TO:	APPROVED BY
Engineering	
Purchasing	
Credit	
Legal	
Insurance	
Traffic	
Comptroller	
Operating Vice President	

RETURN TO PURCHASING DEPARTMENT

PLAINTIFF'S EXHIBIT

ASA-610

AS&R "Lump Sum" Construction or Repairs Contract Form PD-20

500 - 10/57

ORDER NO. _____

CONTRACT FOR

Installation of Ventilation Systems

(Insert name of job)

at

AMERICAN SMELTING AND REFINING COMPANY's El Paso Plant

at El Paso, Texas

THIS AGREEMENT, made the 18th day of January, 19 73, by and between Southwestern Industrial Contractors and Riggers, Inc., whose address is 1730 Bassett Ave., P.O. Box 1611, El Paso, Texas 79(hereinafter called the "Contractor") and AMERICAN SMELTING AND REFINING COMPANY, a corporation of the State of New Jersey, whose address is 120 Broadway, New York 5, N.Y. and P. O. Box 1111, El Paso, Texas 79999 (hereinafter called the "Owner").

(Insert address of plant or unit)

W I T N E S S E T H :

The Contractor and the Owner, for the consideration hereinafter named, agree as follows:

Article 1. Scope of the Work

The Contractor shall furnish all plans, shop drawings, field engineering, labor, materials, transportation, tools, equipment and other facilities, except such items as are hereinafter listed as being furnished or furnished and installed by the Owner, required for Installation of Ventilation Systems at the El Paso plant of the Owner at El Paso, Texas,

(Insert name of job)

(Insert town and state)

all in accordance with the requirements and provisions of the attached "General Provisions of the Contract" and the drawings and specifications listed below and those drawings and specifications which may be supplied by the Owner or prepared by the Contractor at the Owner's direction subsequent to the execution hereof and approved by the Owner, all of which are incorporated herein by reference, made a

part hereof and, together with this Agreement, hereinafter referred to collectively as the Contract:

(List Specifications and Drawings)

Specifications for installation of ventilation systems dated December 11, 1972.

Drawing list is a part of the specification

Article 2. Time of Completion

(a) The work to be performed under this Contract shall be commenced February 1, 1973 and shall be completed by July 31, 1973, with an extension of time for completion equal to any time lost due to causes which were beyond the control of the Contractor and which were not the result of his fault or negligence. Like extension of time for completion shall also be allowed for any delays in the progress of the work caused by strikes and other labor disputes, act or neglect of the Owner or of his employees or by other Contractors employed by the Owner, act of Government, delay in the furnishing of plans and necessary information by the Owner, or by any other cause which in the opinion of the Owner entitles the Contractor to an extension of time. The Contractor shall notify the Owner in writing within five days of any occurrence which in the Contractor's opinion entitles him to an extension of time for completion.

(b) Failure to complete the work within the time stated in this Article, including any extension allowed pursuant hereto, shall entitle the Owner to deduct from the moneys due to the Contractor as liquidated damages an amount equal to $ No for each calendar day of delay in the completion of the work.

(c) If the Contractor completes the entire work covered by this Contract earlier than the date determined in accordance with Paragraph (a), the Owner shall pay the Contractor an additional amount equal to $ No for each calendar day by which the time of completion so determined has been reduced.

Article 3. The Contract Price

The Owner shall pay the Contractor for the performance of this Contract, subject to any additions and deductions herein provided for the sum of Six Hundred Thirteen Thousand Four Hundred Forty dollars ($ 613,441 Only), lawful money of the United States of America, at the time and in the manner hereinafter provided.

Article 4. Progress Payments

As soon as practicable after the first day of each calendar month the Contractor shall present to the Owner an invoice equal to the percentage of the total amount of the Contract which has been completed from the start of the job up to the end of the preceding month plus the cost of materials suitably stored at the site thereof, together with such supporting evidence as may be required by the Owner. Subject to verification of such invoice by the Owner, the Owner as soon as practicable after receipt thereof shall pay the Contractor Ninety percent (90 %) of the amount thereof, less the aggregate of previous payments; and upon completion of the entire work, a sum sufficient to increase the total payments to Ninety percent (90 %) of the contract price. In the event at any time prior payments by the Owner equal such percentage of the contract price, no further payments shall be made until final payment is due.

Article 5. Acceptance and Final Payment

(a) Upon receipt of written notice from the Contractor that the work is ready for final inspection and acceptance, the Owner shall promptly make such inspection, and if and when it finds the work acceptable under the Contract and the Contract fully performed it shall promptly issue a final certificate stating that the work provided for in this Contract has been completed. The entire balance shall be paid to the Contractor by the Owner within 30 days after the date of said final certificate.

(b) Before issuance of the final certificate, the Contractor shall submit evidence satisfactory to the Owner that all payrolls, material bills, and other indebtedness connected with the work have been paid, and that the work is free of all liens and encumbrances. In the case of disputed indebtedness or liens the Contractor may submit, in lieu of evidence of payment, a surety bond satisfactory to the Owner, guaranteeing payment of all such disputed accounts when adjudicated.

Article 6. Insurance Certificate

Prior to commencement of this work the Contractor shall file with the Owner completed certificates of insurance in form of "Insurance Certificate" attached and shall provide insurance coverage in amounts not less than those stated therein.

Article 7. Applicable Law

This Contract shall be construed and enforced in accordance with the laws of the state where the work hereunder is to be performed.

Article 8. Entirety Clause

This Contract constitutes the entire agreement between the parties, and except as may be specifically set forth herein no changes can be made herein except by an agreement in writing duly executed by the parties or their duly authorized agents.

IN WITNESS WHEREOF, the parties have executed this Contract the day and year first above written.

SOUTHWESTERN INDUSTRIAL CONTRACTORS AND RIGGERS, INC.
Contractor

By W. Clay Fiske

Title President

AMERICAN SMELTING AND REFINING COMPANY
Owner

By William A. Bannister
~~Vice President~~

Asst. Director of Purchases

General Provisions of the Contract

I N D E X

Article 1.	Notice	Page 1
Article 2.	Intent of Contract Documents	Page 1
Article 3.	Drawings and Specifications	Page 1
Article 4.	Order of Completion; Schedules	Page 2
Article 5.	Contractor's Understanding	Page 2
Article 6.	Materials, Appliances and Temporary Facilities	Page 3
Article 7.	Employees of Contractor	Page 3
Article 8.	Patents	Page 4
Article 9.	Surveys, Permits and Regulations	Page 4
Article 10.	Protection of the Public and of Work and Property	Page 5
Article 11.	Inspection of Work	Page 5
Article 12.	Supervision and Superintendence	Page 6
Article 13.	Qualification and Performance of Contractor's Employees	Page 6
Article 14.	Changes in the Work	Page 7
Article 15.	Deductions for Uncorrected Work	Page 8
Article 16.	Correction of Work before Final Payment	Page 8
Article 17.	Correction of Work after Final Payment	Page 9
Article 18.	Owner's Right to Terminate Contract	Page 9
Article 19.	Removal of Equipment	Page 10
Article 20.	Use of Completed Portions	Page 10
Article 21.	Payments Withheld	Page 11
Article 22.	Contractor's Liability Insurance	Page 11
Article 23.	Indemnity by Contractor	Page 11
Article 24.	Owner's Responsibility for Certain Casualties	Page 12
Article 25.	Damages to Owner's Property	Page 12
Article 26.	Surety Bonds	Page 12
Article 27.	Liens	Page 12
Article 28.	Assignment	Page 13
Article 29.	Coordination of Work	Page 13
Article 30.	Subcontracts	Page 14
Article 31.	Arbitration	Page 14
Article 32.	Title to the Work	Page 15
Article 33.	Use of Technical Information	Page 15
Article 34.	Cleaning Up	Page 15
Article 35.	Adaptability of Plans and Specifications	Page 16
Article 36.	Engineering Approval	Page 16

Article 1. Notice

Written notice shall be deemed to have been duly served if delivered by hand or sent by registered mail, in each case to the address or addresses of each party set forth on the first page of this Contract or at such other address subsequently designated by either party.

Article 2. Intent of Contract Documents

In case of conflict between plans and specifications, the specifications shall govern. The intention of this Contract is to include all labor and materials, equipment and transportation necessary for the proper execution of the work. Work not specifically shown on the drawings or enumerated herein but that is reasonably necessary for the proper completion of the project shall be provided by the Contractor the same as if shown on the drawings or enumerated herein. Materials or work described in words which so applied have a well-known technical or trade meaning shall be held to refer to such recognized standards.

Article 3. Drawings and Specifications

The Owner agrees to furnish without charge to the Contractor, five sets of specifications and prints of all drawings listed in the specifications. Where revised or additional drawings and specifications are prepared as hereinafter provided the Owner will furnish three sets of same to the Contractor.

The Owner agrees to furnish supplemental drawings as may be required to clarify the contract drawings. Supplemental drawings shall not enlarge nor decrease the scope of the work. Where alterations in the contract drawings and specifications affect the extent of the work, the changes shall be governed as provided in Article 14 of these General Provisions.

The Contractor agrees to furnish to the Owner for approval three sets of prints of the following drawings before proceeding with the work covered therein:

A. All of the Contractor's drawings which are made for this job.

B. Any shop drawings, detail sheets or erection diagrams required for any phase of the work.

C. Certified dimension sheets, wiring diagrams and performance curves covering any equipment purchased by the Contractor for the job.

The Contractor shall make any corrections required by the Owner in drawings submitted for his approval. The Owner's approval as to design of such drawings shall not relieve the Contractor of responsibility for errors or discrepancies of any sort.

The Contractor also agrees to furnish to the Owner five sets of operation and installation instructions and parts lists for all equipment furnished by the Contractor, not later than the date the equipment is shipped, including two certified copies of dimension sheets, wiring diagrams and performance curves of same.

As soon as the drawings referred to in subparagraphs A and B above are completed, checked and approved, the Contractor shall furnish three complete final sets of prints to the Owner.

Article 4. Order of Completion; Schedules

The Contractor shall complete any portion or portions of the work in such order of precedence as the Owner shall require, and the times of completion of the various portions or divisions of the work will be determined by schedules mutually agreed upon by the Owner and the Contractor.

Article 5. Contractor's Understanding

The Contractor shall satisfy itself as to the nature and location of the work, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions, and all other matters which can in any way affect the work under this Contract. The Contractor may examine such logs of test borings and/or records of such other underground or submarine exploration as may be available.

Article 6. Materials, Appliances and Temporary Facilities

The Owner will not supply electricity, water, light, power, steam, compressed air or other utilities required for construction purposes unless specifically so provided in the Contract. Where such items are not supplied by the Owner they shall be furnished by the Contractor, and the Contractor shall, in either case, be required to make the necessary connections, provide approved shut-off and safety devices and furnish and install all temporary lines required to bring them to the point of use.

Unless otherwise specified, all materials incorporated in the permanent work shall be new and both workmanship and materials shall be of the best quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

The Contractor shall construct and maintain all necessary temporary facilities for the completion of the work. Upon completion of the work all such facilities shall, unless the Owner shall otherwise direct, be removed from the premises and the site cleared.

Article 7. Employees of Contractor

If for any reason the Contractor's or any Subcontractor's employees or agents acquire a status imposing liability on the Owner for employer's contributions or taxes under the Federal Insurance Contributions Act, the Federal Unemployment Tax Act, any State Unemployment Tax Act, or any other Act, the Contractor shall be exclusively liable for, and shall indemnify the Owner against, the same and agrees to comply with all such laws and regulations so as to relieve the Owner from any and all liability therefor and from the responsibility of making reports or keeping records with respect thereto.

The Contractor shall at all times enforce strict discipline and good order among his employees, and shall seek to avoid employing on the work any unfit person or anyone not skilled in the work assigned to him.

Adequate sanitary facilities shall be provided and maintained by the Contractor.

Article 8. Patents

The Contractor shall indemnify and save harmless the Owner against and from any and all claims, losses, costs, damages, expenses, actions or other proceedings, growing out of or resulting from the infringement of any patent by the Contractor or any Subcontractor in the performance of this Contract, except that this provision shall not apply to patented articles or processes specified in drawings or specifications furnished by the Owner.

Article 9. Surveys, Permits and Regulations

If involved in the subject matter of this Contract, the base lines and mean datum will be established by the Owner; the control lines and levels and all general layout work will be the responsibility of the Contractor. All controls established by the Contractor shall be preserved and maintained throughout the life of the Contract.

Unless otherwise specified, the Owner shall furnish all land surveys required. Permits and licenses of a temporary nature necessary for the prosecution of the work shall be secured and paid for by the Contractor. Permits, licenses and easements for any permanent structures or any permanent changes in existing facilities shall be secured and paid for by the Owner, unless otherwise specified.

The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the drawings and specifications are at variance therewith, Contractor shall promptly notify the Owner in writing, and any necessary changes shall be adjusted as provided in the Contract for changes in the work. If the Contractor performs any work knowing it to be contrary to any such law, ordinance, rule or regulation, and without such notice to the Owner, Contractor shall bear all costs arising therefrom.

Article 10. Protection of the Public and of Work and Property

The Contractor shall provide and maintain all necessary watchmen, barricades, red lights and warning signs and take all necessary precautions for the protection and safety of employees on the work, of all other persons and of adjacent private and public property. The Contractor at all times shall maintain adequate protection of the work from damage and shall protect the Owner's property and all persons thereon from injury, damage or loss by reason of any act or omission of Contractor or any Subcontractor.

In an emergency affecting the safety of life or of the work or of adjoining property, the Contractor is, without special instructions or authorization from the Owner, hereby authorized to act at Contractor's discretion to prevent such threatened loss or injury. Contractor shall also so act if so instructed by the Owner.

Any compensation claimed by the Contractor on account of emergency work of this nature shall be determined by mutual agreement and failing which, by arbitration.

Article 11. Inspection of Work

The Owner and its representatives shall at all times have access to the work and the Contractor shall provide safe and proper facilities for such access and for inspection.

If the specifications, the Owner's instructions, laws, ordinances, or any public authority require any item of material, equipment or work to be specially tested or approved, the Contractor shall give the Owner timely notice in writing of its readiness for inspection, and if the inspection is by another authority than the Owner, of the date fixed for such inspection. Inspections by the Owner shall be promptly made, and where practicable at the source of supply.

If any work should be covered up before examination by Owner without approval or consent of the Owner, it must, if required by the Owner, be uncovered for examination and properly covered again at the Contractor's expense. Even though the Owner has examined a particular item of work, the Owner may order re-examination of such work, and if so ordered, the work must be uncovered by the Contractor. If such work is found to be in accordance with the Contract, the Owner shall pay the cost of re-examination and replacement. If such work is not in accordance with the Contract, the Contractor shall pay such cost.

Article 12. Supervision and Superintendence

The Contractor shall maintain a competent staff at all times to supervise the work.

The Contractor shall keep on the work, during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Owner. Directions by the Owner may be given to the superintendent and shall be binding on the Contractor. Directions shall be confirmed in writing upon the written request of the Contractor.

The Contractor shall use its best judgement and skill in dealing with labor matters, and take all reasonable steps to avoid labor disputes. In the event of any strike or threat of strike, slowdowns, featherbedding, or other like practices, the Contractor shall apprise the Owner of all relevant facts and implications of the particular labor problem involved, and shall consult in good faith with the Owner in an endeavor to reach a mutually satisfactory solution to such labor problem and, so far as reasonably possible, to protect the Owner against delays affecting the work or damage or losses to its other operations.

Article 13. Qualification and Performance of Contractor's Employees

The Contractor shall at all times supply a sufficient number of skilled workmen to diligently pursue the work. All workmanship and materials shall be the best in its class and shall conform to all codes, rules, regulations and ordin-

ances applying thereto. Where required by such codes, rules, regulations and ordinances, all workmen engaged in such work shall present evidence by certificate or otherwise that they are qualified to do the work in conformity with such codes, rules, regulations and ordinances. If any conflict occurs between the above mentioned codes, rules, etc., and the specifications or the drawings, the code requirements shall govern.

Article 14. Changes in the Work

The Owner, without invalidating this Contract, may at any time order extra work or make changes by altering, adding to or deducting from the work. If such extra work or changes involve a change in cost or in the time required for completion, the contract price shall be increased or decreased by the fair value thereof and the time for completion shall be increased or decreased by the reasonable time allocable thereto. The Owner will itemize the changes to be made and upon receipt of written notice of same the Contractor agrees to submit promptly to the Owner, in triplicate, an itemized statement of the extension or reduction in the time for completion of this Contract which the Contractor deems such reasonable time, and his calculation of the adjustment in the contract price, resulting from the changes or extra work. This must be done before work on the changes is begun unless the Owner gives written order to proceed immediately.

In case the parties shall be unable to agree upon the increase or decrease, in the time for completion or in the contract price, resulting from such extra work or changes, the Contractor shall nevertheless proceed with the work, including such extra work or changes, and the dispute shall be settled by arbitration.

No extra work or change shall be made except by written order of the Owner, and no claim for an addition to the contract price or increase in the time for completion shall be valid unless the additional work was so ordered.

If the Contractor, in the course of the work finds any discrepancy between the plans and the physical conditions encountered or any errors or omissions in plans or in the layout as given by survey points and instructions, the Contractor shall immediately inform the Owner, in writing. After such discovery, no work shall be done by the Contractor involving such discrepancy, error or omission until authorized by the Owner; otherwise it will be done at the Contractor's risk. If the correction of such discrepancies, errors or omissions involves an increase or decrease in costs or time of completion, the contract price or time of completion shall be adjusted accordingly in the manner provided above as in the case of a change in the work.

Article 15. Deductions for Uncorrected Work

If the Owner deems it inexpedient to correct work that has been damaged through the fault or neglect of the Contractor, or that was not done in accordance with the Contract, an amount to compensate the Owner fully for such damage or non-compliance shall be deducted from the contract price. If the parties cannot agree on the amount of such deduction, it shall be determined by arbitration.

Article 16. Correction of Work before Final Payment

At any and all times before final payment, Contractor shall promptly remove from the premises all materials, whether incorporated in the work or not, and take down all portions of the work, condemned by the Owner as failing to meet contract requirements. The Contractor shall promptly replace and re-execute the Contractor's own work in accordance with this Contract and without expense to the Owner and shall bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

If the Contractor does not remove such condemned work and materials within 10 days after written notice, the Owner may remove them and may store the material at the expense of the Contractor. If the Contractor does not pay the expense of such removal within ten days' time thereafter, the Owner may,

upon ten days' written notice, sell such materials at auction or at private sale and shall pay to the Contractor the net proceeds thereof, after deducting all the cost and expense that should have been borne by the Contractor. The Contractor waives all rights to claim damages for sale of materials at auction or private sale. Any dispute under this Article shall be determined by arbitration.

Article 17. Correction of Work After Final Payment

Neither the final certificate nor final payment nor any provision in this Contract shall relieve the Contractor of liability for faulty materials or workmanship and the Contractor shall replace such materials and remedy such workmanship and any defects due thereto and pay for any damage to other work resulting therefrom, which shall appear within one year from the date of completion. The Owner shall give notice of observed defects with reasonable promptness. Any dispute under this Article shall be determined by arbitration.

Article 18. Owner's Right to Terminate Contract

If the Contractor should be adjudged a bankrupt, or make an assignment for the benefit of creditors, or if a receiver of the Contractor's property should be appointed or if the Contractor files a petition or if a trustee of the Contractor's property should be appointed under the reorganization or readjustment provisions of the Bankruptcy Act, or if the Contractor at any time should refuse or neglect to supply enough properly skilled workmen or proper materials, or if he should fail to make prompt payments to Subcontractors or for material or labor, or disregard laws, ordinances or the instructions of the Owner, or otherwise be guilty of a substantial violation of any provision of the contract which he shall have failed to correct promptly after service of written notice thereof by the Owner, then the Owner may, without prejudice to any other right or remedy, terminate the employment of the Contractor for the Contractor's default and take possession of the premises and of all

materials, tools and appliances thereon and finish the work by whatever method the Owner may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price shall exceed all the general damages of the Owner caused by the Contractor's default, including the expense of finishing the work and compensation to the Owner for the Owner's managerial and administrative services, such excess shall be paid to the Contractor. If such damages shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner. In the event the Contractor and the Owner are unable to agree upon the amount to be paid or reimbursed the dispute shall be settled by arbitration.

Article 19. Removal of Equipment

In the case of termination of this Contract before completion from any cause whatever, the Contractor shall promptly remove any part or all of Contractor's equipment and supplies from the property of the Owner, failing which the Owner shall have the right to remove such equipment and supplies at the expense and at the risk of the Contractor, without liability of the Owner for any damage to, or loss of the same.

Article 20. Use of Completed Portions

The Owner shall have the right to take possession of and use any completed or partially completed portions of the work, notwithstanding the time for completing the entire work or such portions may not have expired; but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with this Contract. If such prior use increases the cost of or delays the work, the Contractor shall be entitled to extra compensation in reimbursement thereof, or extension of time equal to the delay or both, as the parties may agree upon, and failing agreement the dispute shall be determined by arbitration.

Article 21. Payments Withheld

The Owner may withhold all or part of any progress or final payment to the extent necessary to protect the Owner from loss or damage on account of:

(a) Damaged or defective work not remedied.

(b) Claims filed or reasonable evidence indicating proable filing of claims by other parties against the Contractor or Owner.

(c) Failure of the Contractor to make payments properly to Subcontractors or for material or labor.

(d) A reasonable doubt that this Contract can be completed for the balance then unpaid or within the time specified.

(e) Damage to the Owner's property or the work of another Contractor.

Article 22. Contractor's Liability Insurance

Unless otherwise specifically provided, the Contractor shall maintain such insurance as will protect Contractor from claims under Workmen's Compensation Acts and from claims for damages for personal injury, including death, which may arise from operations under this Contract, whether such operations be by the Contractor or any Subcontractor or anyone directly or indirectly employed by either of them.

Article 23. Indemnity by Contractor

The Contractor shall save harmless and indemnify the Owner from and against any expense, loss or damage on account of any claim, demand or suit made by any person whomsoever, including any employee of the Owner, which is in any way caused by or connected with, or grows out of the execution and performance of this Contract by the Contractor or any Subcontractor; provided, however, that the Contractor shall not be required to indemnify the Owner against any loss caused solely by the negligence or willful fault of the Owner or its employees. The Contractor accepts all risk of injury or damage and all responsibility for any claims for damages whatsoever resulting from the use, misuse, or failure of any hoist, rigging, blocking, scaffolding, or other like or unlike equipment used by the Contractor or any Subcontractor, even though such equipment be furnished or loaned to the Contractor or any such Subcontractor by the Owner, and shall indemnify the Owner against all such claims.

Article 24. Owner's Responsibility for Certain Casualties

The Owner shall be responsible for all damage to the work and to material, temporary structures, and equipment (excluding construction equipment not owned by the Owner) at the site of the job, which is caused by fire, windstorm, smoke, hail, aircraft, explosion, vehicles, riot or civil commotion.

Article 25. Damages to Owner's Property

The Contractor shall be responsible, and reimburse the Owner, for any loss or expense to the Owner arising from damage to the work or other property of the Owner caused by the wrongful act or neglect of the Contractor, any Subcontractor or of the employees of the Contractor or any Subcontractor. Where such damage includes damage to the work it shall be repaired at the expense of the Contractor.

Article 26. Surety Bonds

If the Owner has so requested prior to the signing of this Contract, the Contractor shall furnish bond covering the faithful performance of this Contract and the payment of all obligations arising thereunder, in such form as the Owner may prescribe and with such sureties as it may approve. If such bond was required by instructions given previous to the receipt of bids, the premium shall be paid by the Contractor; if subsequent thereto, it shall be paid by the Owner.

Article 27. Liens

Neither the final payment nor any progress payment shall become due until the Contractor, if required, shall deliver to the Owner a complete release of all liens arising on account of labor, materials, machinery or equipment in respect of which such payment is to be made, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as Contractor has knowledge or information the releases or receipts include all the labor and materials for which a lien could be filed; but the Contractor may, if any Subcontractor refuses to furnish a release or receipt in full,

furnish a bond satisfactory to the Owner, to indemnify the Owner against any lien. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

Article 28. Assignment

The Contractor shall not assign nor sublet this Contract in whole or in part, nor shall the Contractor assign any monies due or to become due it hereunder without the prior written consent of the Owner.

Article 29. Coordination of Work

The Contractor shall conduct the work so as to cause a minimum of interference with the Owner's operations. Where interference with the Owner's operations becomes absolutely necessary, permission shall be requested by the Contractor not less than seventy-two (72) hours in advance.

When other Contractors or the Owner's forces are working on the job on the immediate premises, the Contractor agrees to so schedule the Contractor's work as not to make it necessary for the Contractor to cut into or otherwise alter any work that has been completed by such other persons. If the Contractor fails to do so, then the Contractor shall replace or repair the damaged work at Contractor's own expense and in a manner satisfactory to the Owner.

If any part of the Contractor's work depends for proper execution or results upon the work of any other person, the Contractor shall inspect and promptly report to the Owner any defects in such work that render it unsuitable for such proper execution and results. Contractor's failure so to inspect and report shall constitute an acceptance of such other work as fit and proper for the reception of Contractor's work, except as to defects which may develop in such other work after the execution of Contractor's work.

Article 30. Subcontracts

The Contractor shall, as soon as practicable after the execution of this Contract, notify the Owner in writing of the names of any Subcontractors proposed to be employed in any part of the work and shall not employ any such Subcontractor without the prior approval of the Owner in writing and shall terminate the employment of any which the Owner may at any time object to as incompetent or unfit.

The Contractor agrees to require each Subcontractor to execute a contract in writing binding such Subcontractor to the terms of this Contract insofar as applicable to his work, and requiring such Subcontractor, to the extent applicable, to assume toward the Contractor all the obligations and responsibilities that the Contractor assumes toward the Owner, unless specifically noted to the contrary in a written subcontract approved in writing by the Owner.

The Contractor shall be fully responsible to the Owner for the acts and omissions of all Subcontractors and of persons directly or indirectly employed by them. Nothing in this Contract shall create any contractual relationship between any Subcontractor and the Owner.

The word "Subcontractor", as employed herein, shall mean one having a direct contract with the Contractor, including one who furnished material worked to a special design according to the plans or specifications of this work, but excluding one who merely furnished material not so worked.

Article 31. Arbitration

All disputes which are herein stated to be subject to arbitration shall be submitted to and determined by arbitration. Demand for arbitration shall be filed in writing by either party with the other within a reasonable time after cause thereof has arisen and in no case later than the time for final payment. No one shall act as an arbitrator who is in any way financially interested in this Contract or is or has been connected or interested in the business affairs of either the Owner or the Contractor. The award of the arbitrator shall be in

writing and shall be binding on both parties. Except as and to the extent otherwise provided by the controlling state law: no party may have recourse to legal proceedings (other than to enforce this arbitration Article) unless and until an arbitration award has been made; the award of the arbitrator shall not be open to objection on account of the form of the proceeding or the award; and there shall be one arbitrator who shall be chosen by the American Arbitration Association, whose arbitration rules shall be followed.

Article 32. Title to the Work

Title to all work completed or in the course of construction shall be in the Owner; and title to all machinery, equipment and materials to be incorporated in the work shall be in the Owner as soon as they are delivered on the site of the job.

Article 33. Use of Technical Information

All blueprints, drawings, specifications and bills of material furnished to the Contractor by the Owner or prepared by the Contractor under the direction of the Owner are and shall at all times remain the property of the Owner and are considered loaned to the Contractor only for use in the performance of this Contract and the Contractor shall not use or permit the use of any of them for any other purpose without the Owner's prior written consent. Said blueprints, drawings, specifications and bills of material shall be treated as confidential information by the Contractor, who agrees not to disclose, dispose of, reproduce, copy or publish, or permit the reproduction, copying or publication of them or any part of them without the written consent of the Owner, and will take all reasonable precautions to prevent any such occurrences.

Article 34. Cleaning Up

The Contractor shall at all times keep the premises free from accumulations of waste material or rubbish caused by Contractor's employees or the work, and at the completion of the work Contractor shall remove all Contractor's

rubbish from and about the site and all Contractor's tools, scaffolding and surplus materials and shall leave the work "broom-clean" or its equivalent, unless more exactly specified.

Article 35. Adaptability of Plans and Specifications

Except in the case of patented products for which there is no adequate substitute, the Contractor will not, without the prior written approval of the Owner, prepare any drawings or specifications or do any engineering or planning for the prospective use or installation of any tool, piece of equipment, or material in the work which is of such a character that such drawings, specifications, engineering or planning could not be used with equal facility in connection with the product of all or most manufacturers of such tools, equipment or materials, or any substitute therefor.

Article 36. Engineering Approval

The Contractor agrees to order no material or equipment and to do no actual construction, and to permit no work to be done by any Subcontractor or supplier of materials or equipment until the drawings relating thereto, the lists and specifications of materials, the equipment to be used and the supplier have been approved by the Owner. During construction, the Contractor shall make no substitutions of material without the prior written approval of the Owner.

AMERICAN SMELTING AND REFINING MPANY

FORM # INSURANCE-1 Revised 11/56

INSURANCE-CERTIFICAT

AMERICAN SMELTING AND REFINING COMPANY REQUIREMENTS FOR CONTRACTORS AND SUBCONTRACTORS.

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE DESCRIBED BELOW HAVE BEEN ISSUED TO Southwestern Industrial Contractors and Riggers, Inc.

THESE POLICIES ARE NOW IN FORCE COVERING WORK ON THE ASSURED FOR AMERICAN SMELTING AND REFINING COMPANY ON Installation of Ventilation Systems

AT El Paso Smelting Works, El Paso, Texas

IF THESE POLICIES ARE CANCELLED OR CHANGED IN ANY WAY THAT WILL AFFECT THIS CERTIFICATE, TEN DAYS' PRIOR WRITTEN NOTICE WILL BE GIVEN BY THIS COMPANY TO AMERICAN SMELTING AND REFINING COMPANY, SAMUEL METZGER, JR., 120 BROADWAY, NEW YORK, N.Y.

KIND OF INSURANCE	DESCRIPTION OF POLICY			REQUIRED MINIMUM
	NUMBER	EXPIRES	LIMITS OF LIABILITY	
CONTRACTOR'S PUBLIC LIABILITY (COMPREHENSIVE INCLUDING CONTRACTUAL)*	[illegible]	[illegible]/1/73		
BODILY-INJURY			EACH PERSON $100,000.	$100,000
			EACH ACCIDENT $300,000.	$300,000
PROPERTY-DAMAGE	[illegible]	[illegible]/1/73	EACH ACCIDENT $100,000.	$ 25,000
CONTRACTOR'S PROTECTIVE LIABILITY	[illegible]	[illegible]/1/73		
BODILY-INJURY			EACH PERSON $100,000.	$100,000
			EACH ACCIDENT $300,000.	$300,000
PROPERTY-DAMAGE	[illegible]	[illegible]/1/73	EACH ACCIDENT $100,000.	$ 25,000
AUTOMOBILE				
BODILY-INJURY	[illegible]	[illegible]/1/73	EACH PERSON $100,000.	$100,000
			EACH ACCIDENT $300,000.	$300,000
PROPERTY-DAMAGE	[illegible]	[illegible]/1/73	EACH ACCIDENT $100,000.	$ 25,000
WORKMEN'S COMPENSATION AND	[illegible]	[illegible]/1/73		COMPLY WIT APPLICABLE STATE LAW
EMPLOYER'S LIABILITY			EACH ACCIDENT $100,000.	$ 25,000

1/1/73
DATE

Employers Insurance of Texas
INSURANCE COMPANY

El Paso, Texas
CITY STATE

L H Swagerty
AUTHORIZED REPRESENTATIVE

*The Contractor shall save harmless and indemnify the Owner from and against any expense, loss or damage on account of any claim, demand or suit made by any person whomsoever, including any employee of the Owner, which is in any way caused by or connected with, or grows out of the execution and performance of this contract by the Contractor or any Subcontractor; provided, however, that the Contractor shall not be required to indemnify the Owner against any loss caused solely by negligence or willful fault of the Owner or its employees. The Contractor accepts all risk of injury or damage and all responsibility for any claims for damages whatsoever resulting from the use, misuse, or failure of any hoist, rigging, blocking, scaffolding, or other like or unlike equipment used by the Contractor or any Subcontractor, even though such equipment be furnished or loaned to the Contractor or any such Subcontractor by the Owner, and shall indemnify the Owner against all such claims.

ASARCO ELP 0000314

AM ICAN SMELTING AND REFINING COM NY
EL PASO SMELTING WORKS
P. O. Box 1111
El Paso, Texas 79999

W. R. KELLY, Manager
P. A. DeSANTIS, Superintendent

ANDREW LIEBERT, Accounting Manager
R. O. COVINGTON, Supply Agent

April 1, 1972

AMERICAN SMELTING AND REFINING COMPANY

EQUAL EMPLOYMENT OPPORTUNITY POLICY STATEMENT

Our Plant has a long-standing policy that its employment practices shall provide equal opportunity for all employees without regard to race, color, creed, sex or national origin.

We in ASARCO are ever mindful of our obligations and responsibilities to the Communities in which we operate and to the Nation as a whole. One of our chosen responsibilities is to insure equal employment opportunities for all, without regard to race, color, creed, sex or national origin--except where sex is a bona fide occupational qualification.

Our hiring practices, promotions and transfers at all levels of employment must continue to be based on an individual's qualifications and ability to perform satisfactorily the job requirements with due regard to seniority, while furthering the principles of Equal Employment Opportunity.

Within ASARCO our management must provide the lead in establishing procedures to continue successfully this declared policy of non-discrimination. The effectiveness of this policy requires a high degree of cooperation on the part of all ASARCO personnel, at every job level within the Company; as Supervisors you are responsible for the continued promotion and enforcement of this Policy throughout your organization.

Mr. A. R. Scasta, Personnel and Safety Director, will continue to administer our Equal Employment Opportunity Program. I know he will have your close and active cooperation in this matter.

W. R. KELLY
Manager

Bond No.

Employers·Commercial Union Companies

PERFORMANCE BOND

The American Institute of Architects,
A.I.A. Document No. A-311 September, 1963 Edition

KNOW ALL MEN BY THESE PRESENTS:

That Southwestern Industrial Contractors & Riggers, Inc., El Paso, Texas
(Here insert the name and address or legal title of the Contractor)

_____, as Principal, hereinafter called Contractor,

and, Commercial Union Insurance Company, incorporated under the laws of the state of Massachusetts, with its Home Office in Boston, as Surety, hereinafter called Surety, are held and firmly bound unto

American Smelting and Refining Company, 120 Broadway, New York, New York
(Here insert the name and address or legal title of the Owner)

as Obligee, hereinafter called Owner, in the amount of Six Hundred Thirteen Thousand Four Hundred Forty-one and ---------- No/100 Dollars ($ 613,441.00 -), for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated January 18, 1973 entered into a contract with Owner for Installation of ventilation systems at the El Paso plant of American Smelting and Refining Company at El Paso, Texas

in accordance with drawings and specifications prepared by _____
(Here insert full name, title and address)

which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said contract, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Owner.

Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly

1) Complete the Contract in accordance with its terms and conditions, or

2) Obtain a bid or bids for submission to Owner for completing the Contract in accordance with its terms and conditions, and upon determination by Owner and Surety of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of Owner.

Signed and sealed this 26th day of January A. D. 19 73

In the presence of:

Assistant Secretary

SOUTHWESTERN INDUSTRIAL CONTRACTORS & RIGGERS, INC. (Seal)
(Principal)
By: _____
Vice President (Title)

Lillian Ashe

COMMERCIAL UNION INSURANCE COMPANY (Surety) (Seal)
By: R S Crowell
R. S. Crowell, Attorney in fact

G 60503 Performance Bond for General Contractors.

STATUTORY PAYMENT BOND – TEXAS

(Hardeman Act – Private Work)

(Penalty of this bond must be 100% of Contract amount. This bond and copy of contract must be filed with County Clerk of County wherein owner's property is located.)

KNOW ALL MEN BY THESE PRESENTS:

That, Southwestern Industrial Contractors & Riggers, Inc., Original Contractor (hereinafter called the Principal), as Principal, and Commercial Union Insurance Company, a corporation organized and existing under the laws of the State of Massachusetts with its principal office in the City of Boston, Mass. (hereinafter called the Surety), as Surety, are held and firmly bound unto American Smelting and Refining Company (hereinafter called the owner), in the amount of Six Hundred Thirteen Thousand Four Hundred Forty-one and No/100 Dollars ($613,441.00) (here insert an amount equal to the total contract price) for the payment whereof the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Owner, dated the 18th day of January, 19 73, xx for Installation of ventilation systems at the El Paso plant of American Smelting and Refining Company at El Paso, Texas which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall promptly pay claimants for all labor, subcontracts, materials and specially fabricated materials performed or furnished under or by virtue of said contract and duly authorized normal and usual extras thereto (not to exceed 15% of said contract price), then this obligation shall be void, otherwise to remain in full force and effect; labor, subcontracts, materials and specially fabricated materials shall be construed in accordance with Article 5452, Vernon's Revised Civil Statutes of Texas, 1925, as amended by the Acts of the Regular Session of the 57th Legislature, 1961.

PROVIDED, HOWEVER, that the Owner having required the said Principal to furnish this bond in order to comply with the provisions of Article 5472d of Vernon's Revised Civil Statutes of Texas, added by Acts of the Regular Session of the 57the Legislature, 1961, all rights and remedies on this bond shall inure solely to such claimants and shall be determined in accordance with the provisions, conditions and limitations of said Article to the same extent as if they were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument, this 26th day of January, 19 73.

WITNESS:

(If Individual or Firm)

SOUTHWESTERN INDUSTRIAL CONTRACTORS & RIGGERS, INC.
(Principal) (Seal)

ATTEST: [signature]
(If Corporation)
Assistant Secretary

By: [signature]
(Title)
Vice President

COMMERCIAL UNION INSURANCE COMPANY
(Surety)

By: [signature]
(Attorney-in-Fact) R. S. Crowell

The foregoing bond is hereby approved.

OWNER

ADDRESS

DATE

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that the COMMERCIAL UNION INSURANCE COMPANY, a corporation duly organized and existing under the laws of the Commonwealth of Massachusetts, and having its principal office in the City of Boston, Mass., hath made, constituted and appointed, and does by these presents make and constitute and appoint R. S. CROWELL and D. C. CROWELL both of El Paso, Texas

and each of them its true and lawful Attorney-in-Fact, to make, execute, seal and deliver for and on its behalf as surety any and all bonds or undertakings

and the execution of such bonds or undertakings in pursuance of these presents, shall be binding upon said Company as fully and amply, to all intents and purposes, as if such bonds were signed by the President, sealed with the corporate seal of the Company, and duly attested by its Secretary, hereby ratifying and confirming all the acts of said Attorney-in-Fact pursuant to the power herein given. This Power of Attorney is made and executed pursuant to and by authority of the following resolutions adopted by the Board of Directors of the COMMERCIAL UNION INSURANCE COMPANY at a meeting duly called and held on the twenty-seventh day of July, 1972:

Resolved, That the President, or any Vice-President, or any Assistant Vice President, may execute for and in behalf of the company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, the same to be attested when necessary and the seal of the company affixed thereto by the Secretary, or any Assistant Secretary; and that the President, or any Vice President, or Assistant Vice President, may appoint and authorize an Attorney-in-Fact to execute on behalf of the company any and all such instruments and to affix the seal of the company thereto; and that the President, or any Vice-President, or any Assistant Vice-President, may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That Attorneys-in-Fact may be given full power and authority to execute for and in the name and on behalf of the company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the company as if signed by the President and sealed and attested by the Secretary, and, further, Attorneys-in-Fact are hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and are also authorized and empowered to certify to a copy of any of the by-laws of the company as well as any resolution of the Directors having to do with the execution of bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and to certify copies of the Power of Attorney or with regard to the powers of any of the officers of the company or of Attorneys-in-Fact.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Directors of the COMMERCIAL UNION INSURANCE COMPANY at a meeting duly called and held on the twenty-seventh day of July, 1972:

"Resolved: That the signature of the President, or any Vice-President, or any Assistant Vice President, and the signature of the Secretary or any Assistant Secretary and the Company Seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Attorneys-in-Fact for purposes only of executing and attesting any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the company as the original signature of such officer and the original seal of the company, to be valid and binding upon the company with the same force and effect as though manually affixed."

IN WITNESS WHEREOF, the COMMERCIAL UNION INSURANCE COMPANY, has caused these presents to be signed by its Vice-President and its corporate seal to be hereto affixed, by its Secretary this first day of January 1973.

COMMERCIAL UNION INSURANCE COMPANY

Attest: William D Bogar
Secretary

By John G Thompson
Vice-President

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF SUFFOLK SS.

On this first day of January 1973, before me personally came John G. Thompson, Vice-President, and William D. Bogar, Secretary of the COMMERCIAL UNION INSURANCE COMPANY to me personally known to be the individuals and officers described in and who executed the preceding instrument, and they acknowledged the execution of the same, and being by me duly sworn, severally and each for himself deposeth and sayeth, that they are the said officers of the Company aforesaid, and that the seal affixed to the preceding instrument is the corporate seal of said Company and that the said corporate seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority and direction of the said Company.

Robert L. Marzelli
Robert L. Marzelli — Notary Public
(My Commission expires June 5, 1975)

CERTIFICATE

I, the undersigned, Assistant Secretary of the COMMERCIAL UNION INSURANCE COMPANY, a Massachusetts Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked; and furthermore, that The Resolutions of the Board of Directors set forth in the power of attorney are now in force.

Signed and sealed at the City of Boston. Dated this 18th day of January 1973

Earle E Leavitt
Assistant Secretary

C60903

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

0.1

SPECIFICATION CE-1-MOT

SPECIFICATIONS

FOR

ELECTRICAL MOTORS

JANUARY 12, 1970
REVISED JULY 2, 1970
*REVISED MARCH 24, 1971
(a)REVISED MARCH 10, 1972

PREPARED BY: R. A. BRUHN
CHIEF ELECTRICAL ENGR.

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

SPECIFICATION CE-1-MOT
JANUARY 12, 1970

SPECIFICATIONS
ELECTRICAL MOTORS

A - GENERAL REQUIREMENTS:

1 - SCOPE

These specifications cover general purpose, integral horsepower induction motors.

2 - STANDARDS

All motors shall be in accordance with the standards set forth in National Electrical Manufacturers Association's publication No. MG1-1967* and all changes to date.

3 - SERVICE CONDITIONS

All motors shall be designed and built for long, trouble-free life in severe industrial service, and be capable of operating successfully under the following application conditions:

a. 40° C, 50° C, or 60° C maximum ambient temperature as stated in the requisition.

b. At the altitude stated in the requisition.

c. Voltage variations to plus or minus 10% of nameplate rating.

d. Frequency variations to plus or minus 5% of nameplate rating.

e. Combined voltage and frequency variations to plus or minus 10% total, as long as frequency does not exceed plus or minus 5%.

B - ELECTRICAL REQUIREMENTS:

1 - VOLTAGE AND FREQUENCY

Motors shall be 460 volts for operation on a 3 phase 60 hertz power supply.

2 - OPERATING CHARACTERISTICS

a. Torques

All motors shall meet or exceed the locked rotor (starting) and breakdown (maximum) torques as specified by NEMA Standards for NEMA design B and rating specified.

b. Currents

Locked rotor (starting) currents shall not exceed the maximum values set forth in NEMA Standards for the NEMA design B and rating specified.

c. Protection

(a) Current density and heating characteristics shall be such that the motors will not burn out if subjected to a maximum of 20 seconds stall at locked rotor current.

3 - SERVICE FACTOR

(a) All motors shall have a 1.0 service factor and the nameplates shall be stamped accordingly.

4 - INSULATION AND TEMPERATURE RISE

(a) All motors shall have Class F insulation. The temperature rise shall be in accordance with NEMA Standards and the ambient temperature specified.

C - MECHANICAL REQUIREMENTS:

1 - ENCLOSURES

All motors shall be totally enclosed, fan-cooled unless stated otherwise in the requisition.

2 - FRAME SIZES

Frame/HP relationships shall conform to the applicable NEMA Standards referred to under paragraph A 2 above.

3 - SHAFTS

Shafts shall be in accordance with the applicable NEMA Standard referred to under paragraph A 2. Long shafts shall be suitable for belt, chain, or gear drive, within limits established by good industrial practice and documented by NEMA. Short shafts shall be used for direct connection only.

4 - BEARINGS AND LUBRICATION

All motors shall have anti-friction (ball or roller) bearings, sized for average life of at least 100,000 hours under normal V-belt loading conditions. Bearings shall be AFBMA standard sizes.

Motors shall be equipped with end shield mounted ball bearings made to AFBMA standards, and be of ample capacity for the motor rating. The bearing housing shall be large enough to hold sufficient lubricant to minimize the need for frequent relubrication, but facilities shall be provided for adding new grease and draining out old grease without motor disassembly. The bearing housing shall have long tight, running fits or rotating seals to protect against the entrance of foreign matter into the bearings, or leakage of grease out of the bearing cavity.

5 - MATERIALS

a. Stator Frames and End Shields

The stator frames and end shields for all frame sizes shall be of rigid cast iron.

b. Other External Parts

Fan covers and conduit boxes shall be cast iron.

6 - EYEBOLTS

All motors weighing more than 50 lbs. shall be drilled and tapped for a lifting eyebolt. The eyebolt shall be supplied.

7 - MOTOR LEADS

Motor leads into the conduit box shall have the same insulation class as the winding, and be equipped with a numbered brass or copper terminal staked or otherwise mechanically fastened to the lead sufficient to resist 15 lbs. pull. Leads shall be marked throughout the entire length to provide identification after terminals are taped or clipped.

8 - VENTILATION FANS

Ventilating fans shall be non-sparking, abrasion and chemical resistant.

9 - SHAFT SEALS

All motors shall have synthetic rubber or molded plastic seal located on the shaft at the drive end shield opening to prevent moisture or other foreign material from entering the bearing cavity.

10 - CONDUIT BOXES

Conduit box mountings shall be arranged for rotation so conduit can be brought in from top, bottom, or either side. Cast iron conduit boxes for all severe duty motors shall be tapped for threaded conduit connection. Conduit hole size shall conform to NEC Standards, depending on motor rating.

11 - NAMEPLATES

All motors shall have nameplates of stainless steel. Nameplates shall be stamped to include the following information:

a. Horsepower
b. Speed
c. Time rating
d. Frequency
e. Phases
f. Model number
g. Rated voltage
h. Service factor
i. Full load amps

j. Insulation class
k. NEMA design
l. NEMA code letter
m. Maximum ambient
n. Bearing identification

12 - CONNECTION DIAGRAMS

The motor connection diagram shall be permanently attached to the motor either inside the conduit box or on the motor frame in a readable location from the conduit box side.

13 - EXTERNAL FINISH

All motors shall be prime painted with corrosion resisting metal primer, and finish painted with a durable machinery gray synthetic lacquer or enamel, manufacturer's standard.

14 - HARDWARE

All bolts, screws, and other external hardware shall be treated for corrosion resistance.

D - TESTS:

1 - TESTING

Motor testing procedure shall be in accordance with the American Standard Test Code for polyphase induction motors and generators, EEE112. All motors shall be given routine test to determine that they are free from electrical or mechanical defects. The routine test shall, as a minimum, conform to NEMA Standards.

E - PREPARATION FOR SHIPMENT:

1 - PROTECTIVE COATING

Before shipment, the shaft extension and any other bare exposed metal parts of each motor shall be coated with an easily removable rust preventative.

2 - PACKAGING

All motors shall be securely fastened to a hardwood skid or pallet for fork truck handling, and be covered for protection against dirt and moisture during transit and for short time outdoor storage.

Salt Lake City, Utah Prepared by: R. A. Bruhn

SPECIFICATIONS

FOR

INSTALLATION OF VENTILATION SYSTEMS

Prepared by
El Paso Smelting Works
Engineering Department
November 10, 1972

ASARCO ELP 0000326

INSTRUCTIONS TO BIDDERS

1.0 RECEIVING OF BIDS

1.1 Bids will be received in triplicate up to 12 o'clock noon November 30, 1972 by:

Mr. R. O. Covington, Supply Agent
American Smelting and Refining Company
P. O. Box 1111
El Paso, Texas 79999

1.2 Bids shall be submitted in the form as indicated by the bid form letter attached.

2.0 DESCRIPTION OF WORK

The scope of work under this contract consists of

2.1 Installation of Matte Tap Ventilation System

2.2 Installation of Kiln Ventilation System

All work to be performed in a safe workmanlike manner and in accordance with the attached specifications and drawings.

3.0 PROPOSALS

3.1 The bidder shall submit a bid on all work called for in these specifications. Bids may be supplemented by any additional data felt necessary.

3.2 The proposal shall include:

3.2.1 Lump sum cost
3.2.2 Estimated time for completion from receipt of contract
3.2.3 Estimated first construction time in field
3.2.4 A cost breakdown between the two systems

4.0 AWARD OF CONTRACT

4.1 The contract will be awarded to the lowest responsible bidder, whose construction skill and financial resources are fully equal to completion of the contract. ASARCO, however, reserves the right to reject any or all bids.

4.2 The successful bidder will be required to complete ASARCO contract form PD-19 and the insurance form attached.

BID FORM LETTER

Mr. R. O. Covington
ASARCO - El Paso Smelting Works
P. O. Box 1111
El Paso, Texas 79999

INSTALLATION OF
VENTILATION SYSTEMS
EL PASO JOBS NO.
567 & 577

Dear Sir:

We have carefully examined the drawings and specifications submitted to us by your engineering department covering the proposed fabrication and installation of materials necessary to install two ventilation systems. We have also visited the site and acquainted ourselves with those conditions we feel will have an effect upon the conduct of the work. Our lump sum bid is hereby attached in triplicate.

_____
CONTRACTOR

By_____

SPECIFICATIONS

1.0 SCOPE OF WORK - ASARCO

ASARCO will furnish the items listed in Appendix A for installation by the contractor.

2.0 SCOPE OF WORK - CONTRACTOR

The contractor shall furnish all labor, tools, equipment and material to install two ventilation systems as outlined below and indicated on the drawings listed in Appendix B. This will include installation of the equipment furnished by ASARCO as listed in Appendix A.

The contractor shall perform all the above in a workmanlike manner and without undue interruption of ASARCO's plant operation. When interruption is unavoidable, it must be arranged ahead of time with the engineer.

The contractor must keep his working area clean and provide for the protection of ASARCO employees working in the area.

The contractor must provide all safety equipment necessary to protect his employees, including respirators and any other equipment required.

3.0 MATERIALS

3.1 CONCRETE

All concrete shall have a minimum strength of 3,000 p.s.i. in 28 days.

3.2 STEEL

All steel is to be A-36.

3.3 PAINT

All steel shall be shop primed with DuPont 373-851 Red Lead Primer and field finish coated with DuPont Dulux 25-055 gray. All paint is to be applied according to manufacturer's specifications.

3.4 ELECTRICAL

All electrical work shall conform to all applicable codes and ordinances.

APPENDIX A

EQUIPMENT FURNISHED BY ASARCO

1.0 MATTE TAP VENTILATION SYSTEM

1.1 One - No. 18RW40 3-Compartment Wheelabrator Baghouse

1.2 One - American Standard Series 106
Model 33-OMH, Arrangement No. 1
35,000 CFM Fan, including drive and 150 HP motor

1.3 One - Motor Control Center

2.0 KILN VENTILATION SYSTEM

2.1 One - No. 12RW40 2-Compartment Wheelabrator Baghouse

2.2 One - Clarage Model 233XL
Design 15-300, Arrangement No. 1
25,000 CFM Fan, including drive and 100HP motor

2.3 One - Motor Control Center

3.0 LOAD CENTER SUBSTATION

One - 1,500 KVA Transformer Load Center

APPENDIX B

LIST OF DRAWINGS

1.0 MATTE TAP VENTILATION SYSTEM

EP 19700 - Plan
EP 19701 - Sections
EP 19702 - Section
EP 19703 - Sections
EP 19704 - North Enclosure Detail
EP 19705 - South Enclosure Detail
EP 19706 - Enclosure Frame Details
EP 19707 - Enclosure Foundation Details
EP 19708 - Preheater Intake Plenum
EP 19709 - Damper Details
EP 19710 - Damper Details
EP 19711 - Baghouse Support Beams
EP 19712 - Fan Platform
EP 19713 - Fan Platform Details
EP 19714 - Duct Hangers
EP 19715 - Pressure Relief Damper
EP 19716 - Electrical Elementary Diagram
EP 19717 - Electrical Interconnection Diagram
EP 19718 - Electrical Conduit Layout
EP 19719 - Electrical Control Panel Layout
EP 19720 - Electrical Bill of Material

2.0 KILN VENTILATION SYSTEM

EP 19760 - Kiln Discharge Vent Hoods
EP 19761 - Plan
EP 19762 - Kiln Feed End Vent Hoods
EP 19763 - Section
EP 19765 - Section Details
EP 19766 - Kiln Feed End Sections
EP 19767 - Duct Hangers
EP 19768 - Reversing Conveyor Ducts
EP 19770 - Section Details

SPECIFICATIONS
FOR
KILN DELEADING DUST COLLECTOR
EL PASO PLANT

Prepared by:

AMERICAN SMELTING AND REFINING COMPANY
CENTRAL ENGINEERING DEPARTMENT
SALT LAKE CITY, UTAH
DESIGN SECTION

Approved by: _____
A. O. MARSH, JR.

Date: August 14, 1972

SPECIFICATIONS
FOR
KILN DELEADING DUST COLLECTOR

Furnish one dust collector, cloth bag filter type, continuous operation.

Duty: This collector will be used to remove PbO and ZnO fume from a kiln exhaust.

a.	Capacity	20,000 cfm net @ TEMD
b.	Cloth ratio	1.5 to 1
c.	Inlet pressure	0 to 5" w.g.
d.	Temperature	260°F.
e.	Operation	Continuous

Features:

a.	Erection type	Welded modules with hopper for each module.
b.	Metal thickness	10 ga. housing and hoppers.
c.	Filter media	8" dia. bags of homopolymer acrylic. Asarco Specification 28-9A-68T
d.	Cell Floor	Thimble floor with thimbles extending 4" above floor. Bags shall fit over thimbles.
e.	Hopper	Trough, 60" min. slope, bottom flanged for flare type screw conveyor.
f.	Gas inlets	Flanged connection into hopper, dia. to be specified by owner.
g.	Gas outlets	Flanged connection out of top, dia. to be specified by Asarco.
h.	Supports	Furnish support legs extending 2'-0 below level of screw conveyor discharge.

i.	Access	Access doors for each compartment, access walkway at cell plate floor.
j.	Platforms	Access and shaker platforms with ladders, also ladder extending to top of each compartment, OSHA standard.
k.	Bag rows	No more than 3 rows of bags on each side of access walkway.
l.	Screw conveyor	Provide 9" heavy duty helical screw conveyor with 10 ga. flared trough full length of hoppers. Discharge location will be specified by owner. Furnish motor, drive and drive guard. Trough to be constructed so that it can be dropped without disturbing screw.
m.	Shakers	Motorized shakers with drives and motors located outside of filter chambers.
n.	Paint	Exterior, one high temperature primer coat, one high temperature finish coat. Interior, one coat of high temperature epoxy.
o.	Insulation	Collector and hopper exteriors insulated with 2" fiberglass or equivalent and covered with weather proof coating. All exterior ribs shall be covered.
p.	Power	All motors shall be 460V, 3 ph, 60 hz, TEFC or TENV.

612

Proposal Information:

a. Outline dimensioned drawings.

b. Full description of all equipment.

c. Net and gross cloth area, number and size of bags.

d. Type of shaking mechanism.

e. Estimated manhours for erection.

f. Quote insulation separately.

g. Quote bags separately.