

SPECIFICATIONS
FOR A
VACUUM EVAPORATOR
FOR THE
WHEELING STEEL CORPORATION
AT
EAST STEUBENVILLE, WEST VIRGINIA
PROJECT #1-5270 - PROPOSITION #1
AUGUST 22, 1955

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These specifications cover the furnishing and erecting of a vacuum evaporator and auxiliaries for the East Steubenville Plant of the Wheeling Steel Corporation.

The new equipment will operate in conjunction with the existing ammonia absorbers to produce larger crystals of ammonium sulfate than are now possible.

These specifications are the property of Koppers Company, Inc. and are delivered to Wheeling Steel Corporation for the purpose of advising in detail the work to be performed. They may not be duplicated in any way or made public without written permission from Koppers Company, Inc., and Koppers Company, Inc. reserves the right to demand their return at any time, such demand to be made in writing.

The term "Seller" as used herein refers to Koppers Company, Inc. and the term "Purchaser" refers to Wheeling Steel Corporation.

The new equipment will include one classification tank, one evaporator, one separator, one barometric condenser and seal, one mother liquor heater, and necessary piping.

Two existing liquor circulating pumps which were dismantled on Seller's Contract #1850 will be re-used with the new equipment.

The above equipment will be used in conjunction with the present sulfate equipment. Except for piping, no alterations to the existing equipment have been contemplated.



With the additional equipment the new plant will operate as before except that a secondary circulation will be provided from the existing ammonia absorbers to the evaporator to concentrate the liquor and accelerate sulfate crystal growth. Also the slurry pumps will take their suction from the new classification tank instead of from the classification chambers of the existing ammonia absorbers.



401 DEFINITION OF TERMS

The term "Seller" used herein refers to the Engineering and Construction Division of Koppers Company, Inc.

The term "Purchaser" used herein refers to the Wheeling Steel Corporation.

The term "Vendor" used herein refers to persons or companies under contract to Koppers Company, Inc. for the supply or manufacture of equipment or materials covered by these specifications.

The term "Extra Work" used herein refers to work not covered by these specifications and which, if performed by Seller, shall be paid for by Purchaser.

402 ENGINEERING AND DRAWINGS

Seller shall provide all engineering and design and installation drawings required for the work as specified in the foregoing specifications.

Seller shall deliver to Purchaser, upon completion of the work, one (1) set of reproduced tracings of Seller's drawings.

Seller shall also furnish paper prints of Vendor's drawings when available.

403 PROCUREMENT, INSPECTION AND EXPEDITING

Seller shall purchase and expedite all materials and equipment for the work as specified in the foregoing specifications.

Where necessary, Seller shall perform the inspection of equipment in Vendor's shops during fabrication and prior to shipment.

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404 CONSTRUCTION AND ERECTION

Seller shall perform all construction work and erect all equipment furnished by him under these specifications.

Seller shall provide all tools and construction equipment required during the construction period including the transportation of tools and equipment to and from the site.

405 WELDING AND BURNING

Seller shall comply with Purchaser's restrictions with regards to welding and burning. It has been assumed that welding and burning will be permitted in the construction area.

406 CLEARING SITE

Seller shall clear the site of the new plant of all obstructions interfering with the new work except electric power lines, underground piping, sewers and conduits which will be dismantled or relocated by Purchaser.

407 CLEANING UP THE SITE

Seller shall, upon completion of the work, remove all his construction equipment, material and temporary buildings from the site of operations.

408 DISMANTLING AND RELOCATION

Seller shall dismantle and/or relocate equipment interfering with the erection of the new equipment. This will include the following:

1. Dismantle the railroad track adjacent to and east of the existing ammonia absorbers.

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408 DISMANTLING AND RELOCATION - Continued

2. Relocate the bumper from its present site to the new terminal of the above track.
3. Dismantle the existing hot water, recirculating liquor and slurry piping at the base of the existing ammonia absorbers.

409 DISPOSAL OF DISMANTLED MATERIAL

Seller shall load scrap and other salvageable equipment dismantled by him on cars or trucks which will be furnished at the site by Purchaser. Purchaser shall also remove and unload the cars or trucks of dismantled equipment.

Dismantled steelwork will not be cut to charging box size.

Seller shall load dismantled refuse into his trucks and unload the trucks at a dump site not over a 1.5-mile haul from the construction site.

410 EXCAVATION AND BACKFILL

Seller shall perform all necessary excavation for the foundations furnished by him, and shall backfill such excavation to the yard level.

Surplus excavated material not used for backfill will be loaded by Seller upon Seller's trucks and disposed of at a dump site not more than a 1.5 mile haul from the construction site.

This specification is based on excavation in soil or like material readily excavated and removal of known foundations as required, but does not cover excavation in rock or poured slag or unknown underground obstructions such as old foundations. All such additional excavations required shall be "Extra Work".

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413 STRUCTURAL STEELWORK - Continued

Institute of Steel Construction, Inc., for the Design, Fabrication, and Erection of Structural Steel for Buildings, dated June 1, 1923, and amended to date, except that for towers or other points subject to severe action of heat and steam, the stress will not exceed 16,000 lbs. per square inch.

Structural steel field joints will be made up with high tensile strength bolts in lieu of rivets. Such joints will conform to Specifications for Assembly of Structural Joints using High Tensile Bolts as endorsed and distributed by A.I.S.C. 1951 (or current).

414 PAINTING

Seller shall provide material and labor for one primer coat and one finish coat of paint on steel parts of new equipment provided under these specifications. The primer coat will be zinc chromate and the finish coat will be black carbon. Stainless steel and insulated carbon steel pipe and equipment will not be painted.

All exposed pipe, platforms, ladders, and handrailings will be painted.

415 STEAM AND RIVER WATER CONDITIONS

Seller shall design all live steam and river water consuming equipment covered in the foregoing specifications for the following utilities:

Live Steam Supply

Normal 140 p.s.i.g., saturated

Maximum 250 p.s.i.g., 100° F. superheat

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415 STEAM AND RIVER WATER CONDITIONS - Continued

River Water Supply

Maximum temperature 85° F.

416 PIPING

Seller shall furnish and install the piping specified in the preceding pages in accordance with Seller's standard specifications covering each class of service unless otherwise noted.

417 INSULATION

Seller shall furnish and install insulation on piping and equipment requiring same in accordance with Seller's Standard Specifications D-2127 for Piping and D-2207 for Apparatus.

418 EXISTING EQUIPMENT

Seller assumes that all equipment specified for reuse, whether in place or relocated, is in proper operating condition for such reuse.

419 COMPRESSED AIR

Seller shall provide all necessary compressed air for pneumatic tools used for construction of the plant.

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