV DEP) NSR application forms (Appendix A).

1.1 Facility Location and Contact

The mailing address and contact for the Constellium facility is as follows:

Mr. Mike Steele
EHS Manager
mike.steele@constellium.com
Phone: 304-273-6978
Constellium Rolled Products-Ravenswood LLC
Route 2 South
Ravenswood, West Virginia 26164

Process and Project Description

The Constellium facility located in Ravenswood, West Virginia, consists of casting and fabrication operations. The existing air permit is broken up into the casting area and four separate areas in fabrication. The casting operation is located in the cast house, which contains 9 direct chill (DC) processing units, two induction furnaces, and a rotary furnace. The secondary aluminum melting process is initiated by charging aluminum scrap into the melting furnace. After the charging is complete and the solid metal has been liquefied, alloying agents and salt flux are added to the molten aluminum as required. The molten aluminum is then sampled to determine if it has obtained the desired metal properties.

If no further alloying is required, the molten aluminum is transferred from the melting furnace to the holding furnace, analyzed for quality, and then flows into the cast pit where ingots are formed.

The ingots are then transported to the fabrication facility. The fabrication area is broken into four different areas, hot line, cold line, plate, and finishing. Aluminum is sent to the various areas dependent upon the type of aluminum alloy as well as the desired final product of the aluminum. The Ingot Pusher Furnace is a semi-continuous unit used for reheating and homogenizing the aluminum ingots for hot rolling.

The Ingot Pusher Furnace is manufactured by Ebner Furnaces. A process flow diagram is included in Attachment B and additional details for the furnace are included in Attachment L.

The scheduled construction start date is May 2015 for foundation work and operator pulpits. The actual installation of the furnace will not begin until the third quarter of 2016.

Section 3 Summary of Emissions

The Ingot Pusher Furnace consists of 48 natural gas burners with each burner rated for 1.98 million British thermal units per hour (MMBtu/hr). The total furnace capacity is 95.0 MMBtu/hr. The furnace will operate at a maximum of 55 MMBtu/hr. The maximum annual operation will be 8,000 hours per year.

The manufacturer of the furnace, Ebner Furnaces, provided detailed burner information and emissions data. The data was provided in metric units which were then converted to conventional US standards.

The Ebner emissions data was based on using natural gas with a heating value of 1,136 Btu per cubic foot of natural gas (Btu/ft³). The default average natural gas heating value for the Constellium facility is 1,026 Btu/ft³. Therefore, it is necessary to burn more natural gas at Constellium to achieve the same heat release required by the process. The additional natural gas flow rate is increased by a factor of 1,136/1,026 or 1.107. The natural gas flow rate and the emissions from the furnace, as calculated by Ebner, were thus increased by a factor of 1.107 to account for the variation in the heating value of natural gas.

The burners used are two stage, low NO_x, high velocity burners.

Detail of the emission calculations is located in Attachment N. Additional details of the burners are located in Attachment L.

Section 4 Regulatory Review

The Constellium facility is a major source for Title V. Based on this renewal application, Constellium wishes to maintain its Title V status. The facility information collected and provided in this application was used to provide an outline of the applicability of both federal and state regulations. This outline identifies many of the regulations that are applicable or may be applicable to the facility. An exhaustive list of regulations and their applicability are provided in the Permit Shield review in Attachment B.

4.1 Regulation 45CSR7 (Prevent and Control PM from Manufacturing Processes)

The only PM emissions from this source are from the combustion of natural gas and are in trace quantities.

4.2 Regulation 45CSR13 (Construction Permitting)

This application is in compliance with Regulation 13.

4.3 Regulation 45CSR14 (Prevention of Significant Deterioration)

The Constellium facility is a major source under the Prevention of Significant Deterioration (PSD) regulation. The installation of the Ingot Pusher Furnace does not trigger any of the PSD significant emission increases and a PSD review is not required.

4.4 Regulation 45CSR15 (Federal NESHAPs, 40 CFR Part 61)

The Ingot Pusher Furnace is not subject to any of the 40 CFR Part 61 regulations.

4.5 Regulation 45CSR16 (Federal NSPSs, 40 CFR Part 60)

The Ingot Pusher Furnace is not subject to any of the 40 CFR Part 60, New Source Performance Standards (NSPS) regulations.

4.6 Regulation 45CSR19 (New Source Review)

The Constellium facility is a major source under the Federal New Source Review (NSR) regulation. The facility is located in an attainment area for all pollutants. Federal NSR only applies in areas of non-attainment. In areas of attainment, PSD takes precedence. Therefore, Federal NSR is not applicable at this time.

4.7 Regulation 45CSR29 (VOC & NOx Emission Reporting)

This regulation is only applicable to facilities located in Putnam, Kanawha, Cabell, Wayne, Wood, and Greenbrier counties. The Constellium facility is located in Jackson County. Therefore, this regulation is not applicable.

4.8 Regulation 45CSR30 (Title V)

Constellium presently operates under Title V permit R30-03500043-2003.

4.9 Regulation 45CSR34 (Federal NESHAPs/MACT)

The Constellium facility is a major source under Title V and is subject to the Federal NESHAPs. The Ingot Pusher Furnace is not subject to the Federal NESHAPs.

4.10 Regulation 40 CFR Part 64 (Compliance Assurance Monitoring)

The Ingot Pusher Furnace does not include a control device and is, therefore, not subject to CAM.

Appendix A
Application for NSR Permit Forms



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
 601 57th Street, SE
 Charleston, WV 25304
 (304) 926-0475
www.dep.wv.gov/daq

**APPLICATION FOR NSR PERMIT
 AND
 TITLE V PERMIT REVISION
 (OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO NSR (45CSR13) (IF KNOWN):

- CONSTRUCTION MODIFICATION RELOCATION
 CLASS I ADMINISTRATIVE UPDATE TEMPORARY
 CLASS II ADMINISTRATIVE UPDATE AFTER-THE-FACT

PLEASE CHECK TYPE OF 45CSR30 (TITLE V) REVISION (IF ANY):

- ADMINISTRATIVE AMENDMENT MINOR MODIFICATION
 SIGNIFICANT MODIFICATION

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS ATTACHMENT S TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant (as registered with the WV Secretary of State's Office): Constellium Rolled Prodcuts, LLC		2. Federal Employer ID No. (FEIN): 550686448	
3. Name of facility (if different from above):		4. The applicant is the: <input checked="" type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input type="checkbox"/> BOTH	
5A. Applicant's mailing address: PO Box 68 Ravenswood, WV 26164-0068		5B. Facility's present physical address: 859 Century Road 26164	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - If YES, provide a copy of the Certificate of Incorporation/Organization/Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A . - If NO, provide a copy of the Certificate of Authority/Authority of L.L.C./Registration (one page) including any name change amendments or other Business Certificate as Attachment A .			
7. If applicant is a subsidiary corporation, please provide the name of parent corporation: Constellium US Holdings I			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the proposed site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - If YES, please explain: Applicant owns site - If NO, you are not eligible for a permit for this source.			
9. Type of plant or facility (stationary source) to be constructed, modified, relocated, administratively updated or temporarily permitted (e.g., coal preparation plant, primary crusher, etc.): Ingot Pusher Furnace		10. North American Industry Classification System (NAICS) code for the facility: 331315	

11A. DAQ Plant ID No. (for existing facilities only): R30 – 03500043	11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): R30-03500043-2013 R13-0042, R13-0383 R13-2102 R13-2376
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All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits**, please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

Facility is located on a state road; Route 2 South

12.B. New site address (if applicable):	12C. Nearest city or town: Ravenswood	12D. County: Jackson
12.E. UTM Northing (KM): 4,309.40	12F. UTM Easting (KM): 428.23	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:

Installation of a new Ingot Pusher Furnace

14A. Provide the date of anticipated installation or change: 5/2015 - If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: / /	14B. Date of anticipated Start-Up if a permit is granted: 09/2016
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14C. Provide a **Schedule** of the planned **Installation of/Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved). **Included in Section 2 of the narrative.**

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day Days Per Week Weeks Per Year **8,000 hours per year**

16. Is demolition or physical renovation at an existing facility involved? **YES** **NO**

17. **Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18. **Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (*if known*). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance (*if known*). Provide this information as **Attachment D**.

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to **Plot Plan Guidance**) . See **Attachment B Process Flow Diagram**
 – Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F**.

23. Provide a **Process Description** as **Attachment G**.
 – Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.
 – For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I**.

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J**.

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K**.

28. Check all applicable **Emissions Unit Data Sheets** listed below:

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	
<input type="checkbox"/> General Emission Unit, specify		

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L**.

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

<input type="checkbox"/> Absorption Systems	<input type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System
<input type="checkbox"/> Other Collectors, specify		

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M**.

30. Provide all **Supporting Emissions Calculations** as **Attachment N**, or attach the calculations directly to the forms listed in Items 28 through 31.

Monitoring, Recordkeeping, Reporting and Testing Plans. Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O**. Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and **Example Legal Advertisement** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?
 YES NO

➤ If **YES**, identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "**Precautionary Notice – Claims of Confidentiality**" guidance found in the **General Instructions** as **Attachment Q**.

Section III. Certification of Information

34. Authority/Delegation of Authority. Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

- | | |
|--|---|
| <input type="checkbox"/> Authority of Corporation or Other Business Entity | <input type="checkbox"/> Authority of Partnership |
| <input type="checkbox"/> Authority of Governmental Agency | <input type="checkbox"/> Authority of Limited Partnership |

Submit completed and signed **Authority Form** as **Attachment R**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

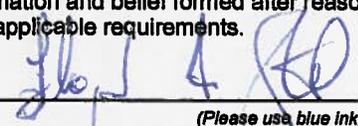
35A. Certification of Information. To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned **Responsible Official** / **Authorized Representative**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE  (Please use blue ink) DATE: 2/13/15 (Please use blue ink)

35B. Printed name of signee: LEOYD A. STEMPLE 35C. Title: CEO

35D. E-mail: buddy.stemple@constellium.com 36E. Phone: 304-273-6000 36F. FAX:

36A. Printed name of contact person (if different from above): MICHAEL E. STEELE 36B. Title: ENVIRONMENTAL MANAGER

36C. E-mail: mike.steele@constellium.com 36D. Phone: 304-273-6978 36E. FAX: 304-273-6757

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

<input checked="" type="checkbox"/> Attachment A: Business Certificate	<input type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet
<input checked="" type="checkbox"/> Attachment B: Map(s)	<input checked="" type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s)
<input type="checkbox"/> Attachment C: Installation and Start Up Schedule	<input type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s)
<input type="checkbox"/> Attachment D: Regulatory Discussion	<input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations
<input checked="" type="checkbox"/> Attachment E: Plot Plan	<input type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans
<input type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s)	<input type="checkbox"/> Attachment P: Public Notice
<input type="checkbox"/> Attachment G: Process Description	<input type="checkbox"/> Attachment Q: Business Confidential Claims
<input type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS)	<input type="checkbox"/> Attachment R: Authority Forms
<input type="checkbox"/> Attachment I: Emission Units Table	<input type="checkbox"/> Attachment S: Title V Permit Revision Information
<input type="checkbox"/> Attachment J: Emission Points Data Summary Sheet	<input type="checkbox"/> Application Fee

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY - IF THIS IS A TITLE V SOURCE:

- Forward 1 copy of the application to the Title V Permitting Group and:**
- For Title V Administrative Amendments:**
 - NSR permit writer should notify Title V permit writer of draft permit,**
- For Title V Minor Modifications:**
 - Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,**
 - NSR permit writer should notify Title V permit writer of draft permit.**
- For Title V Significant Modifications processed in parallel with NSR Permit revision:**
 - NSR permit writer should notify a Title V permit writer of draft permit,**
 - Public notice should reference both 45CSR13 and Title V permits,**
 - EPA has 45 day review period of a draft permit.**

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Attachment A
Current Business Registration Certificate

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

**ISSUED TO:
CONSTELLIUM ROLLED PRODUCTS RAVENSWOOD, LLC
PO BOX 68 859 CENTURY RD
RAVENSWOOD, WV 26164-0068**

BUSINESS REGISTRATION ACCOUNT NUMBER: 1009-1680

This certificate is issued on: 10/5/2011

***This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code***

***The person or organization identified on this certificate is registered
to conduct business in the State of West Virginia at the location above.***

This certificate is not transferrable and must be displayed at the location for which issued

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

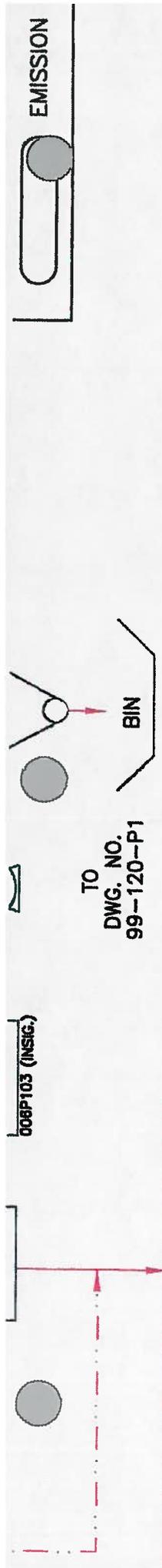
**TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of
this certificate displayed at every job site within West Virginia.**

Attachment B
Map/ Process Flow Diagram

Figure 1
Area Map
Constellium Rolled Products, LLC



Constellium Rolled Products, LLC
Route 2 South
Ravenswood, West Virginia 26164
UTM Easting 428.30 km - UTM Northing 4308.60



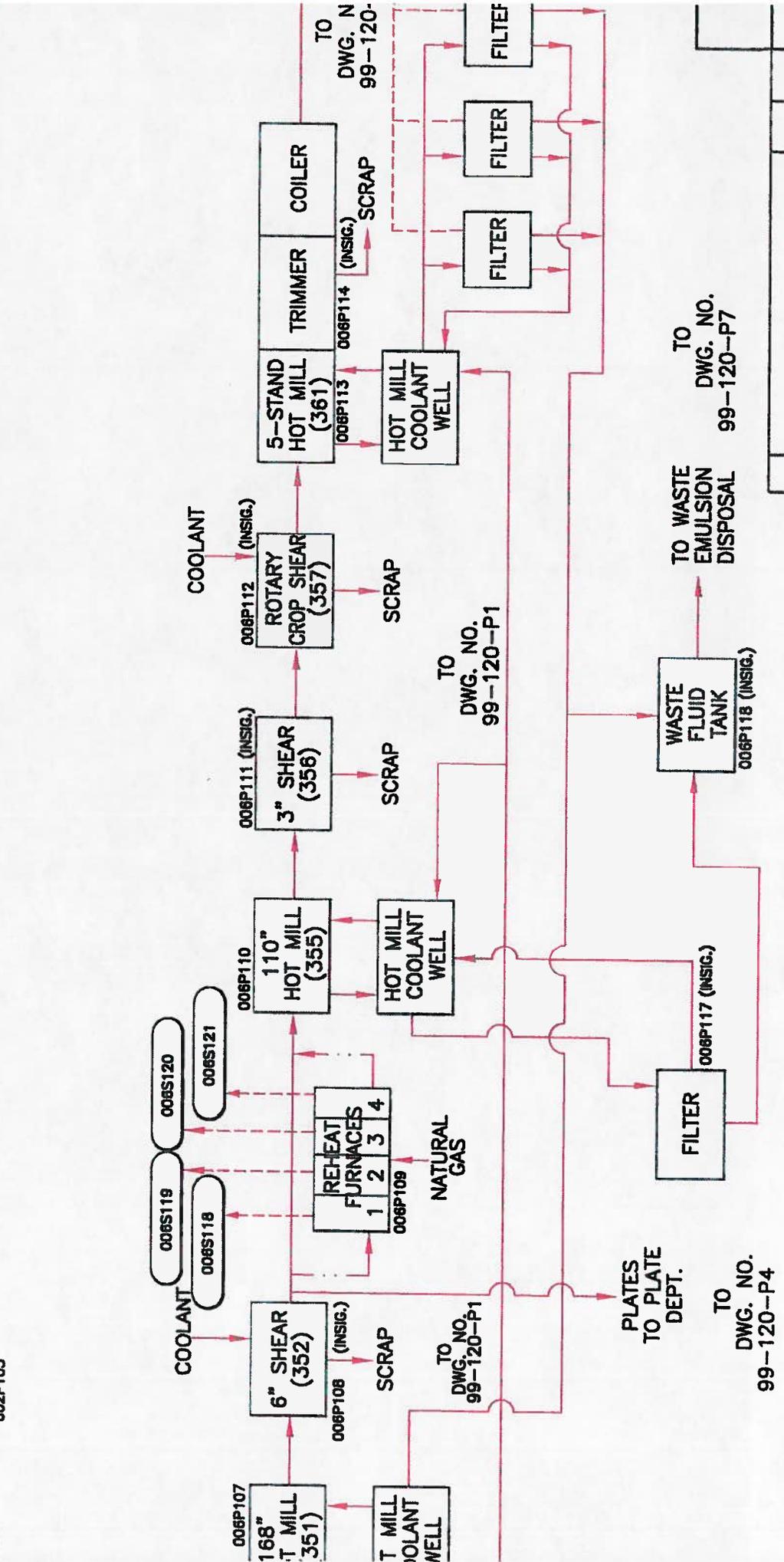
TO DWG. NO. 99-120-P1

EMISSION

BIN

006S103	006S104	006S105	006S106	006S107	006S108	006S109	006S110	006S111	006S112	006S113	006S114	006S115	006S1
A1	A2	B1	C1	C3	C5	D1	D3	D5	E1	E3	E5	F1	F3
			C2	C4	C6	D2	D4	D6	E2	E4	E6	F2	F4

27 HEAT SOAKING PITS (337)
002P105



PLATES TO PLATE DEPT.
TO DWG. NO. 99-120-P4

WASTE FLUID TANK
006P118 (INSIG.)
TO WASTE EMULSION DISPOSAL

TO DWG. NO. 99-120-P7

TO DWG. NO. 99-120-P1

TO DWG. NO. 99-120-

Attachment J
Emissions Points Data Summary Sheet

**Attachment
EMISSION POINTS DATA SUMMARY SHEET**

Table 1: Emissions Data

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ³)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
006S102	Vertical stack	006P1 21	Ingot Pusher	N/A	N/A	N/A	N/A	NO _x CO	6.25 4.13	25.0 16.5	6.25 4.13	25.0 16.5	Gas Gas	EE EE	75 ppm 80 ppm

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

- Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.
- Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).
- List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, all applicable Greenhouse Gases (including CO₂ and methane), etc. DO NOT LIST H₂, H₂O, N₂, O₂, and Noble Gases.
- Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).
- Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m³) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO₂, use units of ppmv (See 45CSR10).

Attachment L
Emission Unit Data Sheet

**Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL**

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 006P121

1. Name or type and model of proposed affected source:

Ingot Pusher Furnace, Direct fired on natural gas.

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

15 tons of ingot per hour

4. Name(s) and maximum amount of proposed material(s) produced per hour:

15 tons of ingot per hour

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

N/A

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

Natural Gas; 55 MMBtu/hr

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

Pipeline gas; Ash and sulfur are negligible.

(c) Theoretical combustion air requirement (ACF/unit of fuel):

10 @ 750 °F and psia.

(d) Percent excess air: 15

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

Two-Stage High-Velocity Burner. 48 burners each rated for 1.98 MMBtu/hr.
Details of burner attached

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

N/A

(g) Proposed maximum design heat input: 55 MMBtu/hr × 10⁶ BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	47.6
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8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@	°F and	psia
a. NO _x	6 lb/hr	grains/ACF
b. SO ₂	0.03 lb/hr	grains/ACF
c. CO	4 lb/hr	grains/ACF
d. PM ₁₀	0.41 lb/hr	grains/ACF
e. Hydrocarbons	0.59 lb/hr	grains/ACF
f. VOCs	0.30 lb/hr	grains/ACF
g. Pb	5E-07 lb/hr	grains/ACF
h. Specify other(s)	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
 Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING
 N/A

RECORDKEEPING
 N/A

REPORTING
 Annual Emissions Inventory

TESTING
 N/A

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Heat treatment furnace facilities for the aluminum industry

HICON® pusher-type furnaces for ingots

EBNER HICON® pusher-type furnaces are the most modern available for reheating and homogenizing aluminum ingots for hot rolling. In contrast to conventional furnaces (such as soaking pits) the HICON® pusher-type furnace is a semi-continuous operating facility. HICON® pusher-type furnaces achieve the best possible transfer of energy to the charge using high convection technology, which incorporates powerful function-specific recirculation fans and a finely-tuned baffle system.

HICON® pusher-type furnaces feature the following characteristics:

- short heating-up times
- fully automatic operation of the facility
- low energy consumption
- straightforward operation and process control
- temperature uniformity throughout the whole charge of < 6K
- long service life of key components
- no damage to ingot surfaces
- low maintenance

In addition to supplying the heat treatment technology EBNER also supply the ingot handling equipment and the process control systems. In addition EBNER can supply pusher optimization software (POS) to increase throughput while reducing energy consumption at the same time as contributing to quality assurance. By connecting the POS to the customer's existing production planning system it is possible to optimize the whole production line.

EBNER



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FN 367676w Landesgericht Linz
ARA-Nr.: 7898
DVR: 0006939
UID-Nr.: ATU86681101



Aerospace and Transportation

CONSTELLIUM ROLLED PRODUCTS
RAVENSWOOD, LLC
859 Century Road
Ravenswood, WV 26164-0068
USA

Ihr Zeichen
vour reference

Ihr Schreiben
vour message

Unser Zeichen
our reference

Unser Hausruf
extension

Leonding.

pk/gmar

03.11.2014

BURNER CERTIFICATE

burner type:	161490 - two stage-high velocity burner
max. rating:	580 kW
standards:	EN 746-2 - 2010-10
fuel gas pressure:	46 mbar
combustion air pressure:	32 mbar
fuel gas:	natural gas or LPG/AIR-mixture
control range:	10 % - 100 %; ON/OFF
ignition:	ignition electrode 7,5 kV
supervision:	ionisation
NO_x-emissions for natural gas at 5 % O₂:	
with preheated air at 400 °C,	
without stack gas admixing:	less than 120 ppm
with stack gas admixing:	less than 75 ppm
with cold air:	approx. 30 ppm

The emission pattern is dependant on the particular conditions of use and type of operation and may only be considered in the context of the whole plant.

Ignition, flame stability, etc. are insured with the components shown on the schematic combustion system.

**EBNER-Industrieofenbau
Gesellschaft m.b.H.**

ppa Josef Lexmüller

(Executive Vice President Engineering and Commissioning)

I.v. Johannes Mastbroek

(Senior Manager Atmosphere Engineering)



TWO-STAGE HIGH-VELOCITY BURNER

for natural gas, LPG/air mixtures, with swirl disc
type 161490

General:

equipped with direct ignition and ionization flame supervision
wide control range
for hot and cold air
high speed flame
low emission by virtue of optimized combustion

Technical description:

max. rating: 580 kW
control range: 10 % to 100 %; ON/OFF
suitable for natural gas or LPG/air mixtures
fitted with 2 identical electrodes, for ignition and ionization flame supervision. The electrodes can be replaced without having to remove the burner insert.
Suitable for combustion air temperatures of up to 450 °C.
electrode material: Kantal A1
burner tube material: 1.4828; front section: 2.4879
The burner is ignited at a setting of 30 %.
ignition voltage required: 7.5 kV
The fuel gas and combustion air pressures can be checked at two separate sampling connections at the burners.

Emission:

The emission level depends on the operating conditions and must be assessed in connection with the overall facility. More detailed information on emission is available on request.

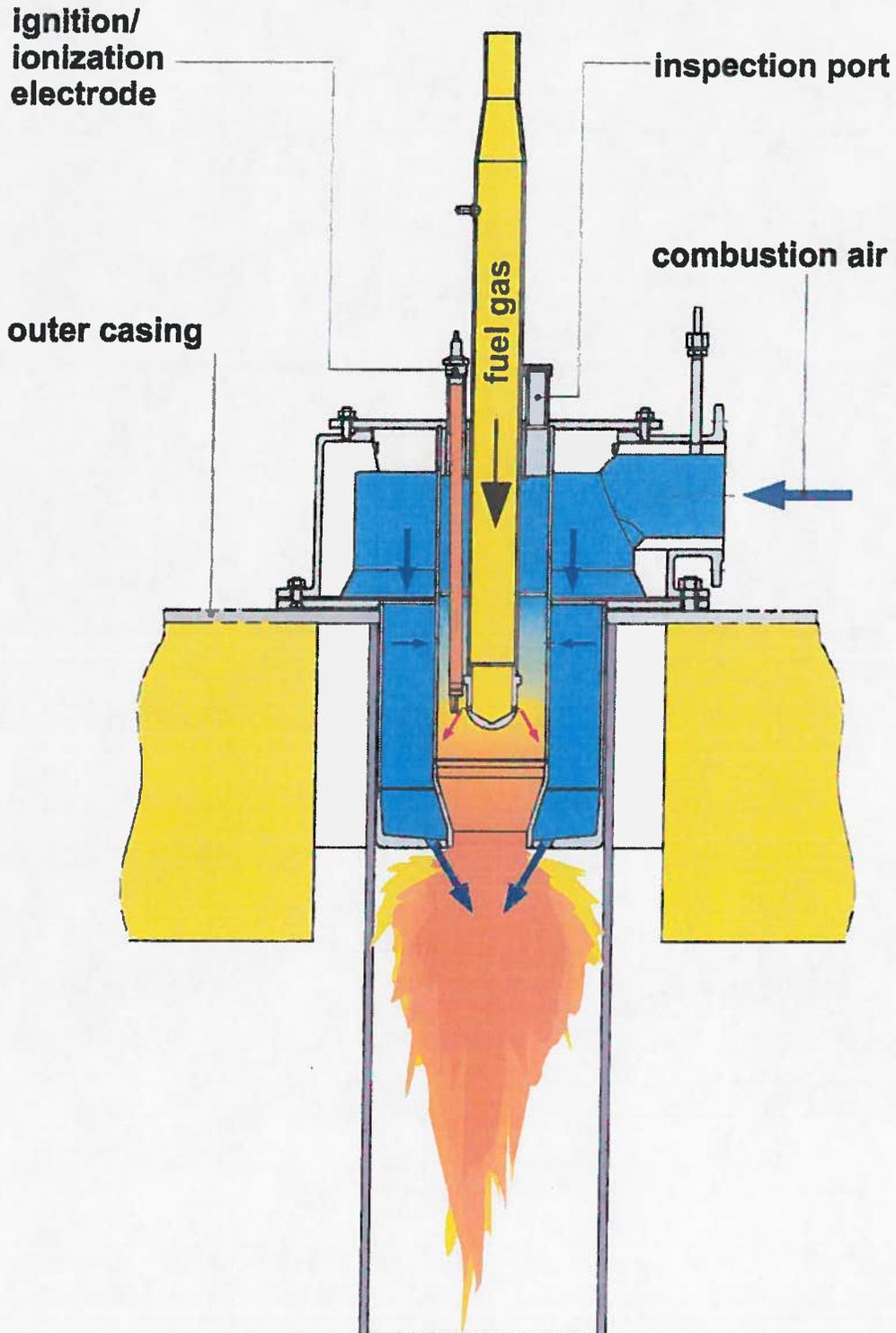
• Low NO_x emission by virtue of two-stage combustion:

In the case of gas-fired burners, the NO_x emission depends on the flame temperature, the dwell time of the gas in the burner and the oxygen and nitrogen concentrations. If the temperature of the combustion air is very high, the flame temperature is also very high which in turn results in very high NO_x emissions. By virtue of two-stage combustion the NO_x emission of this burner is reduced considerably. In the first stage only a portion of the combustion air (primary air) is admixed with the fuel gas, resulting in partial combustion only. The oxygen deficiency not only reduces the flame temperature but also results in a considerable reduction of the NO_x emission. The secondary air required for complete combustion of the fuel gas is introduced to the products of combustion in the second stage. By virtue of the pulsing action of the flame, exhaust gas is drawn into the flame, thus reducing the temperature. This design makes it possible to keep the NO_x emission levels well below the threshold specified in the TA-Luft standard.

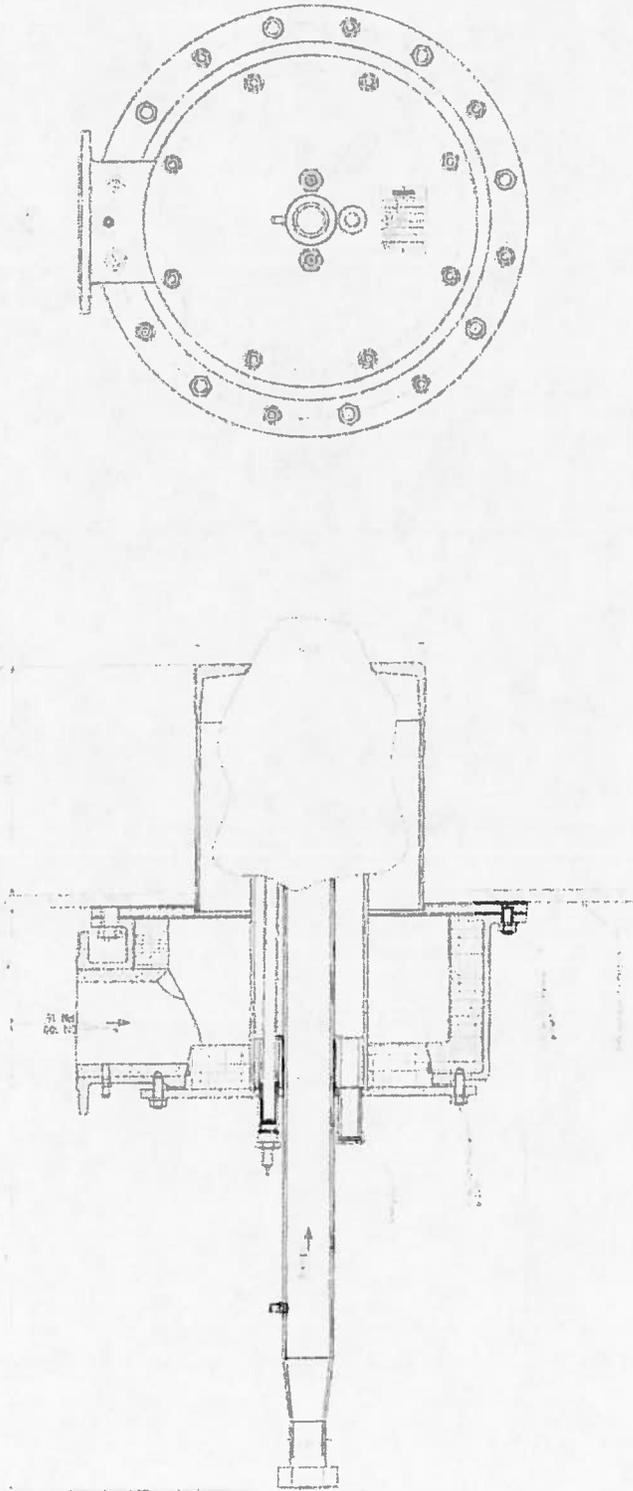
• Temperature of components:

The temperature of the individual burner components has been investigated during extensive tests. It was found that even at high workload space and combustion air temperatures, the temperatures of the burner components are lower than the workload space temperature. Two-stage combustion not only reduces the temperature in the combustion chamber of the burner but the admixing of secondary air reduces the temperature of the burner components. For this reason this burner is suitable for workload space temperatures of up to 700 °C.

EBNER HICON® pusher-type furnace
Two-stage high-velocity low NO_x burner



Dimensions and design not binding !



EBNER		MAX	
Maschinenbau Industriemaschinen Industriemaschinen		GEMÄSS DIN EN ISO 9001:2015	
Name: _____ Adresse: _____ Telefon: _____		Datum: _____ Zeichnung: _____ Blatt: _____	
Zeichner: _____ Geprüft: _____ Freigegeben: _____		Kunden-Nr.: _____ Projekt-Nr.: _____ Zeichnung-Nr.: _____	

Attachment N

Emission Calculations

Constellium NSR Permit Application Emission Calculations - Attachment N

Ebner Calculations: S-49 cycles only

Exhaust Gas Flow Rate, Nm ³ /y 135,261,642					
Exhaust Gas Composition	%	Density, kg/m ³	Nm ³ /y	kg/y	Metric Tons/Year
CO ₂	8.5	1.977	11,497,240	22,730,043	22,730.04
N ₂	73	1.25	98,740,999	123,426,248	123,426.25
O ₂	3.4	1.429	4,598,896	6,571,822	6,571.82
H ₂ O	15.1	0.804	20,424,508	16,421,304	16,421.30
NO _x	75	2.02	10,145	20,492	20.49
CO	80	1.25	10,821	13,526	13.53
Total	100	N/A	135,282,608	169,183,436	169,183.44

Converted to US Standards

Exhaust Gas Flow Rate, SCF/year 4,776,088,579					
Exhaust Gas Composition	ft ³ /year	SCFH	SCFM	lb/year	US Tons/Year
CO ₂	405,967,529	50,746	846	50,119,744	25,059.87
N ₂	3,486,544,663	435,818	7,264	272,154,878	136,077.44
O ₂	162,387,012	20,298	338	14,490,868	7,245.43
H ₂ O	721,189,375	90,149	1,502	36,208,976	18,104.49
NO _x	358,207	45	1	45,185	22.59
CO	382,087	48	1	29,825	14.91
Total	4,776,828,873	597,104	9,952	373,049,476	186,525

Emissions Corrected for Variation in Heating Value

Exhaust Gas Flow Rate, SCF/year 5,288,144,859					
Exhaust Gas Composition	ft ³ /year	SCFH	SCFM	lb/hr	US Tons/Year
CO ₂	449,492,313	56,187	936	6,937	27,746.60
N ₂	3,860,345,747	482,543	8,042	37,667	150,666.64
O ₂	179,796,925	22,475	375	2,006	8,022.23
H ₂ O	798,509,874	99,814	1,664	5,011	20,045.52
NO _x	396,611	50	1	6	25.01
CO	423,052	53	1	4	16.51
Total	5,288,964,522	661,121	11,019	51,631	206,523

	lb/10 ⁶ scf	lb/MM Btu	lb/hr	tons/year
SO ₂	0.6	0.0006	0.032	0.13
PM (Total)	7.6	0.0074	0.407	1.63
TOC	11	0.0107	0.590	2.36
VOCs	5.5	0.0054	0.295	1.18
Pb	0.0005	5E-07	0.000	0.00

AP-42 Emission Factors, Section 1.4
Burners Firing Rate = 55 MMBtu/hr

Flue gas flow rates have been corrected for heating value
Ebner natural gas heat value = 1,136 Btu/ft³. EPA default = 1,026 Btu/ft³
The flue gas flow rate to release the same Btu will be greater by 1,136/1,026 =

Attachment P
Public Notice/Legal Advertisement

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that Constellium Rolled Products, LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a NSR Permit for an Ingot Pusher Furnace located on 859 Century Road, in Ravenswood, WV in Jackson County, West Virginia.

The applicant estimates the increased potential to discharge the following Regulated Air Pollutants will be: NO_x = 25 tons per year, CO = 16.5 tons per year, PM = 1.6 tons per year, SO₂ = 0.13 tons per year, lead, formaldehyde, benzene, toluene, and xylenes = trace. Basis: 8,000 hours per year.

Startup of operation is planned to begin after approval from the West Virginia Department of Environmental Protection. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this the _____ day of _____,

By: Constellium Rolled Products, LLC
Lloyd A. Stemple
CEO Ravenswood Operations
859 Century Road)
Ravenswood, WV 26164