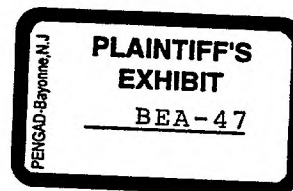


KOPPERS COMPANY, INC.
Engineering and Construction Division

PROJECT AUTHORIZATION



Date December 20, 1960

Mr. E. B. Shuck,
Attn. Mr. C. L. Kirkpatrick

Dear Sir:

Please be advised that the project now being prepared for
Weirton Steel Company, Weirton, West Virginia

has been assigned the following number and title:

NO. P-6064 P-1-6064

The work consists of engineering, procurement, construction, estimate,
and drawings for installation of equipment for disposal of vapors
from CS₂ Column.

Authorized by _____

Approved by J. A. Hartzell

W. C. Rueckel
Vice President

Copies to:

E. B. Shuck, Attn. C. L. Kirkpatrick
E. B. Shuck, Attn. R. H. Young
W. C. Rueckel, Attn. H. A. Denny
J. W. Pinks
E. J. Helm H. P. Clifton
E. G. Smith Mrs. E. Hadly
C. F. Simmers (2)
H. A. Grosick
J. A. Hartzell
J. S. Atwood
J. D. Rice
F. W. Rys
T. J. Kukla
G. L. Cox
H. W. Maurice
J. F. Rigatti
E. K. Sandbach
D. D. Hamilton

J. M. Nelan

(Coke Plants)

SPECIFICATIONS
FOR
ONE (1) FLARE STACK AND AUXILIARIES
FOR THE
DISPOSAL OF WASTE GASES
FROM THE
BENZOL PLANT
FOR THE
WEIRTON STEEL COMPANY
WEIRTON, WEST VIRGINIA

PROJECT #1-6064 - PROPOSITION #21 LOCATION DISTRIBUTION

MAY 9, 1961

COPY	NAME	DATE
1	E. J. Klein	5/15/61
2	"	"
2	Kimmer	"
5	Donichio	16
3		
4	Got...	5/13/61
5	Comment	
6		
7		
8		
9		
10		

ALL INFORMATION HEREON IS THE PROPERTY OF KOPPERS COMPANY, INC. ENGINEERING AND CONSTRUCTION DIVISION AND IS CONFIDENTIAL AND MUST NOT BE MADE PUBLIC OR COPIED UNLESS AUTHORIZED BY IT AND IS SUBJECT TO RETURN UPON DEMAND.



DECEMBER 28, 1960

BOB WILSON & ASSOCIATES
1100 EAST WARRINGTON AVENUE
PITTSBURGH 10, PENNSYLVANIA

SUBJECT: PROJECT 1-6064
WEIRTON STEEL COMPANY
WEIRTON, WEST VIRGINIA
BLEEDER PIPE

GENTLEMEN:

PLEASE SUBMIT A QUOTATION ADVISING PRICE AND DELIVERY FOR FURNISHING, ERECTING, INSULATING AND HEATING APPROXIMATELY 350 FEET OF 4 INCH PIPE FOR CONDUCTING FORERUNNING COLUMN VENT GASES TO A FLARE STACK.

THE PIPE WILL BE SCHEDULE 40 CARBON STEEL SUPPORTED ON EXISTING PIPE RACKS AND BLEEDER STEEL BRACING. PURCHASER SHALL PROVIDE ANY NEW PIPE SUPPORTS.

THE INSULATION WILL BE SUCH AS TO MAINTAIN THE LINE TEMPERATURE AT A MINIMUM OF 120°F. THE INSULATION WILL BE COVERED WITH A WATERPROOF COMPOSITION JACKET HELD IN PLACE WITH TYPE 316 STAINLESS STEEL BANDS. THE LAST 100 FEET OF PIPE WILL CONSIST OF A VERTICAL RUN TO THE FLARE BURNER. THE INSULATION OF THE TOP 25 FEET WILL BE COVERED WITH A TYPE 316 STAINLESS STEEL JACKET.

THE HEATING METHOD IS TO BE ELECTRICAL BY THE IMPEDANCE METHOD. THE LINE IS IN A HAZARDOUS AREA AND ALL ELECTRICAL EQUIPMENT SHALL BE EXPLOSION-PROOF. THE QUANTITY OF HYDROCARBON VAPORS PASSING THROUGH THE LINE WILL BE ABOUT 218 POUNDS PER HOUR.

BIDDER IS TO STATE THE POWER REQUIREMENTS FOR HEATING THE LINE.

YOUR PROMPT ATTENTION IN SUBMITTING YOUR QUOTATION WILL BE APPRECIATED.

PLEASE ACKNOWLEDGE RECEIPT OF THIS LETTER BY SIGNING AND RETURNING THE ATTACHED COPY.

YOURS VERY TRULY,
ENGINEERING & CONSTRUCTION SECTION

H. C. HAMMOND
MANAGER - BRANCH 3

DICTATED BY:
C. J. LAFON/CAC

cc: H. A. GROSICK

K-3114 ✓

March 8, 1961

Mr. W. C. Hammond, Manager - Branch 3
Koppers Company, Inc.
General Offices
Pittsburgh 19, Pennsylvania

In Reply

Refer to: Fluid Systems, Inc. Proposal No. 220A

Subject: Installation and Heating of Waste Gas Line Located at
Weirton Steel Company, Weirton, West Virginia

Gentlemen:

We propose complete field erection of a Thermal Electric pipe system in accordance with the attached Sketch No. 16486, Revision A and "General Conditions" for the sum of Thirty-eight Thousand Four Hundred Five Dollars (\$38,405.00) without escalation if a contract is received and accepted on or before April 10, 1961. This proposal includes all labor, material and construction supervision for piping and associated thermal insulation and electrical work and supersedes previous Proposal No. 220 of February 20, 1961.

Present schedules indicate that construction can start immediately after approval of drawings, mobilization of materials and equipment and complete in seven (7) weeks maximum.

This quotation is in accordance with the following drawings and specifications supplied by you:

Drawing #1827-2A1	Rev. 3	Plot Plan
Drawing #2035-2A31	Rev. 4	By-Product Plant 36" Gas Bleeder
Drawing #2035-2A32	Rev. 5	By-Product Plant 36" Gas Bleeder
Drawing #1827-2A136		Benzol Plant CS ₂ Gas Piping
Drawing #2035-4A60	Rev. 1	By-Product Plant 36" Gas Bleeder
Drawing #2035-4A68	Rev. 1	By-Product Plant Bleeder Stack Stair Tower

Koppers Company, Inc. Engineering Department Standard D-1002-5,
dated March 10, 1955, Sheets 1 and 2
Koppers Company, Inc. Letter of February 27, 1961
Koppers Company, Inc. Drawing No. F1-6064-B CS₂ Vapors Disposal System

Except as noted in the following enclosures:

1. Sketch No. 16486, Revision A describes configuration of the pipe system as adapted from your drawings. The construction under this quotation consists of electrically heated pipe interconnections between equipment units furnished and installed by others.

2. Piping Exceptions.

Usual terms are 90% monthly labor and materials delivered, net 15th following month, 10% net 30 days after completion of erection.

The pipe system covered by this quotation is warranted as follows:

1. Automatically maintain not less than the temperatures and temperature differentials listed on Sketch No. 16486, Revision A when operated within the voltage limits stated.
2. To recover temperature from a cold condition to the stated operating temperature after prolonged shut-down.
3. Gas-tight, isolated construction when operated within the limits of Design Data as listed on Sketch No. 16486, Revision A.
4. Materials free from defect for a period of one (1) year from completion of erection.

Thank you for this opportunity to submit our bid. We hope to serve you.

Very truly yours,

FLUID SYSTEMS, INC.

By C. E. Collins
C. E. Collins, Vice President

CEC/b
enclosures
cc: (2)

PIPE MATERIAL SPECIFICATION D-1002-5 EXCEPTIONS
FLUID SYSTEMS, INC. PROPOSAL #220A
DATED 8 March 1961

The following exceptions apply to the Koppers Company, Inc. Engineering Department Standard D-1002-5, dated March 10, 1955:

- FLANGES:** Over 2" to 24" inclusive to be 150# ASA Standards Forged Steel Welding Neck instead of Slip-on.
- GASKETS:** 2" to 8" inclusive to be Johns Manville No. 71 full face - 1/8" thick on all electrically insulated joints instead of Ring Type Garlock #7022-1/16" thick.
- PIPE:** 12" and smaller to be ASTM A-53 Gr. A Seamless instead of ASTM A-120. All pipe to be flanged in 50' lengths. Refer Koppers Company, Inc. 2/27/61 letter.
- INSULATION:** To be 2" thick Carey Temp with plastic waterproof jacket. Refer Koppers Company, Inc. 2/27/61 letter.

KOPPERS COMPANY, INC.
Engineering and Construction Division
Project & Technical Section

5/12/61

PLANT VISIT MEMORANDUM

WEIRTON STEEL COMPANY
WEIRTON, WEST VIRGINIA

Project #1-6064

DATE: May 11, 1961

PLACE: Pittsburgh Coke and Chemical Company,
Neville Island, Pa.

PRESENT: Mr. Bill Sciss of Pittsburgh Coke and Chemical Company

Messrs. T. A. Donehoo, R. O. Parker and B. F. Tatterson
of Koppers Company, Inc.

=====

The purpose of the visit was to discuss the operation and maintenance of the Fluid Systems, Inc. line heating system similar to the one proposed for Project #1-6064 at Weirton Steel Company. Pittsburgh Coke and Chemical Company has two such line heating systems, one installed about 15 years ago for a naphthalene transfer line and one installed about 10 years ago for transferring pitch to storage. The total length of both lines is about 1800 feet.

Mr. Bill Sciss, Chief Electrician, kindly showed us the naphthalene transfer line and discussed the maintenance of the installation with their electrical department. Their report is that the system is essentially trouble free or as dependable as the source of electric power. They reported one call last year, and the investigation showed that the difficulty was caused by something else.

Their system has no failure indicators, consequently, they have no warning of difficulty until there is a block in the line. They felt that a low temperature signal and alarm was desirable because of the infrequent service calls. Their systems maintain the pitch and naphthalene fluid from one pumping until the next.

Their chief source of trouble is the improper weatherproofing of the line insulation and the leaking of naphthalene from valve stem packings on the insulation. These conditions overload the heating system resulting in line blocks.

BFT:mmm

B. F. Tatterson

cc: Mr. C. F. Simmers (11)
Mr. J. A. Hartzell + T. A. Donehoo
Mr. E. J. Helm

INTER-OFFICE CORRESPONDENCE
KOPPERS COMPANY, INC.

K-5
PRINTED 4-5-56



BF1

TO: _____
MR. H. A. GROSICK
LOCATION _____
SUBJECT COMMENTS ON SPECIFICATIONS

FROM: _____
LOCATION FAC - STANDARDS SECTION
DATE MAY 19, 1961
FILE PROJECT #1-6061 - PROPOSITION #2
WEIRTON STEEL COMPANY
WEIRTON, WEST VIRGINIA

WE HAVE REVIEWED THE ATTACHED SUBJECT SPECIFICATIONS AND OFFER THE FOLLOWING COMMENTS IN REGARD TO PARAGRAPH #307, INSULATION FOR THE IMPEDANCE HEATED PORTION OF THE CS₂ VAPOR LINE FROM THE NEW SEAL TANK TO THE WEST GAS BURNER RISER.

A "PLASTIC WEATHERPROOF JACKET" IS SPECIFIED OVER THE 2" THICK CAREY TEMP INSULATION. WE HAVE HAD NO PRIOR EXPERIENCE WITH WEATHER-PROOFING OF THIS SORT. WE SUSPECT THAT THIS JACKET WOULD BE PRONE TO TEAR, ESPECIALLY AT THOSE POINTS WHERE THE STAINLESS STEEL BANDS ARE APPLIED; THEREFORE WE RECOMMEND MORE COMMON WEATHERPROOFING FOR THIS INSULATION SUCH AS ROOFING FELT.

ALSO WE NOTICE THAT NO RECOMMENDATION HAS BEEN MADE FOR THE USE OF "THERMON", AN INORGANIC HEAT TRANSFER MATERIAL THAT IS COMMONLY BEING USED TO ASSURE MORE EFFICIENT HEAT TRANSFER BETWEEN TRACE AND PROCESS LINES. WE ADVISE THAT "THERMON", OR AN EQUIVALENT, BE USED FOR ANY LINE THAT IS TRACED.

OK

W. Kuenzi
W. KUENZI

WK/LRB:JD

ATTACH

CC: MR. C. F. SIMMERS
MR. J. A. MARTZELL
MR. W. H. MOFFATT
MR. E. PRESTON
MR. H. W. FRICKE
MR. R. K. MATTHEWS
MR. J. D. RICE
MR. J. F. RIGATTI

01368.000