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NICHOLS ENGINEERING & RESEARCH CORP.

ENGINEERS · CONTRACTORS · MANAGEMENT

60 WALL TOWER · NEW YORK

CABLE ADDRESS: NERCODEL. N. Y.
PHONE: WHITEHALL 3-5520

October 22, 1946

Far East Division
State Department
Washington, D. C.

Gentlemen:

We are anxious to secure information on equipment for a metallurgical and sulphuric acid plant, which we believe was installed in Japan about 1941.

We furnished design of flash roasters to the Mitsui Company, Ltd. of New York in 1940 for four (4) furnaces to burn, in suspension, iron pyrite, FeS_2, for the production of sulphur dioxide gas, presumably to be used in the manufacture of sulphuric acid. Insofar as we were aware, this plant was to be for the Toyo Koatsu Koggo of the Kabushiki Kaisha Co., Ltd. of Tokyo. We have no information as to the exact location of the flash roaster equipment or acid plant.

We are desirous of securing as much technical information as possible on the operation of these flash roaster units and would like to secure at least the following data:

(1) Tons of pyrite concentrates roasted per 24 hours in each of the individual furnaces. Average rate and maximum capacity.

(2) Analysis of the pyrite, giving percent iron, percent sulphur and any other elements conveniently known.

(3) Method employed in pre-drying and in grinding or screening the pyrite before feeding to the flash roaster system.

(4) Percent SO_2 gas strength leaving the flash roasters.

(5) Percent sulphur in the calcines or iron oxide product discharged from the bottom of the flash roaster.

(6) Data on operation of the waste heat boilers utilizing

the heat in the SO_2 gases, including:

(a) Temperature of gases entering the boiler.
(b) Temperature of gases leaving the boiler.
(c) Pressure of the steam.
(d) Temperature of the steam and whether superheaters were used.
(e) Temperature of the feed water.
(f) Pounds of steam generated per hour for each individual unit.
(g) Pounds of steam generated per pound of pyrite burned.
(h) Description of boiler installation, including type of boiler.
(i) Information on operating experience, including any corrosion or abrasion of the tubes and drums.
(j) Method of cleaning dust from tubes, soot blowers manual or automatic, and whether steam or compressed air for soot blowing.
(k) Information on general suitability of the type boiler used and whether maintenance has been excessive.

(7) Method of cleaning the gases following the flash roaster and boiler, as to whether Cyclone dust collector or Cottrell or other of dust removing apparatus was employed with any available information on results secured.

(8) Any available history on the installation, including approximate date when it was placed in operation, length of time it has operated, and whether operation has been substantially continuous. Whether four flash roaster units with four individual boilers were installed.

(9) Information whether similar type flash roasters have been installed at this or other plants in other cities.

As much information as can be secured on the operation of these units will be most helpful to us in the design of some large and important flash roaster plants now being considered. If at all possible, it will be most helpful if we could have general assembly drawings of this portion of the plant to show method of conveying the pyrite to the flash roaster equipment and method of removal of calcine and dust. Also drawing of the boilers and auxiliaries.

Very truly yours,

NICHOLS ENGINEERING & RESEARCH CORP.

R. W. Rowen
Vice President

RWR/ea

In reply refer to
JK

My dear Mr. Rowen:

This is in reply to your letter of October 22, 1946 requesting detailed information about the operation of the sulfuric acid plant of Toyo Koatsu K. K. in Japan, for which you furnished the design of the flash roasters.

It has been determined that the plant to which you refer was probably erected at Sunagawa, on the island of Hokkaido, but it did not get into operation until 1946, and it is now just starting on a very limited scale, not nearly approaching its 50,000 metric-ton sulfuric acid annual capacity.

A detailed study such as you request seems impractical at this time for the following reasons:

1. Because the Japanese ordered the designs does not mean that they installed them. It has been shown that in many cases they purchased elaborate designs and discarded them because of production difficulties and for many other reasons. Information available at present in this country gives no indication of the use of flash roasters at that plant, and none at any other Toyo Koatsu plant in Japan.

2. If they did make use of your design, an engineering study such as you request would not be worth while at this early date, for they have not had the opportunity to test performance, nor begun to approach capacity output.

3. Considering the many tasks assigned to qualified engineering personnel among the Occupation Forces, it does not seem practicable to ask them to undertake a technical study of this scope at present.

When

Mr. R. W. Rowen,
Michols Engineering and Research Corp.,
60 Wall Tower,
New York, New York.

When Japan is opened to private trade and the free travel of businessmen, as it is hoped will be the case in the near future, the study can then be undertaken and the findings will doubtless be more fruitful when the plant has been in operation long enough to warrant definitive tests.

Sincerely yours,

Roswell H. Whitman
Associate Chief
Division of Japanese and Korean
Economic Affairs

JK:WSMcCornick:bcb
11/7/46

STANDARD FORM NO. 64

Herreshoff Roasters ~~at~~ [illegible] contact plant.

Office Memorandum · UNITED STATES GOVERNMENT

Sunagawa DATE: ~~[illegible]~~

50,000 m.t. cap. yr. am. sulfate ~~or sulfuric~~

TO : Fisher

FROM : Martin

SUBJECT :

Design doesn't mean they installed those roasters.

Not operating fully -46.

Engineering study not yet [illegible] made, not up to cap. No knowledge [illegible] installed.

I think FA handles letters like attached. Will you see that an answer is given them.

Bill —

1. Gantenbein FA says FA handles Amer. property ~~interests~~ — not inquiries.

2. Suggest that Nichols Corp. be told to write Atcheson directly or — No.

3. We could write Atcheson + send acknowledgment to Nichols Corp. — No.

See what Ross thinks.

Ralph.

FORM DS-202
11-20-46

DEPARTMENT OF STATE
DIVISION OF COMMUNICATIONS AND RECORDS

TRANSFER SHEET

The item of correspondence, formerly filed under the number shown on the extreme margin of this sheet, has been transferred to the number indicated.

FROM Nanking	TO
DATED 7-1948	DATE OF TRANSFER 7-2948
ANALYST'S INITIALS WSS	

REMARKS

tel # 1383

TRANSFERRED TO	FORMER FILE NUMBER
893.00	893.00
894.768	894.768