

*Issued 6/1/76*

*J. J. Hansen*

W. J. King  
April 1976

PROCESSES

Chambers Works  
Bldg. 743  
I-1-1

"PONSOL" SPRAY DRYER #2

Principle of Process

A slurry or solution is pumped to an atomizing nozzle. Steam or pump pressure is used to atomize it. The droplets of material thus formed come in contact with a large volume of hot air. The dry product is separated from the air stream in a cyclone. The product is discharged to containers and the air stream is scrubbed to remove any remaining particles and then discharge to the atmosphere.

Reaction

There are no chemical reactions.

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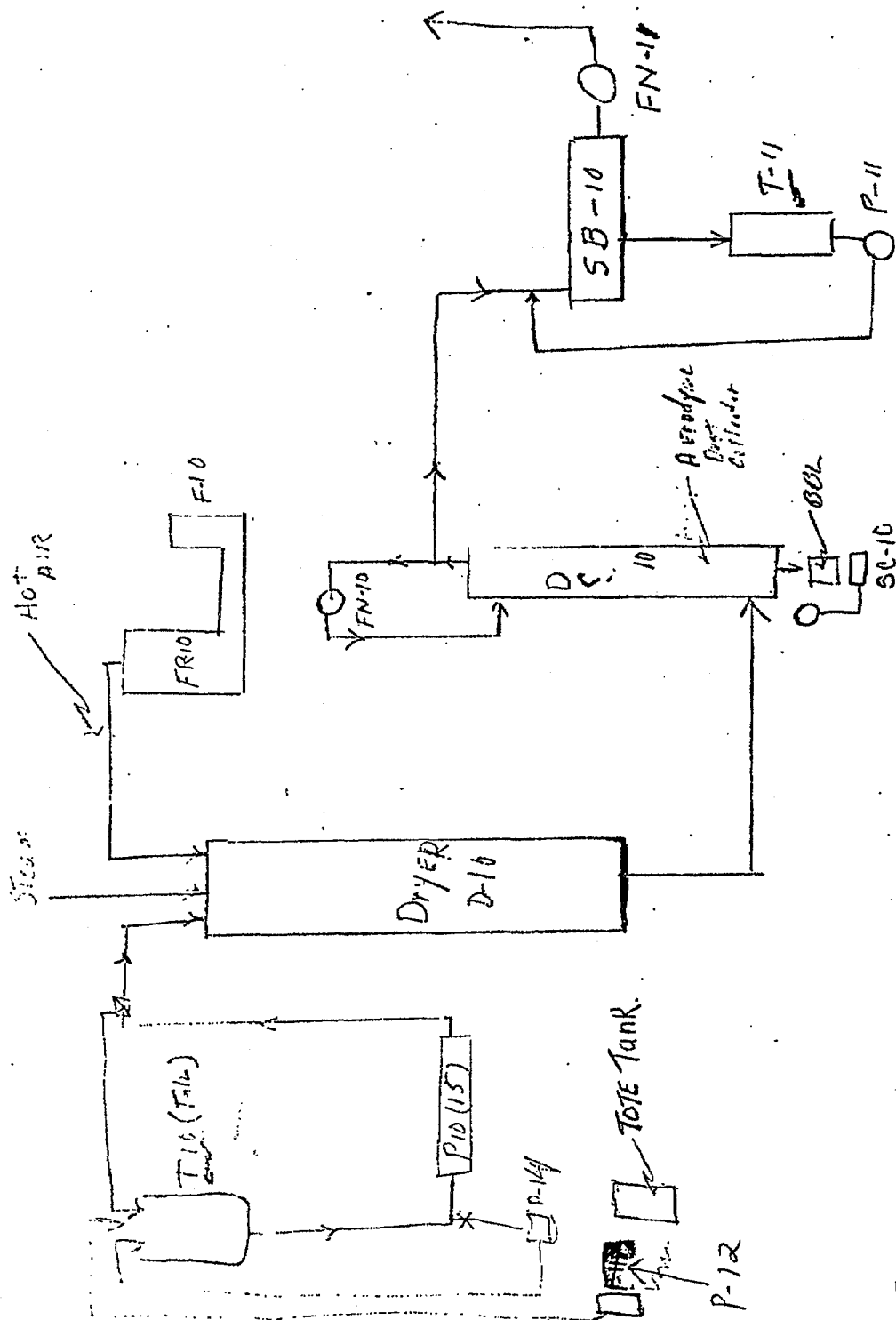
## OPERATING INSTRUCTIONS

Chambers Works  
Bldg. 743  
III-1

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION:

Flow Diagram



N32959.01



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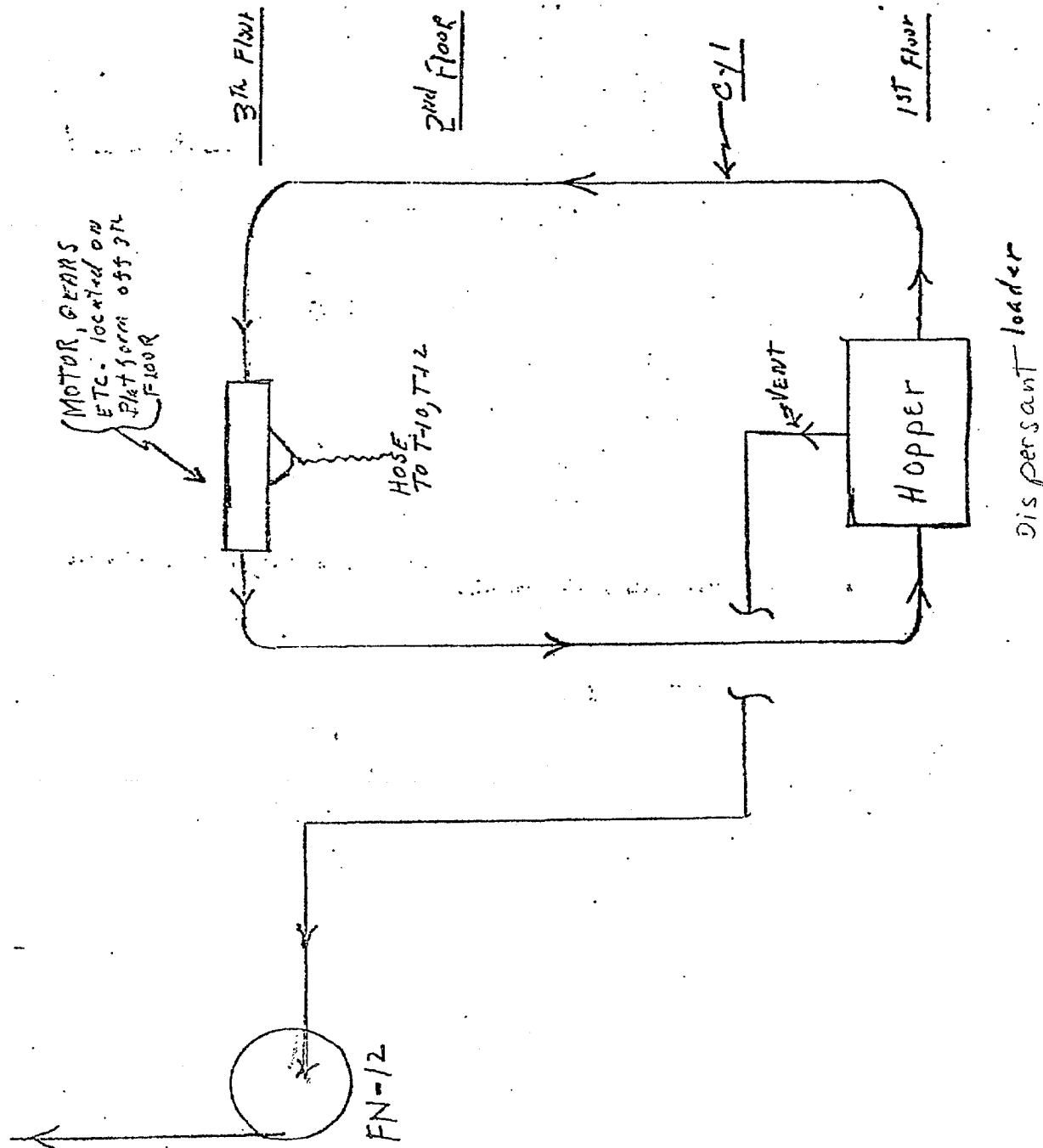
## OPERATING INSTRUCTIONS

Chambers Works  
Bldg. 743  
III-3

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION:

Dispersant Loader



## OPERATING INSTRUCTIONS

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Chambers Works  
Bldg. 743  
III-4

**SUBJECT:** "PONSOL" SPRAY DRYER #2

**OPERATION:** Equipment List

CY-1 - Dispersant Loader, an enclosed endless chain of S.S. flights driven through a gear reduction system by a 3 HP 550V. 1750 RPM motor.

CY-2 - Box elevator and dumper, a platform cage attached to an endless chain in guides. It is driven through a gear reduction system by a 7 1/2 HP 550V. 1750 rpm motor with a magnetic brake attached.

D-10 - Dryer, an 8' diameter x 45' high S.S. dryer body with a conical bottom and flat top.

DC-10 - Dust collector, an Aerodyne S.S. dust collector 25 3/4' high. It is in two functional sections joined as one unit. The upper Aerodyne - exhaust-recirculation section is 6 3/4 ft. drain by 4 3/4 ft. high. The lower dust section is 5' drain x 21' high. It has a conical bottom with a rotary air lock for discharging solids. The air lock turns at 10 RPM driven through a gear reducer by a 1/2 HP 220V. 1750 RPM motor.

FN-10 - Recirculating air fan for DC-10, a 6620 c.f.m. 2375 RPM fan driven through V-belts by a 50 HP 550V. 1750 RPM motor.

FN-11 - Main exhaust fan, a 10,000 c.f.m. 2300 rpm fan driven through V-belts by a 125 HP 550V. 1750 RPM motor.

FN-12 - Dispersant hopper exhaust fan, a New York Blower size 15 fan driven through V-belts by a 1/2 HP 550V. 1750 RPM motor.

FR-10 - Drying air heater, propane fired Maxim heater furnishing total combustion gases for drying air at a rate of 480,000 cubic feet/hr. It can furnish approximately 10 million BTU/hr.

P-10 - Feed pump, Moyno 6FGJ6SSQ 27-216 RPM driven through a verispeed drive by a 15 HP 1750 RPM 550V. motor.

P-11 - Circulating pump for scrubber solution, Gould 350 GPM pump driven by a direct coupled 10 HP 550V. 1750 RPM motor.

P-12 - Slurry suck-up pump, an air and spring driven diaphragm pump.

P-13 - Booster pump for wash water, Gould high pressure 20 GPM, limited volume pump driven by a direct coupled 15 HP 550V. 1750 RPM motor.

P-14 - Slurry recirculation pump for T-10 & 12, Gould 300 GPM pump driven by a direct coupled 20 HP 550V. 1750 RPM motor.

P-15 - Feed pump, Moyno special high pressure feed pump driven through a verispeed drive by 20 HP 550V. 1750 RPM motor.

## OPERATING INSTRUCTIONS

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III-5

**SUBJECT:** "PONSOL" SPRAY DRYER #2

**OPERATION:** Equipment List

P-16 - Slurry recirculation pump for T-13, Gould 300 GPM pump driven by a direct coupled 20 HP 550V. 1750 RPM motor.

SB-10 - Scrubber, a 10' long 5'6" wide x 4' high S.S. box with a 1'8" x 5'4" scrubber solution contact area which uses either 3" stainless steel pads or 1" S.S. bars. The exhaust 1/3 contains demister vanes for droplet removal.

SC-10 - Scale, Toledo 711-2881, 0-600 lb. dial face 30 x 30 platform with mounted rollers.

T-10 & 12 - Feed tanks Identical 2,950 gal. S.S. tank with 56 RPM and 28 RPM two speed agitation driven through a gear reducer by a two speed 30 HP 550V. 1750 RPM and 15 HP 550V. 880 RPM motor.

T-11 - Scrubber solution storage tank, 600 gal. S.S. no agitation.

T-13 - Press cake make up tank, 2,950 gal. S.S. tank with 56 RPM and 28 RPM two speed agitation driven through a gear reducer by a two speed 30 HP 550V. 1750 RPM and 15 HP 550V. 880 RPM motor.

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## OPERATING INSTRUCTIONS

Chambers Works  
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III-6

SUBJECT: "PONSOL" SPRAY DRYER #2

Operation: Loading Prepared Slurries

1. Check to be sure feed tank T-10 or T-12 is empty and all valves are closed.
2. Place screen in manway and hook-up P-12 discharge hose to screen.
3. Place tote tank or barrel in position and hook up line to unloading pump P-12.
4. Pump contents of tote tank or barrel to feed tank. When tote tank is empty, rinse with 50 lbs. of water, valve off suction to pump and turn off pump.
5. Disconnect tote tank and place another full one of the same charge in position. Pump this one also to feed tank. Continue pumping until charge is loaded to feed tank.
6. On last tote tank of charge, rinse with 20 gallons of water and pump this to the feed tank. This lessens dye loss by cleaning out feed line to tank.
7. Wash the empty tote tank to the ditch. Be sure they are drained and product labels removed. Set empty, clean tote tanks aside for return to the area. Be certain that the discharge valves are closed and caps are fitted on the quick couplings.
8. After last tank has been disconnected, remove discharge hose from screen and remove screen from manway.
9. Clean up screen, unloading pump P-12, and line by flushing with water to the ditch.

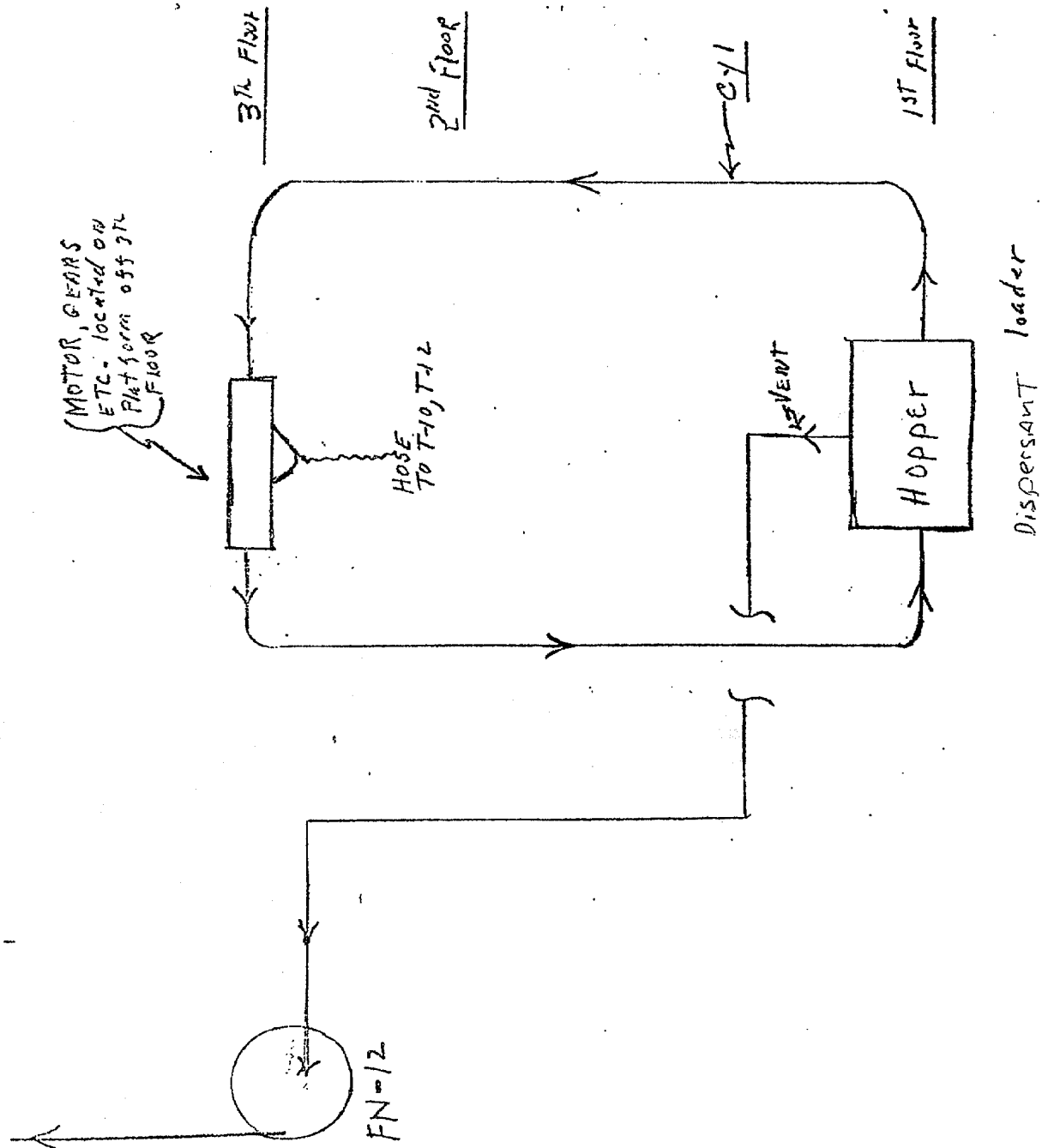
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## OPERATING INSTRUCTIONS

Chambers Works  
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III-7

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION: Dispersant Loader



N32959.02

## OPERATING INSTRUCTIONS

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III-8

**SUBJECT:** "PONSOL" SPRAY DRYER #2

**OPERATION:** Loading Dispersant Agents

1. Start FN-12, ventilating fan, for the dispersant loader.
2. Start CY-1, the dispersant loader.
3. Load the Reax 85A called for by the log card into conveyor hopper.
4. Shut down CY-1, agitate the contents of the tub, and circulate using P-14 for one hour, sample to G.A.L. as a S.D. slurry for adds and wet DPT. (Sample C.)
5. Start CY-1. Add  $3/4$  of the Tamol SN called for by the log card while waiting results on C sample. If C adds are within 10% of amount called for by the log card, complete the additions of Tamol SN as called for by the log card. If C adds are above or below 10%, contact supervision.
6. Shut down CY-1 and FN-12 after all dispersants have been added. Mix for one hour and sample to G.A.L. as a S.D. slurry for adds and wet DPT. (Sample E.) If the log card amounts of dispersants have been loaded, do not wait for the E & F results; start drying.

## OPERATING INSTRUCTIONS

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III-9

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION: Shutdown to Operation

Unless otherwise stated, the following operations are from the panel board.

1. Set feed control FC-101 to manual and output air to 9 psig.
2. Connect feed tank T-10 or T-12 to pump P-10 or P-15. Dry dip tank (be sure agitator is off when dipping) and record on log card.
3. Connect return line to T-10 or T-12.  
Be sure return and feed line are connected to the same tank.
4. Open bottom valve on T-10 or T-12 and start up feed pump, P-10 or P-15. Running light should come on.  
Be sure both feed line and return line are connected before starting pump.
5. Check tank to be sure slurry is returning to tank. It should take about 6 minutes for slurry to return after starting with empty lines if output is set at 9 psig.
6. Start P-11 scrubber circulating pump. Prior to starting, water level in scrubber water tank T-11 should be 1/2 way up in the middle sightglass. Running light should come on when pump is started. Flow should be 6.25 on the meter (250 gpm) or better.
7. Start main fan FN-11. Running light should come on.
8. Start sec. fan FN-10. Running light should come on.
9. Place barrel on scale SC-10. Weigh and record tare weight.
10. Start air lock. Running light should come on.
11. Set temperature control TC-116 to 4 psig output - automatic mode and set point at required temperature (see log card).
12. During this time, the main power light should come on, the system will purge and 3 minutes after the power light is on the purge light will come on. If it does not, see interlock list for probable cause and correct it.
13. Check to be sure gas valves (GV-1, GV-2, GV-3) are open.

These valves are located on the fourth floor platform beside the main burner.

## OPERATING INSTRUCTIONS

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Chambers Works  
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III-10

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION: Shutdown to Operation

14. Open propane feed valve. Light should come on.
15. Depress the pilot start switch and hold in until pilot light lights.

The following automatic series will take place. Valves SV-108A, SV-108B will open as valve SV-108C closed. This allows gas to be fed into the pilot burner. A spark plug will be activated to light this gas. When the pilot is ignited, the "Pilot on" light goes on. If the pilot does not light, the alarm will sound and SV-108A and B will close and SV-108C will open. If pilot does not start, see Page III-18.

16. When it is decided to light the main burner, depress valve open switch and hold down until "burner on" light comes on. If the flame is not established, repeat Steps 14, 15, and 16..
17. After burner is lit, allow outlet temperature to rise to 75-100°F. Slowly raise air pressure to maximum of 9 psig and then set controller to automatic position. When air to control valve starts to decrease, set pressure to 18 psig or above.
18. Set the external steam controller, PC-120, and the internal steam controller, PC-151, to zero.
19. Open main steam valve (HV-130). Light should go on.
20. Raise pressure of external steam to set point by using PC-120 in manual.
21. Raise pressure of internal steam to set point by using PC-151 in manual mode.
22. Set the feed controller, FC-101, to manual and 0 psig output.
23. Open 3-way feed valve to dryer. This will allow feed to go to dryer.
24. Depress and hold wash flush, PB-132, for 45 seconds. This will clean out return line to tank.
25. The outlet temperature of the dryer will drop. As the outlet temperature approaches its set point, raise the output of the feed controller FC-101 until the recorder gpm is at 5 gpm. Set point to 5 gpm and switch to automatic.

## OPERATING INSTRUCTIONS

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Chambers Works  
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III-11

**SUBJECT:** "PONSOL" SPRAY DRYER #2

**OPERATION:** Normal Operations

1. Follow instructions given on the instruction sheet.

See also the product sheet. This sheet will indicate any hazards involved in handling individual products.

2. Maintain temperature on the dryer as instructed.

Check log card and list of Drying Control Set Points.

3. Check periodically for dust losses at the stack.

The dryer should be shut down when a dust loss is evident. All of the dyes are very expensive.

Dust losses also cause atmospheric pollution.

4. Keep a check on the instruments to be sure the dryer is operating properly.

5. Replace the drum on scale when it is full.

6. Label, tag, and head each drum immediately.

Include on barrel label, net weight, code number of product, name of product, barrel number and charge number. Use plastic drum liners when drying dyes.

7. Maintain an adequate supply of clean dry drums.

Be sure the drums are stored in a safe manner. Do not use wet drums. Do not use #2 wash drums (drums with 6" dia yellow circle stenciled on side of drum).

8. Maintain the Produce and Ship ticket up to date.

9. When putting drums on pallets, make certain stenciling on barrels face outside so that the material can be identified without having to move drums on pallet.

10. At the beginning and end of the shift, record the events of the shift on the shift log sheet. Dry dip the tanks and record.

Continued

## OPERATING INSTRUCTIONS

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III-12

**SUBJECT:** "PONSOL" SPRAY DRYER #2

**OPERATION:** Normal Operations

10. Continued.

Be sure agitator is off when dipping tanks.

Be sure to note unusual occurrences in detail. Leave information on needed repairs, malfunctioning equipment, etc. Record any down time and reasons for down time.

11. Keep the area clean and trash picked up.

The panel board and control room must be kept clean and dry at all times.

DO NOT USE ANY WATER IN THE CONTROL ROOMS.

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## OPERATING INSTRUCTIONS

Chambers Works  
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III-13

SUBJECT: "PONSOL" SPRAY DRYER #2

Operation to Shutdown

OPERATION:

1. When the feed stock level is within 1-inch of the feed tank's outlet, wash down the tank using less than 200 lbs. of water.

This will clean the tank and lessen the product loss.

2. Repeat Step 1 using up to 1,000 lbs. of water.

Be sure tank walls are clean.

3. As the output of slurry controller decreases and inlet temperature increases, turn off flame by pressing pilot flame stop button. This should turn off all gas to the burner and cause the flame out alarm to sound. When the burner is not lit, the feed is directed back to the feed tank automatically.

4. Allow FN-10, FN-11 and P-11 to run to cool down the unit. Shut off P-10 or P-15 if feed tank is empty. DO NOT RUN P-10 OR P-15 DRY.

5. After the unit has cooled down, inlet air below 200°F, check barrel on scale to be sure it will hold any hangups. Turn off the following in order:

- a) Air lock
- b) FN-10 sec. fan
- c) FN-11 main fan

Don't turn off P-11 scrubber pump.

6. Turn on air lock and pack out all product.
7. Turn off air lock, lock out FN-11. Inspect unit for hangups by opening duct to dust collector and looking into the dryer and lower part of dust collector. (Pack out amount).
8. Turn off P-11. (P-11 must always be running before FN-11 main fan is started).

## OPERATING INSTRUCTIONS

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Chambers Works  
Bldg. 743  
III-14

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION: Cleaning Feed System

1. Disconnect return line from tank (T-10 or T-12).
2. Drain feed line by opening valve next to control room.
3. Drain pump (P-10 or P-15) by allowing it to run for two minutes. DO NOT RUN PUMP (P-10 or P-15) DRY.
4. Valve off T-10 or T-12 and remove suction line from P-10 or P-15.
5. Place hose under T-10 or T-12 and route to ditch.
6. Place water hose into suction of P-10 or P-15.
7. Start P-10 or P-15 allowing it to flush the feed line and the return line to the 2nd floor drain.
8. Continue flushing until no color is seen in discharge at 2nd floor.
9. Wash T-10 or T-12 with water from Pick heater until no color is visible. Be sure top of tank and baffles are clean.
10. Close valve under T-10 or T-12 and fill with water, agitate and then open and close three times T-10's or T-12's drop valve. (This will clean seat).
11. Drop this wash water to the ditch and rinse tank.
12. Close T-10 or T-12 drop valve. Tank is ready for inspection.

## OPERATING INSTRUCTIONS

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Chambers Works  
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III-15

**SUBJECT:** "PONSOL" SPRAY DRYER #2

**OPERATION:** Clean Dryer Dust Collector

DO NOT turn off P-11 scrubber pump until all of the systems are clean except the scrubbing system.

1. Inspect the dryer for large hangup. If any are found, start FN-11 and FN-10 and remove as much as possible by brushing. Do not remove with water. Turn off FN-10 and FN-11 after brushing.
2. Be sure FN-11 is locked out then remove lower plates from DC-10 (aerodyne). Start air lock motor. Be sure barrel is in place and sweep material into air lock. When as much dust is removed as possible, replace lower plate. Remove the barrel.
3. Start up FN-11, FN-10.
4. Place water hose into P-10 or P-15 and start to circulate water from pump to 2nd floor. Do not have recycle line connected to tank.
5. Be sure air lock is running and duct valve is open. Open drains on DC-10, FN-10, FN-11 and place water hoses into duct opening.
6. Turn on water to hoses.
7. Set controller to feed 50 lbs. steam to dryer and turn on slurry bypass. Open and close 3-way valve about three times to clean seats and then leave it open so that water is pumped to the dryer.
8. Allow water to run until no color is observed in the air lock discharge. Then turn off water, steam, FN-10 and FN-11.
9. Inspect dryer and DC-10. Wash if necessary.
10. Turn off P-11. Drain pump and T-11 to ditch.
11. Wash SB-10 to ditch via T-11.
12. Close ditch valve. Fill T-11 1/2 full with water and circulate to SB-10 for 15 minutes then drain to ditch.
13. Refill T-11 to overflowing and drain to ditch until color is no longer visible in draining.
14. After T-11 is clear, shut drain valves and open valves to P-11.

# OPERATING INSTRUCTIONS

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Chambers Works  
Bldg. 743  
III-16

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION:

Interlocks

| <u>Point</u> | <u>Name</u>                 | <u>Alarms ON</u> | <u>Action</u>      |
|--------------|-----------------------------|------------------|--------------------|
| PS 106       | Gas Pressure                | Low Pressure     | Shuts Off Burner*  |
| PS 112       | Gas Pressure                | High Pressure    | Shuts Off Burner*  |
| TS 114       | Inlet Temperature to Dryer  | High Temperature | Shuts off Burner*  |
| FS 115       | Drying Air Flow             | Low Flow         | Shuts Off Burner*  |
| PS 119       | Dryer Vacuum                | High Vacuum      | Shuts Off Main Fan |
| TS 121       | Dryer Discharge Temperature | High Temperature | Shuts Off Burner*  |
| PS 124       | Instrument Air Pressure     | Low Pressure     | Shuts Off Burner*  |
| FS 127       | Scrubber Water Flow         | Low Flow         | Shuts Off Burner*  |
| PS 129       | Sec. Air Pressure           | Low Pressure     | Shuts Off Burner*  |
|              | Access doors                | Doors Open       | Shuts Off Burner*  |

\*NOTE: Whenever the burner shuts down or if burner is not lit, HV-132, 3-way slurry feed valve, directs the feed back to the feed tank.

## OPERATING INSTRUCTIONS

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Chambers Works  
Bldg. 743  
III-17

Trouble Sheet

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION:

1. Main fan, FN-11, will not run (PB-125).  
Check electrical.
2. Main fan, FN-11, running but shuts down.  
Check electrical.  
Interlock Hi Vacuum (PS-119).  
Too much pressure drop on system.
3. P-11 water scrubber pump will not run.  
Electrical trouble. No interlocks.
4. Second fan, FN-10, will not run.  
Electrical trouble.  
Main fan not running.
5. Power light does not go on.  
Light burned out or one of the following:  
Low water flow, less than 6.25 (250 gpm) (FS in scrubber system) P-11.  
Low Sec. air pressure (PS-129) FN-10  
Low drying air flow (PS 115)  
High discharge temperature to dryer (TS-121)  
High inlet temperature to dryer (TS 114)  
Low instrument air pressure (PS 124)  
Low gas pressure (PS 112)  
Door (s) to unit open
6. Pilot will not start.  
Power not to unit (see power light).  
Purge not complete.  
PB-133, field switch, left in off position.  
Electronic failure on safety guard unit.  
No fuel.
7. Main burner will not light.  
Manual gas valve closed GV 1 and/or GV 2.  
Pilot not lit.  
  
Note: If main burner does not light; in order to try again, the pilot must be re-established.

## OPERATING INSTRUCTIONS

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Chambers Works  
Bldg. 743  
III-18

**SUBJECT:** "PONSOL" SPRAY DRYER #2

**OPERATION:**

Trouble Sheet

- 
8. Feed will not go to dryer.
1. Burner not running.
  2. Pump not running or failed.
  3. Plugged line or 3-way valve failed.
  4. Low air pressure to 3-way valve.

# OPERATING INSTRUCTIONS

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April 1976

Chambers Works  
Bldg. 743  
III-19

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION:

"These Operating Instructions have been issued after a complete review of current technology and conform to current C. W. Process and subsequent recommendations recorded in TA's and TC's."

W. J. King (Author's signature)

Building Supervisor W. J. King Date 4/21/76

Senior Supervisor W. R. Steinbrink Date 4/26/76

Chief Supervisor, Operations M. J. Rembert Date 5/13/76

Chief Supervisor, Tech. or Plant Assist. J. Hansen Date 26 Apr 76

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## OPERATING INSTRUCTIONS

W. J. King  
April 1976

Chambers Works  
Bldg. 743  
IV-1

**SUBJECT:** "PONSOL" SPRAY DRYER #2

**OPERATION:** Sampling and Operating  
Procedure for "Latyl" Colors

1. Load Reax 85A, water and slurry.
2. Sample to G.A.L. for adds and wet DPT. Add 3/4 of the Tamol SN called for on the log card while waiting results from lab.
3. If adds called for by G.A.L. are within 10% of those called for on the log card, complete the addition of the Tamol as called for by analysis. If adds are above or below 10%, contact supervision. If solids calc. exceed percent gross solids, check for 100% present. If that is within 10% of the 100% shown at bottom of log card, proceed with Tamol as above.
4. Whenever additional dispersant above that called for on the log card is added to the slurry, add an equivalent amount of H<sub>2</sub>O.
5. After all dispersants have been added and mixed, resample to G.A.L. for adds. Record all results on log card. Do not wait for E&F results before starting dryer if dispersants added are log card amounts.
6. Run with outlet temp. as instructed usually between 175-185°F. Do not let inlet temperature go above 600°F.
7. Start dryer at 5 GPM feed rate. Dry 3 bbls. and sample to G.A.L. for dry DPT. Reduce feed rate to 3 GPM while waiting results.
8. When DPT on bbl. 3 comes back from lab., make following adjustments on feed:  

|                                   |                                                  |
|-----------------------------------|--------------------------------------------------|
| If DPT on bbl. 3 is under 15 sec. | set feed at 6 GPM.                               |
| between 15-25 sec.                | 5 GPM.                                           |
| between 25-35 sec.                | 4 GPM.                                           |
| between 35-60 sec.                | 3 GPM.                                           |
| over 60 sec.                      | shut down and wait for results for DPT at 3 GPM. |
9. After adjustments in feed rate have been made (Step 8), sample last barrel off at 3 GPM to G.A.L. for DPT. Record results on log card.  
  
If DPT at 3 GPM is over 60 sec., shut down and contact supervision.
10. Also, after adjustments in feed rate have been made (Step 8), run for 3 barrels and sample to G.A.L. for DPT. Do not change feed setting until results are back from G.A.L. but, upon receipt of these results, if DPT is over 40 sec., reduce feed rate by 1 GPM and resample. Record all DPT's and barrel numbers on log cards.

## OPERATING INSTRUCTIONS

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April 1976

Chambers Works  
Bldg. 743  
IV-2

**SUBJECT:** "PONSOL" SPRAY DRYER #2

**OPERATION:** Sampling and Operating  
Procedure for "Latyl" Colors

### SAMPLES:

Slurry - One 8 oz. for C sample from tank after water, Reax and slurry.

One 8 oz. for E sample from tank after adding Tamol.

Dry - Two 8 oz. from bbls. 3, 10, 20 and last.

On last bbl. one is for D.P.T., cloth test and A.I.

The other one mark Final - File Only.

One quart composite - C. E. Childs

Wash water - One 8 oz. for % A.I.

## OPERATING INSTRUCTIONS

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Chambers Works  
Bldg. 743  
V-1

**SUBJECT:** "PONSOL" SPRAY DRYER #2

**OPERATION:** Loading Press Cake  
to The Feed Tubs

1. Check T-13 and lines for cleanliness. Close valve at bottom of T-13.
2. Add water to cover lower agitator blade.
3. Turn on agitation to low speed.
4. Open the gate to CY-2 using the air cylinder control.  
If CY-2 platform is not in the full down position, an interlock will prevent gate from opening.
5. Load a box of wet press cake on CY-2 platform.  
If the wet presscake is in a white plastic box, use the special adapter for the platform of CY-2.
6. Close the gate to CY-2 using the air cylinder control valve.  
If the gate is not completely closed, an interlock will not allow CY-2 motor to operate.
7. Raise CY-2 platform to the full up or dump position.  
If press cake does not come out of box, lower platform part way. Stop. Then raise to full up position. Repeat as necessary.
8. Add the minimum amount of water necessary to keep the slurry stirrable and pumpable.
9. Return CY-2 platform to the full down position.
10. Load the remaining press cake and other ingredients called for by the log card. Record weights. Remove tags from empty containers.
11. Set the valves in the discharge line of P-16 to recirculate the slurry to T-13.
12. Open the valve at the bottom of T-13.
13. Start P-16. Circulate the slurry until it is free of lumps.  
A pint of slurry should pass completely through a 10 mesh screen.
14. When the slurry passes the screen test, connect the flexible nose on pump up line from P-16 to either T-10 or T-12. Pass the slurry through the manhole screen.

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Chambers Works  
Bldg. 743  
V-2

**SUBJECT:** "PONSOL" SPRAY DRYER #2

**OPERATION:** Loading Press Cake  
to The Feed Tubs

15. Open the valve to the line for the second floor and close the valve which recirculates to T-13.
16. When the charge has been pumped over rinse T-13 with 600 lbs. of water and pump this to the feed tub.
17. Shut down P-16 and the agitation for T-13 for either another charge of the same material or for the clean up procedure.

## OPERATING INSTRUCTIONS

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Chambers Works  
Bldg. 743  
VI-1

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION:

### Process change for Dustless Beads - Mechanical Items

#### Locking & Tagging:

Lockout FN-11, P-15, and AL-10.  
Tag main propane valves to FR-10.  
Tag steam & process lines to D-10 nozzle.

#### D-10:

Change thermowell location from bottom outlet ductwork to outlet beside bottom door.  
Remove frying pan blank in ductwork below bottom door.  
Change nozzle, as required by operations, at top of dryer.  
Operations to change vanes at top of dryer as required.

#### FR-10:

Remove entrance panel of sheet metal on south side of furnace under main propane feed line.  
Inside furnace, remove 2 s/s center panels also the North and East s/s air baffle panel. Install fabricated replacement panels so clearances are 1/2" or less.

#### DC-10:

Place Sweco separator under AL-10 and hookup. (Operations and Mechanic's).

#### SB-10:

Operations remove scrubber pads in inlet duct and install pipe baffles. (Operations)

#### Changing back:

Just reverse all operations to original positions.

#### FR-10:

Original panels set to 1-1/2".

## OPERATING INSTRUCTIONS

W. J. King  
April 1976

Chambers Works  
Bldg. 743  
VII-1

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION:

### Drying Control Set Points

|                              | <u>Latyl's</u> | Special<br><u>Latyl's</u><br>(Note 1) | <u>Sevron's</u> | <u>Inter-<br/>mediates</u> |
|------------------------------|----------------|---------------------------------------|-----------------|----------------------------|
| Internal steam pressure, psi | 65             | 65                                    | 80              | 80                         |
| External steam flow, lb./hr. | 1,500          | 1,500                                 | 1,500           | 1,500                      |
| Slurry flow, gpm             | Note 2         | 3                                     | 3-5             | 5                          |
| Inlet temp., max., °F.       | 450            | 350                                   | 750             | 750                        |
| Outlet temp., °F.            | 175-180        | 175-180                               | 165-170         | 194-202                    |

Note 1 - Special Latyl's include: Latyl Brick Red EV, Latyl Bright Yellow 6GFS, Latyl Navy EFSN and Latyl Orange 3YFS.

Note 2 - See section entitled "Sampling Procedures".

N32959.05

# OPERATING INSTRUCTIONS

W. J. King  
April 1976

Chambers Works  
Bldg. 743  
VII-2

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION:

## Identification of Hazardous Materials

### Hazard Key

SIRI = Skin irritant or respiratory irritant  
CYAN = Cyanotic  
CORR = Corrosive  
FLAM = Flammable  
TOX = Toxic

### Name of Material

### Hazard

|                               |                    |
|-------------------------------|--------------------|
| Acetic Acid, Glacial          | FLAM - SIRI - CORR |
| Ammonia, Aqua                 | SIRI - CORR - TOX  |
| Boric Acid                    | SIRI               |
| 1,4-Diamino-2,3-Dichloro Aq.  | SIRI               |
| Dowicide G                    | SIRI - TOX         |
| "Dybln" Crude                 | SIRI               |
| Hydrochloric Acid, 30%        | SIRI - CORR        |
| "Latyl" Crudes                | SIRI               |
| Leuco-1,4-diamino Aq.         | SIRI               |
| Lignosols                     | SIRI               |
| Maracarl N-1                  | SIRI               |
| Marasperse CB                 | SIRI               |
| Nalco 71-D-5                  | FLAM - SIRI        |
| Natural Gas                   | FLAM               |
| PC-269                        | SIRI               |
| Polyfon O                     | SIRI               |
| "Ponsol" Crudes               | SIRI               |
| Potash Caustic                | SIRI - CORR - TOX  |
| Propane                       | FLAM               |
| Reax 85A                      | SIRI               |
| "Sevron" Crudes               | SIRI               |
| Soda Ash                      | SIRI               |
| Soda Caustic, Liquid or Flake | SIRI - CORR        |
| Sodium Siluofluoride          | TOX                |
| Tamol N and SN                | SIRI - TOX         |

## OPERATING INSTRUCTIONS

W. J. King  
April 1976

Chambers Works  
Bldg. 743  
VII-3

SUBJECT: "PONSOL" SPRAY DRYER #2

OPERATION: "Latyl" Dyes Controlled  
by "DPT"

The following disperse dyes must pass "DPT" to be "OI SHIP".  
If any lots do not pass, they will be released as "O2" quality,  
no good "DPT".

"Latyl" Blue GFE  
Blue 4-GFS  
Bordeaux B  
Brick Red EV  
Bright Yellow 6-GFS  
Brilliant Blue BGA  
Brilliant Blue BGN  
Brown 8-RFS  
Cerise NSN  
Cerise YLN  
Navy EFS  
Orange 4-RFS  
Orange 3-YFS  
Rubine BFS  
Yellow GFSW  
Yellow 3G  
Yellow 3GB  
Yellow 5R  
Violet 2R

3-31-75 from a letter by J. A. Oscar