

MANUFACTURING CO.

EQUIPMENT FOR THE FOOD AND CHEMICAL PROCESS INDUSTRIES

WEST CHESTER, PENNSYLVANIA

SANTA ROSA, CALIFORNIA

REPLY TO:

P. O. BOX 690
WEST CHESTER, PA.
OWEN 6-6313

August 8, 1963

E. I. Du Pont De Nemours & Co., Inc.
Newport Plant
Newport, Delaware

Attention: Mr. A. M. Auster
Pigments Department

Dear Mr. Auster:

We have taken a look at the pigment presscake drying problem you have outlined to us last week. Provided this material does not stick to heat transfer surfaces too severely and does not form little caseharden lumps which are extremely slow to dry, we would estimate that 150 lbs. per hour could be easily dried with approximately 400 sq. ft. of heat transfer surface.

This, in Type 304 stainless steel, would cost approximately \$40,000.00 to \$50,000.00. You would have to add approximately \$5,000.00 for drive and rotary joint to this, so the total value of the equipment would be in the neighborhood of \$45,000.00 to \$55,000.00 f.o.b. the West Coast.

The size of this equipment could perhaps be adjusted to suit your particular needs but a single unit 15 ft. long with 28" diameter screws, mounted side-by-side and so arranged as to give a recirculating bed of pigment, would be one approach. The total floorspace requirement in this case would be approximately 18 ft. long x 6 ft. wide and the equipment would require approximately 4 ft. from top inlet to bottom. There would be a side overflow discharge.

A typical small unit of the same type is available here at West Chester for test purposes. It is shown in the attached photographs E-104 and E-106. A couple of other views are shown in our Photographic Sheet T-5405 and T-5406, attached. This test unit has 8" diameter screws and is four feet long. It contains approximately 3 cu. ft. of material, when filled, flush with the top of the screws. We are not in a good position to run drying tests now as we are in the throws of a small building program and installation of a new steam boiler, which will considerably improve our capabilities in this direction. We would suggest that should you be interested in a test that it be scheduled for approximately six weeks from now; certainly not less than four from now. Our charges for such a test are \$200.00 per day and we would think that we could probably accomplish two runs in a day's testing, though occasionally only one test run is carried out in a day's time. Let us hear from you if this seems to have any promise of interest. We, of course, are anxious to serve as best we may.

Yours very truly,

Robson B. Dunwoody
Robson B. Dunwoody

RBD:mb
Enc: 104, 106 5405/6

USERS REPORT*

RIETZ TJ Series Thermascrews

provide uniform, fully effective Heat Exchange
for difficult materials

TJ's ARE HIGHLY CONTROLLABLE

Quantity, temperature and rate of flow of heating or cooling medium are easily regulated.

Quantity and retention time of product are fully controllable.

TJ's ARE COMPACT, HIGH CAPACITY UNITS FOR CONTINUOUS HEAT EXCHANGE

TJ's ARE EXCEPTIONALLY EFFICIENT HEAT EXCHANGERS

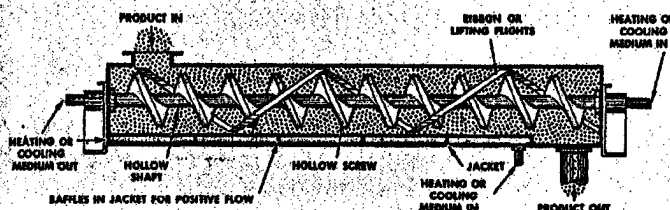
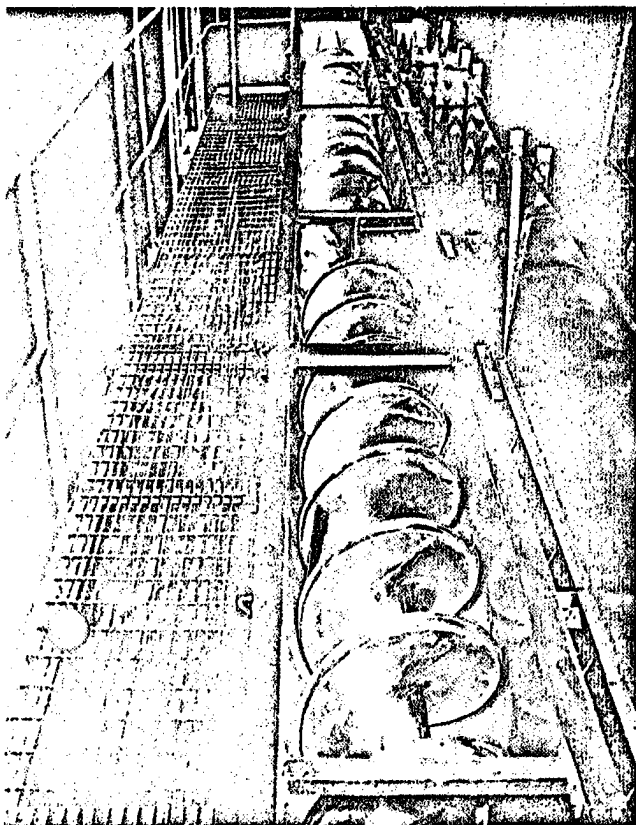
Hollow screw and jacketed trough present a very high ratio of heat transfer surface to product volume.

Gentle, slow-speed action minimizes particle-size degradation. Dust-tight, vapor-tight construction is available.

Easily accessible contact parts permit quick, thorough cleaning. Rugged Rietz construction reduces maintenance requirements. Standard or ASME Code.

*SOME USERS:

Allied Chemical Co. • American Cyanamid Co. • Armour & Co. • Beech-Nut Packing Co. • California Packing Corp.
Campbell Soup Co. • Canadian Chemical Co. • Chas. Pfizer • Dow Chemical Co. • E. I. du Pont de Nemours Co.
Eastman Kodak Co. • Hershey Chocolate Co. • Horn & Hardart • Kraft Foods • Libby, McNeill & Libby • Monsanto Chemical Co.
New England Lime Co. • Ocean Spray Cranberries, Inc. • Victor Chemical Co. • Wyandotte Chemicals Corp.



Above shows basic operating principle of Rietz TJ Series Thermascrews. Various modifications of this basic design adapt TJ's for use with a variety of heating fluids or coolants to meet special product requirements.

Left shows an installed 24" x 30' Rietz Thermascrew. Note complete accessibility of heat exchange surfaces.

MAIN OFFICES:

Santa Rosa, California; West Chester, Pennsylvania

FIELD OFFICES:

Chicago, Illinois; Seattle, Washington; Houston, Texas



Equipment for the Process Industries
Size Reduction • Mixing • Heat Exchange

MANUFACTURING COMPANY

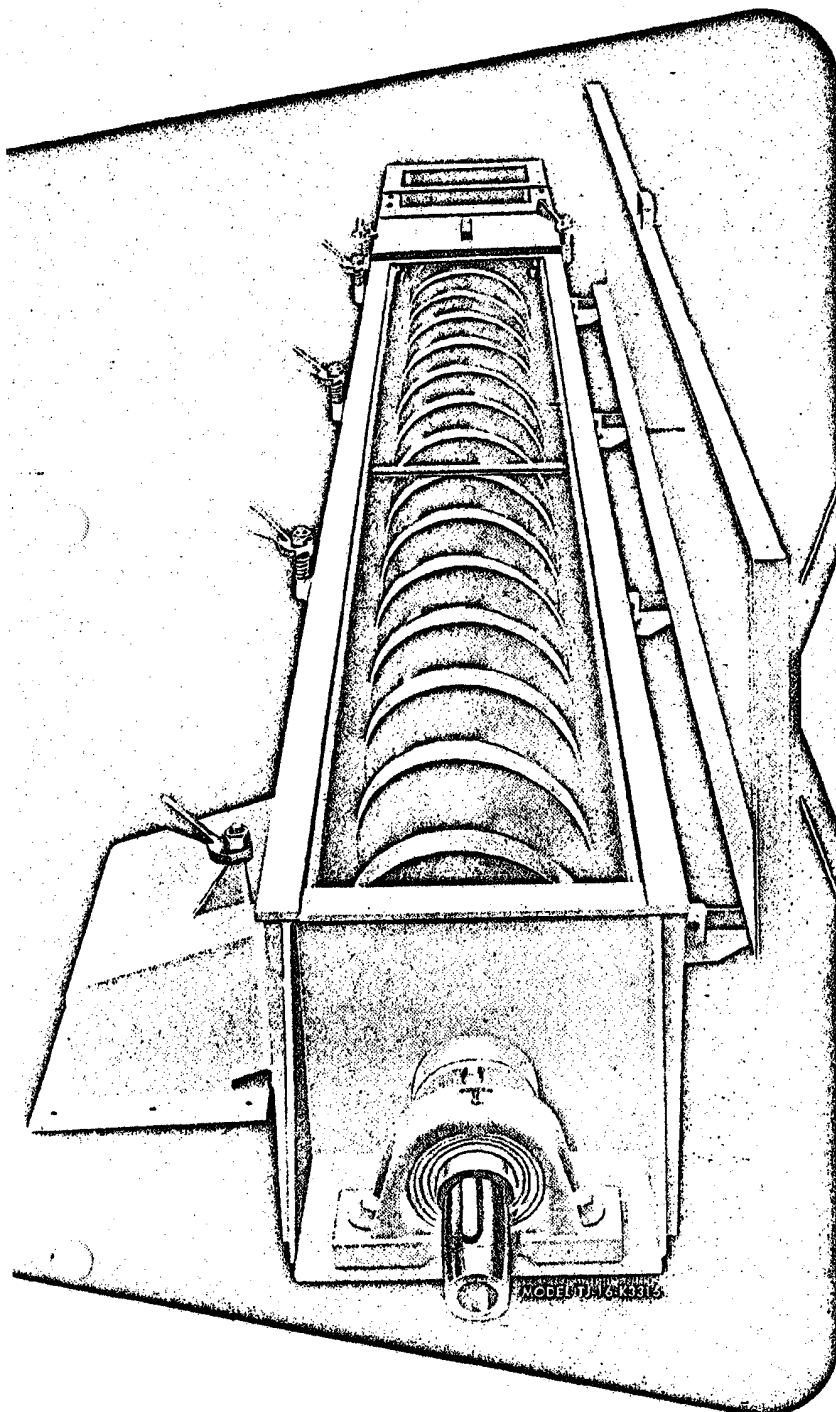
Santa Rosa, California • West Chester, Pennsylvania
Sales and Engineering Offices in Principal Cities



TJ SERIES

THERMASCREWS

HOLLOW SCREW WITH JACKETED TROUGH



Bulletin No. 1011

COOLING • HEATING • MIXING

CRYSTALLIZING • DRYING • COOKING

CHILLING • SOLVENT EXTRACTION

TROUGH LENGTHS FROM 4' to 30'

TROUGH DIAMETERS FROM 8" to 24"

EFFICIENT
CONTINUOUS
HEAT EXCHANGE
FOR
POWDERS
GRANULAR SOLIDS
PASTES
VISCOUS MATERIALS
and many classes
of materials
that are
not adaptable
to other
heat exchange methods

EVAPORATION OF
VOLATILE ELEMENTS
FROM PASTES AND SOLIDS

DUST-FREE COOLING
OF PRODUCTS
DIRECT FROM KILN