



**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

**RICK SCOTT
GOVERNOR**

**HERSCHEL T. VINYARD JR.
SECRETARY**

DRAFT PERMITS

PERMITTEE

Carpenter Technology Corporation
d/b/a Dynamet Incorporated
14000 49th Street
Clearwater, FL 33672

Authorized Representative:
Mr. B. F. Riffée

Air Permit Nos. 1030216-008-AC
1030216-009-AO
Permits Expire: 10/01/2013 (AC)
xx/xx/20xx (AO)

Site Name: Dynamet Incorporated
Minor Air Construction and Operation Permits
Titanium Metal Cleaning and Pickling Plant

These are the final air construction and operation permits, in one document. Construction Permit No. 1030216-008-AC is for an increase in the allowable amount of hydrofluoric acid used. Operation Permit No. 1030216-009-AO is to renew the current operation permit for the existing acid metal wash, surface oxidation and shotblasting operations. The work is conducted at the Dynamet Incorporated Plant, (Standard Industrial Classification No. 3356, Rolling, Drawing and Extruding of Nonferrous Metals, Except Copper and Aluminum). The facility is located in Pinellas County at 14000 49th Street in Clearwater, Florida. The UTM coordinates are Zone 17, 332.57 km East, and 3087.32 km North.

This final document is organized by the following sections:

- Section 1. General Information
- Section 2. Administrative Requirements and Facility-wide Specific Conditions
- Section 3. Emissions Unit Specific Conditions
- Section 4. Appendices

Due to the technical nature of the project, this document contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this document.

These air pollution permits are issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of these permits. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of these final permits, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Hillsborough County, Florida
DRAFT

Kelley M. Boatwright
District Air Program Administrator
Southwest District

Effective Date

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination, the Final Permits and the Appendices) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on the date indicated to the persons listed below.

B.F. Riffie, Dynamet, Inc., jriffie@cartech.com

Jeffrey Tomich, Manufacturing Engineer, Carpenter Technology Corporation, jtomich@cartech.com

Kenneth E. Given, PE, Air Testing & Consulting, Inc., ken@airtest.fdn.com

Gary Robbins, Environmental Program Coordinator, Pinellas County Air Quality Division, grobbins@pinellascounty.org

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

DRAFT

(Clerk) (Date)

SECTION 1. GENERAL INFORMATION (DRAFT)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

Titanium metal processing plant with mineral acid cleaning (pickling) and surface oxidation system operation, and shotblasting operation. The existing facility consists of the following emissions units.

Facility ID No. 1030216	
EU ID No.	Emission Unit Description
001	Acid Metal Cleaning (Pickling) and Surface Oxidation Operation
002	Shot Blasting Operation with Baghouse

Titanium is received at this facility as hot rolled coils. In the straight bar process the titanium is annealed, warm extruded, straightened to customer specified lengths and then processed to remove defects and to meet customer specifications. Heating takes place in eight electric furnaces. Defects are removed by grinding operations. Non-hazardous grinding sludge is collected and disposed at contracted landfill. In the Smart Coil process large coils of titanium (weighing from ~ 180 to ~ 350 pounds) go through the annealing and extrusion process before defects are removed by turning machines. The turnings are collected for recycling. The coils then go through an initial pickling process. This currently consists of dipping the coils into a series of open, ~1,200 gallon polypropylene tanks. The first is a solution of 5% hydrofluoric acid and 10% sulfuric acid (pickling tank), the second is a rinse tank. The coil is then inspected and shot blasted. The shot blasting process uses fine steel shot as blast material. The blast area is enclosed and exhausts through a Torit dust collector. After shot blasting the coil is then taken back and dipped first into the pickling tank and then into the rinse tank and then into one of two Tikote surface oxidation tanks. The coil is then rinsed by a spray hose. Emissions from each of these tanks are captured by a MAPCO Type II gray MW-300-2 fume scrubber that picks up from the back side of the tanks through louvers and into ducts that lead to the scrubber. The scrubber exhausts out the west side of the building. The titanium is then uncoiled and passes through an area where lubricant is applied.

Project Description and Affected Emission Units

An increase in hydrofluoric acid usage with the no new equipment or change in the production throughput is proposed. This project will modify the following emissions units.

EU ID No.	Emission Unit Description
001	Acid Metal Cleaning (Pickling) and Surface Oxidation Operation

NOTE: Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.

FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAPs).
- The facility has no units subject to the acid rain provisions of the Clean Air Act (CAA).

SECTION 1. GENERAL INFORMATION (DRAFT)

- The facility is not a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.
- This facility is a synthetic non-Title V source for the pollutants sulfuric acid and hydrofluoric acid. The emission limitations restriction on the types or amounts of materials processed in this permit will ensure that the facility's sulfuric acid and hydrofluoric acid emissions will be below the threshold for a Title V source.

PERMIT HISTORY/AFFECTED PERMITS

These permits replace Construction/Operation Permit Nos. 1030216-006-AO and 1030216-007-AC.

**SECTION 2. ADMINISTRATIVE REQUIREMENTS AND FACILITY-WIDE SPECIFIC
CONDITIONS (DRAFT)**

ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority - The permitting authority for this project is the Florida Department of Environmental Protection (Department), Southwest District Office's Air Resource Management Section. The mailing address and phone number is:

Florida Department of Environmental Protection
Southwest District Office
Air Permitting Program
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-470-5700

All documents related to applications for permits shall be submitted to the above address.

2. Compliance Authority - All documents related to compliance activities such as reports, tests, and notifications shall be submitted to Pinellas County Air Quality Division. The mailing address and phone number of the Local Air Program is:

Pinellas County Air Quality Division
509 East Avenue South, Suite 138
Clearwater, Florida 33760
Telephone: 727-464-4422

3. Appendices - The following Appendices are attached as part of this permit:

- a. Appendix A. Citation Formats and Glossary of Common Terms;
- b. Appendix B. General Conditions;
- c. Appendix C. Common Conditions; and
- d. Appendix D. Common Testing Requirements.

4. Applicable Regulations, Forms and Application Procedures - Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions - For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time.
[Rule 62-4.080, F.A.C.]

6. Modifications - Unless otherwise exempt by rule, the permittee shall not initiate any construction, reconstruction, or modification at the facility and shall not install/modify any pollution control device at the facility without obtaining prior authorization from the Department. Modification is defined as: Any physical change or changes in the method of operations or addition to a facility that would result in an increase in the actual emissions of any air pollutant subject to air regulations, including any not previously emitted, from any emission unit or facility.

SECTION 2. ADMINISTRATIVE REQUIREMENTS AND FACILITY-WIDE SPECIFIC CONDITIONS (DRAFT)

[Rules 62-210.200 - Definition of "Modification" and 62-210.300(1)(a), F.A.C.]

7. Annual Operating Report - On or before **April 1** of each year, the permittee shall submit a completed DEP Form 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility" (AOR) for the preceding calendar year. The report may be submitted electronically in accordance with the instructions received with the AOR package sent by the Department, or a hardcopy may be sent to the Compliance Authority, the Air Compliance Section of the Pinellas County Air Quality Division.
[Rule 62-210.370(3), F.A.C.]
8. Operation Permit Renewal Application - A completed application for renewal of the operation permit shall be submitted to the Permitting Authority with a copy to the Pinellas County Air Quality Division (Compliance Authority) no later than 60 days prior to the expiration date of the operation permit. To properly apply for an operation permit, the applicant shall submit the following:
 - a. the appropriate permit application form (*see current version of Rule 62-210.900, F.A.C. (Forms and Instructions)*), and/or FDEP Division of Air Resource Management website at: <http://www.dep.state.fl.us/air/>;
 - b. the appropriate operation permit application fee from Rule 62-4.050(4)(a), F.A.C.;
 - c. copies of the most recent compliance test reports required by Specific Condition No. **B.3.**, if not previously submitted;
 - d. copies of the most recent 3 month of records/logs specified in Specific Condition No(s). **A.3.** and **B.9.**; and
 - e. any proposed revisions to the most recently approved O & M Plan (Pinellas County Air Quality Division) (*see Facility Wide Specific Condition No. 10*).

[Rules 62-4.030, 62-4.050, 62-4.070(3), 62-4.090, 62-210.300(2), and 62-210.900, F.A.C.; Pinellas County Code, Section 58-128]

FACILITY-WIDE SPECIFIC CONDITIONS

9. Hours of Operation - The hours of operation are not limited (8760 hours per year).
[Rules 62-4.070(3) and 62-210.200(Definition of Potential to Emit), F.A.C.]
10. Operation and Maintenance Plan - The MAPCO fume scrubber and Torit dust collector shall be operated and maintained in accordance with the Operation and Maintenance (O&M) Plan submitted with the response received on July 9, 2008, to the Department's request for additional information or as revised with the prior approval from the Pinellas County Air Quality Division (PCAQD). The O&M Plan documentation shall be retained at the facility for at least 2 years and made available to the Department and PCAQD upon request. At a minimum, the O&M plan shall include:
 - a. The operating parameters of the pollution control device.
 - b. Time table for the routine maintenance of the pollution control device as specified by the manufacturer.
 - c. Time table of routine daily, weekly, bi-weekly, or monthly observations and inspections of the pollution control device.

**SECTION 2. ADMINISTRATIVE REQUIREMENTS AND FACILITY-WIDE SPECIFIC
CONDITIONS (DRAFT)**

- d. A list of the type and quantity of the required spare parts for the pollution control device which are stored on the premises.
- e. A maintenance log which will indicate, as a minimum:
 - 1. When maintenance and observations were performed.
 - 2. What maintenance and observations were performed.
 - 3. Who performed said maintenance and observations.
 - 4. Acceptable parameter ranges for each operational check.

[62-4.070(3), F.A.C.; Pinellas County Code, Section 58-128]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (DRAFT)

A. EU No. 001, Acid Metal Cleaning (Pickling) and Surface Oxidation Operation

This section of the permit addresses the following emissions unit (EU).

EU ID No.	Emission Unit Description
001	<u>Acid Metal Cleaning (Pickling) and Surface Oxidation Operation</u> – consisting of a titanium pickling and oxidation operation. The pickling process has six tanks; two cleaning tanks, two rinse tanks and two oxidizer tanks. Dip tanks are vented through a MAPCO Type II gray PVC MX-300-2 fume scrubber.

The acid cleaning (pickling) operation consists of one process line of six tanks as follows:

Acid Cleaning Tank - Aqueous solution of 5% by weight hydrofluoric acid and 10% by weight sulfuric acid

Rinse Tank - Water rinse

Acid Cleaning Tank - Aqueous solution of 5% by weight hydrofluoric acid and 10% by weight sulfuric acid

Rinse Tank -Water rinse

Oxidizer Tank (2) - 5-10% by weight aqueous solution of Tikote A (sodium fluoride). These two tanks are in parallel, not in line.

and four enclosed strand titanium processing lines with four tanks each as follows:

Acid Cleaning Tank - Aqueous solution of 10% by weight hydrofluoric acid and 15% by weight sulfuric acid

Rinse Tank - Water rinse

Oxidizer Tank - 10-15% by weight aqueous solution of Tikote A (sodium fluoride).

Rinse Tank -Water rinse

Hydrofluoric Acid is added to the acid dip tanks as make-up for conversion of the acid to titanium fluoride.

PERFORMANCE RESTRICTIONS

A.1. Permitted Capacity – The usage of mineral acids is restricted to the following, as determined by records of make-up and replenishment:

- a. Hydrofluoric Acid (HF), maximum annual rate of HF shall not exceed 18 tons/year of 49% by weight HF, (8.82 ton/year equivalent pure HF),
- b. Sulfuric Acid (H₂SO₄); maximum annual rate of H₂SO₄ shall not exceed 44.5 tons/year of 93% by weight H₂SO₄ (41.4 ton/year equivalent pure H₂SO₄).

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (DRAFT)

A. EU No. 001, Acid Metal Cleaning (Pickling) and Surface Oxidation Operation

[Rule 62-210.200 (“Potential to Emit”), F.A.C.]

*(**Permitting Note:** This rate was changed from Operation Permit No. 1030216-006-AO to differentiate between industrial strength solution and pure acid.)*

- A.2. Proper Operation of Control Equipment** - No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device (MAPCO fume scrubber) operating properly.

[Rule 62-210.650, F.A.C. (“Circumvention”); Construction Permit No. 1030216-007-AC]

RECORDKEEPING AND REPORTING REQUIREMENTS

- A.3. Mineral Acid Cleaning Recordkeeping** – In order to document compliance with the limitations of Specific Condition No.A.1., the permittee shall keep a log of products produced and chemicals consumed for all mineral acid cleaning operations for the facility. The log shall record the following at a minimum:

Daily

- a. name, facility ID No., emission unit ID No., and description (i.e., Dynamet, Inc., 1030216, EU 001, Mineral Acid Cleaning);
- b. day, month, and year;
- c. daily quantity, in pounds, of hydrofluoric and sulfuric acid makeup used in the process;

Monthly

- d. month and year;
- e. monthly total, in pounds, of hydrofluoric and sulfuric acid makeup used in the process based on c. above; and
- f. most recent consecutive 12-month period cumulative material usage rate (in tons per consecutive 12-month period) based on e. above. The tons of acid usage should indicate if it is being reported on a pure equivalent basis or at industrial concentration.

[Rule 62-4.070(3), F.A.C.]

- A.4. Documentation** - Supporting documentation (e.g., MSD sheets, “As Supplied” sheets, “As Applied” sheets, purchase orders, inventory records, production records, etc.) which include sufficient information to determine hydrofluoric and sulfuric acid percentage by weight, shall be kept at the facility.

[Rule 62-4.070(3), F.A.C.; Construction Permit No. 1030216-007-AC]

- A.5. Records Completion and Retention** - Daily records required by Specific Condition No. A.3. shall be completed within three (3) business days. The monthly records shall be completed by the end of the following month. The records shall be maintained in a form suitable for inspection by the Department upon request and shall be kept at the facility for a minimum of the most recent three (3) year period.

[Rule 62-4.070(3), F.A.C.; Construction Permit No. 1030216-007-AC]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (DRAFT)

B. EU No. 002, Shotblasting Operation

This section of the permit addresses the following emissions unit (EU).

EU ID No.	Emission Unit Description
002	<u>Shotblasting Operation</u> - Shotblasting is performed by an MMC spin blasting unit with emissions controlled by a Torit baghouse. The shot blasting process uses fine steel shot as blast material.

PERFORMANCE RESTRICTIONS

- B.1.** Permitted Capacity - The throughput of titanium metal processed in the shotblaster shall not exceed 2,500 tons in any consecutive 12-month period.
[Rule 62-210.200(“Potential to Emit”), F.A.C.; Construction Permit No. 1030216-007-AC]
- B.2.** Proper Operation of Control Equipment - No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device (Torit dust collector) operating properly. In order to provide reasonable assurance that the PM emissions from the shotblasting system are being effectively controlled by the dust collector control device, visible emissions from the dust collector exhaust shall not exceed 5% opacity.
[Rule 62-210.650, F.A.C. (“Circumvention”); Construction Permit No. 1030216-007-AC]

COMPLIANCE TESTING REQUIREMENTS

- B.3.** Compliance Tests – In order to determine compliance with the visible emissions limitation of Specific Condition No. B.2., the dust collector exhaust shall be tested to demonstrate compliance with the emissions standards for visible emissions within 60 days of permit renewal (every 5 years).
[Rule 62-297.310, F.A.C.; Construction Permit No. 1030216-007-AC]
- B.4.** Compliance Test Requirements - Compliance tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit.
[Rule 62-297.310, F.A.C.]
- B.5.** Compliance Test Method - Required compliance tests shall be performed in accordance with the following reference method.

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources

The above method is described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other method(s) may be used unless prior written approval is received from the Department.
[Rule 62-204.800, F.A.C.; and Appendix A of 40 CFR 60]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (DRAFT)

B. EU No. 002, Shotblasting Operation

- B.6. Operating Rate During Testing** – Visible emissions compliance testing shall be conducted while operating at process rates representative of normal operations. If the Department determines the tested rates are not representative of normal operating conditions, a new compliance test may be required at a higher process rate.

[Rule 62-4.070(3) F.A.C.; Construction Permit No. 1030216-007-AC]

NOTIFICATION REQUIREMENTS

- B.7. Test Notification** - The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. The notification must include the following information: the date, time, and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company, and the telephone number of the person conducting the test.

(Permitting Note - The notification should also include the relevant emission unit ID No(s), test method(s) to be used, and pollutants to be tested.)

[Rules 62-4.070(3) and 62-297.310(7)(a)9., F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

- B.8. Compliance Test Reports** - The permittee shall prepare and submit reports for all required compliance tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. The report shall include a statement of the actual process rate during the test period in tons/hour.

[Rule 62-297.310(8), F.A.C.; Construction Permit No. 1030]

- B.9. Titanium Processing Recordkeeping** – In order to document compliance with the limitations of Specific Condition No. B.1., the permittee shall keep a log of the quantity of titanium processed in the shotblaster. The log shall record the following at a minimum:

Daily

- a. name, facility ID No., emission unit ID No., and description (i.e., Dynamet, Inc., 1030216, EU 002, Shotblasting Operation);
- b. day, month, and year; and
- c. daily quantity, in pounds, of titanium processed;

Monthly

- d. month and year;
- e. monthly total, in pounds, of titanium processed based on c. above; and
- f. most recent consecutive 12-month period cumulative process rate (in tons per consecutive 12-month period) based on e. above.

[Rule 62-4.070(3) F.A.C.; Construction Permit No. 1030216-007-AC]