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W. H. Mayo purgative

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Newport, Delaware
December 20, 1963

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NEWPORT

REQUEST FOR PROJECT

QUINACRIDONES - SPRAY DRIER

Attached are Reason Sheet and Scope of Work for the drier capacity required for Quinacridones in late 1964. (See letter V. H. Chalupski to R. A. Hageman - 2/15/63.) Please authorize preparation of project.

Of the driers considered (Heated Screw, Rotary Double Cone Vacuum, Turbulizer, Scraped Vacuum) only tray or spray drying were found suitable.

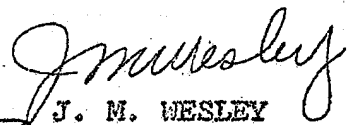
Technical Section economic comparisons show that at 600M lbs./year QA, net return on the differential investment (Spray versus Tray Driers) is above 9%; at 780M lbs./year, about 20%. These figures will be verified by Operations prior to project preparation.

The project contains provision for a vibrating hopper to receive presscake from the new Shriver press to feed to the drier, thereby eliminating manual handling of QA presscakes.

The minimum spray drier (7 ft.) has capacity in excess of 1MM lbs./year QA. This will eliminate a future space problem versus tray driers.

No yield improvement is claimed for spray drying since the losses in multiple handling tray drying, although evident, cannot be established quantitatively.

All equipment specified has been tested successfully on full scale tests.


J. M. WESLEY
TECHNICAL SECTION

JMW/tmj

attach.

N40631

REASON SHEET

PRESENT FACILITIES AND TO WHAT EXTENT THEY ARE INADEQUATE:

Two existing vacuum dryers in the Quinaeridone Plant have 216M lbs./year drying capacity versus the 604M lbs./year plant crude capacity. The additional crude is dried in Newark driers and returned for dispersion milling at Newport. Newark drying capacity now being used will be required for Newark products in late 1964.

PROPOSED WORK:

Purchase and install a seven foot diameter Bowen Spray Dryer, presscake feeding equipment and auxiliaries.

REMARKS:

1. Spray drying is specified since it is economically, operationally and quality-wise the most desirable.
2. The minimum size spray drier will have capacity in excess of 1MM lbs./year QA.
3. The Bowen drier is specified because of its unique atomizing disc system.
4. No pollution problems will result from this project.

SCOPE OF WORK

1. Purchase and install Carrier Mfg. Co. vibrating hopper
 - a. Hopper -\$15M
 - b. Support steel -\$ 1M
 - c. Power - 2 - 1 hp motors } 5000#
 - d. Pads
 - e. Purchased water hose connection (1")

Hopper to be installed to take cake from Shriver filter and feed Moyno pump. Install on first floor A-27 under Shriver.

2. Purchase and install Bowen Spray Drier System* - \$43M
System includes
 - (a) Moyno feed pump w/variable drive
 - (b) Spray drying chamber
 - (c) Direct fired gas burner (FIA Safety)
 - (d) Instrumentation for dryer
 - (e) Structural steel
 - (f) Dust collector
 - (g) Minimum duct work

Install in present PIS Storage Area adjacent to A-27 Bldg.
(*) Print attached to E. H. Kolb's copy.

2a. Moyno feed pump

- (1) Provide power for 2 hp motor
- (2) Provide mounting pad
- (3) Provide 2" S/S piping (smooth line) to atomizer
- (4) Provide special throat opening

2b. Spray drying chamber (7.5 x 7.5 x 16') - Chamber, ducts and steel 5000#

- (1) Provide pads for structure
- (2) Provide access steel
- (3) Provide purchased water line (1")
- (4) Provide 10 hp power for atomizer
- (5) Install duct work
- (6) Provide 1/2 hp power for small auxiliaries

2c. Direct fired gas burner (FIA Safety)(4' x 6' x 10')

- (1) Provide access steel
- (2) Provide mounting pads
- (3) Provide power to 1 hp blower
- (4) Provide auxiliaries to safety features
- (5) Provide fresh air intake installation
- (6) Provide installation for duct work to dryer
- (7) Provide gas line to burner

Burner, ducts and steel 1500#

2d. Instrumentation for dryer

- (1) Provide 110 volt power
- (2) Mount panels (provided by vendor)

2e. Structural steel

- (1) Mount as required

2f. Dust collector (6' x 6' x 18')

- (1) Provide pads for structural steel
- (2) Provide 1/2 hp power for auxiliaries
- (3) Provide 110 volt power for lights and timer
- (4) Provide access steel
- (5) Provide 100 psig compressed air
- (6) Provide 10 hp for blower
- (7) Provide 2 doors in collector (1 door normal)
- (8) Provide installation of exhaust line duct work
- (9) Provide spare bags and holders
- (10) Feeder valve

Collector and accessories
Pigment

4500#
2000#

3. Relocate PTS Storage Area.