

AMERICAN SMELTING AND REFINING COMPANY
CENTRAL ENGINEERING DEPARTMENT
500 CRANDALL BUILDING
SALT LAKE CITY, UTAH 84101

ASARCO EL PASO, TEXAS SMELTER
REVERB. & ROASTER FLUE
STRUCTURAL STEEL CONNECTING FLUE
FABRICATION

August 11, 1966

AMERICAN SMELTING AND REFINING COMPANY
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SPECIFICATIONS
FOR
ASARCO EL PASO, TEXAS SMELTER
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A. Scope

The work consists of furnishing all plant, labor, equipment, material, supervision, coordination, and in performing all operations necessary for the steel detailing, fabrication and delivery to the job site of a structural steel flue in strict accordance with these specifications and applicable drawings. Jobsite is at the location of an 825 ft. concrete stack, Asarco Smelter, El Paso, Texas.

B. Drawings

The work is defined on the following drawings:

- EP-13077 - Plan of Flue Top and Damper Detail. Furnish all steel shown including connection to existing flue, connection to new stack, dampers, expansion joint and flue openings on top. Connection plates to existing flue to be shipped loose. Support beam for rafters on existing flue to be placed before removal of brick wall beneath.
- EP-13078 - South Elevation and Section at Dampers. Furnish all steel shown. The damper assembly is defined here, and the sample house is shown atop the flue. Typical side elevation is shown.
- EP-13079 - Lower Supporting Steel and Bottom Plate. Furnish all steel shown. Details of the flange connection to the stack are shown and the bottom plate supports are defined and located.
- EP-13080 - Stairway and Walkways to Sample House. Furnish all steel shown, including handrail, toe plates, and grating, with connections. Pedestrian access from existing flue top to Sample House is shown.
- EP-13142 - Sample House - Structural Steel. Furnish all building steel. Details of the Sample House Steel are shown including connection to the flue on which it rests. General Steel notes are on this drawing.

EP-13143 - Sample House - Corrugated Steel Closing. For reference only, to indicate a complete job on the House. This work is not part of this contract.

EP-13081 - Concrete Foundations. For reference only. Foundations are provided by the Owner.

El Paso Plant Dwg. 4120 - General Arrangement - Existing Flue. For reference only. Shows layout and Details of existing flue. New connecting flue is located between bents 21 and 22 as noted on Dwg. EP-13077. North is to the left on this drawing.

C. Work Not Included

The following work is to be performed by others:

1. Field erection of steel.
2. Reinforced concrete foundations including anchor bolts.
3. Closing for the Sample House including windows, doors and hardware.
4. Insulation of duct.
5. Finish Painting.
6. Removal of brick wall section in existing flue.

D. Material

1. Structural steel shall conform to the standard specifications of the A.S.T.M. for structural steel, A-36, latest edition.
2. All arc welding electrodes shall conform to the E-60 or E-70 series of the specifications for Mild Steel Arc-Welding Electrodes, A.S.T.M. A-233, latest edition.
3. High strength steel bolts shall conform to the latest edition of High Strength Steel Bolts for Structural Joints, A.S.T.M. A-325.
4. Other bolts shall conform to A.S.T.M. A-307.
5. Floor grating shall be painted welded bar type of $1\frac{1}{2} \times 1/8$ " longitudinal bars spaced at $1-3/16$ " and cross bars at 4" c.c., equal to Superweld Type SW, standard mesh.

6. Stair treads shall be painted, welded bar grating with 1" x 3/16" longitudinal bars spaced at 1-3/16" and cross bar at 4" c.c. with safety nosing, 9-5/8" wide equal to Superweld stair treads.

E. Workmanship

1. All workmanship shall be to the best practice in modern structural shops. Workmanship and fabrication shall be in accordance with A.I.S.C. "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings", 1963. Edition.
2. Welding - Welding shall conform to A.W.S. Standard Code for arc welding in Building Construction.

All welding shall be done by operators qualified by tests prescribed by Standard Qualification Procedure of A.W.S. for the type of work required.

Welding shall be done by direct electric process only. Equipment shall be of a type which will provide current so that the operator may produce satisfactory welds. Electrodes shall be suitable for the positions used, and for other conditions of intended use.

F. Connections

1. Shop connections shall be welded or of high strength bolting.
2. All welded connections shall conform to the 1963 edition of A.I.S.C. Manual of Steel Construction, Part 4, Table III.
3. All other connections, except those noted in the following paragraph shall be bearing type with 3/4" diameter high strength bolts and shall conform to the 1963 edition of A.I.S.C. Manual of Steel Construction, Part 4, Table I.
4. Connections for walkways, stairs, girts and purlins shall be made with 3/4" diameter machine bolts unless shown otherwise.
5. The supplier shall furnish a bolt list itemizing and identifying bolts, nuts, and washers for all field bolting excluding anchor bolts embedded in concrete.

G. Substitutions

Substitutions of sections, or modifications of details, or both shall be made only when approved by the Company's engineer.

H. Responsibility for Error

The fabricator alone shall be responsible for all errors of fabrication and for the correct fitting of the structural members shown on the shop drawings.

J. Inspection

The Owner's Inspector shall have access to the work during working hours and the Supplier shall provide proper facilities for such access and for inspection.

The inspector shall make inspections promptly. If any work should be covered up without his approval or consent it must, if he requires, be uncovered for examination at the Supplier's expense.

The examination of questioned work may be ordered by the inspector and if so ordered, the work must be uncovered by the supplier at his own expense. Any such work found not to be in accordance with the drawings and specifications shall be corrected at the supplier's expense.

Final acceptance of the work will be made after final assembly of the steel.

K. Painting

A shop coat of paint shall be applied to surfaces exposed to weather after completion of the construction project. It shall be applied in accordance with A.I.S.C. Specification Section 1.24. Paint shall be red lead or zinc chromate primer equal to Pratt & Lambert #90 or #25, or Dupont #83-008 or #67-746. Minimum dried coat thickness shall be two (2.0) mils.

Note that flue plates are to be insulated, hence will not require painting.

Paint shall be applied only to surfaces which are thoroughly dry and shall be set up, dry and well hardened when materials are loaded for delivery to the job site.

The paint shall be delivered to the job in original sealed containers which are marked with manufacturer's name and identifying brand name and number. The paint shall be used as prepared by the manufacturer without thinning or the addition of other materials.

L. Steel Detail Drawings

Detail fabrication drawings shall be prepared by the Contractor and shall receive Owner's approval before fabrication is commenced. Three (3) copies of drawings for approval shall be forwarded to:

Mr. S. T. Johnson, Chief Design Engineer
American Smelting and Refining Company
Central Engineering Department
500 Crandall Building
Salt Lake City, Utah 84101

Upon completion of the fabrication the Contractor shall forward to Mr. S. T. Johnson at the above address, the original tracings or two sets of reproducible transparencies of all his drawings prepared for the project.

M. Indemnity

The supplier shall indemnify and hold harmless the Owner from and against all claims, demands, payments, suits, actions, recoveries and judgements of every nature and description brought or recovered against him by reason of any act of omission of the supplier, his agents or employees, in the execution of this work.

CD:jj
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ASARCO
CENTRAL ENGINEERING DEPT.