

PTA/CTA FINEX LUMP CRUSHER 450

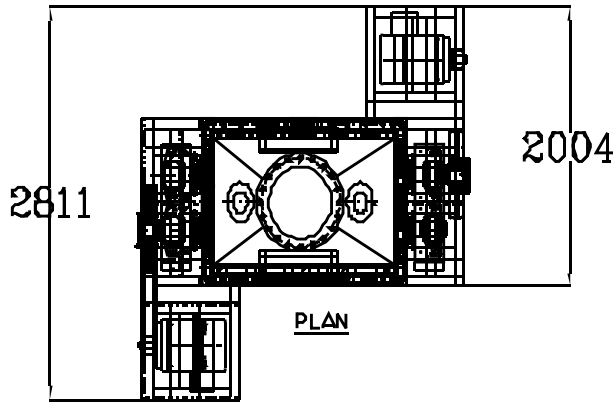
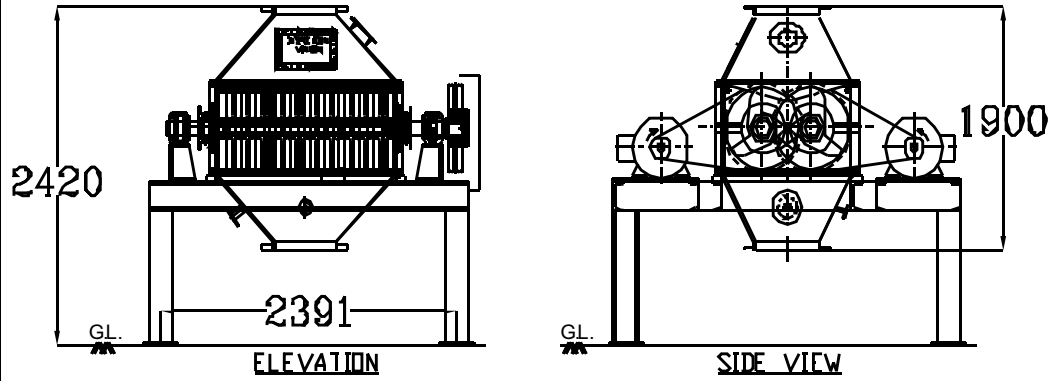


PTA/CTA FINEX LUMP CRUSHER 600



PTA/CTA FINEX LUMP CRUSHER

PTA/CTA FINEX LUMP CRUSHER



FINEX SIEVES PVT. LTD.
606 GIIC MAKARPURA,
BARODA-10
PH:+91 265 2642214
MOBILE : +91 9376232020
FAX:+91 265 2311871
WEB : www.finexsieves.com

PTA/CTA FINEX LUMP CRUSHER

MODEL NO.	PTA/CTA CAPACITY	HP/KW	INLET/ OUTLET FLANGE DIAMETER (MM)
FINEX LC 450	60 TONS/HOUR	20/15 X 2NOS.	350 MM
FINEX LC 600	90 TONS/HOUR	40/30 X 2NOS.	700 MM
FINEX LC 900	200 TONS/HOUR	60/45 X 2NOS.	700 MM

PTA/CTA FINEX LUMP CRUSHER'S SALIENT FEATURES

1. INLINE TOTALLY ENCLOSED DUST PROOF DESIGN.
2. DOESN'T ALLOW ANY FRESH AIR INSIDE WORKS UNDER PRESSURE.
3. CONTINUOUS OPERATION LUMPS OF 200MM REDUCED TO LESS THAN 3MM.
4. CRUSHING CAPACITIES INFEED 60 TO 200 TONS PER HOUR.
5. MANUFACTURED IN SS304L AND SS316L.
6. UNIQUE SEALING ARRAGEMENT WITH AIR PURGING .
DOESN'T ALLOW ANY POWDER TO COME IN CONTACT TO BEARINGS.

7. TWIN JAWS EACH WORK WITH SEPARATE MOTORS.
8. JAWS , SHAFT MACHINED ON CNC.
9. BREAKER PLATE SLOTTING ON CNC MILLING MACHINE.
10. WITH LUMP CRUSHER AVOID FREQUENT SHUT DOWNS TO REMOVE LUMPS THAT JAM THE PIPE LINE , FILTERS AND RAV. NO POLLUTION GENERATED.
11. PLANT CAPACITY CAN BE INCREASED FROM RATED 80 TONS PER HOUR TO 120 TONS PER HOUR. HIGHER PRODUCTION AT SAME POWER.
12. WHEN CRUSHER NOT RUNNING YET WILL ALLOW MATERIAL TO FLOW THROUGH MACHINE.

MANUFACTURE OF PTA POWDER AND PROBLEM FACED BY LUMP CATCHER IN PTA PLANT

Purified Terephthalic Acid (PTA) is produced by hydrogenation of CTA in Reactor having fixed bed of palladium Catalyst at 285 Deg C and 80 Bar G with water as solvent. PTA produced immediately precipitates to form a slurry. The slurry is centrifuged and the cake is dried in a rotary steam tube drier to give dry PTA powder (Mean Particle Size) = 95 - 110 microns. The PTA powder at 130 deg C is pneumatically conveyed in to a CTA Silo. During any process upset in the PTA drier, lumps of PTA are formed which have an avg size of 1" – 2 " with max of 3". The quantity of lumps is 2 – 5 % . With max of 10% .The PTA powder from Batch Tank is fed through a rotary valve by gravity for conveying by the rotary valve to PTA Product Silos.

In the conveying line downstream of rotary valves , there is a **SCREEN CALLED LUMP CATCHER** . Purpose of lump catcher is to block particles greater than 5 mm , so as the lumps are not conveyed to the PTA Customers .
DURING START UP , DRIER UPSETS LUMPS ARE FORMED IN DRIER .

PROBLEMS FACED

- 1) This result in **SEVERE CHOAKING OF LUMP CATCHER SCREEN AND REPEATEDLY FILTERS NEED REPEATEDLY TO BE CLEANED .**
 - 2) This **REDUCES** the **CONVEYING RATE** and hence **Reduces capacity in upstream units.**
 - 3) **5% Lumps in 120 TONS is 6 TONS LUMPS that is to be thrown away after removal**
- IF This continues for 12 hours DURING START UP 72 TONS PTA MATERIAL IS WASTED**

THE SOLUTION FINEX LUMP CRUSHER

FINEX OFFERS A CONTINUOUS INLINE LUMP CRUSHER FITTED IN LINE ABOVE ROTARY VALVE IN PLACE OF LUMP CATCHER. BY THE ROTATING JAWS IN BETWEEN TOP AND BOTTOM TWO STATIONARY SLOTTED PLATES LUMPS ARE CRUSHED. ALL LUMPS OF MAXIMUM 3 INCHES ARE REDUCED TO POWDER PASSING 5MM SCREEN.

ADVANTAGES INSTALLING FINEX PTA LUMP CRUSHER

NO DOWN TIME LOST IN REMOVAL OF HOT LUMPS

NO LUMPS TO BE THROWN AWAY / RECOVERY OF MATERIAL CONVERTED TO POWDER FROM LUMPS.

NO CHOAKING OF FILTERS ETC /NO DAMAGE OR LOSS OF PRODUCTION TO UPSTREAM UNITS .

NO DUSTING NO POLLUTION GENERATED BY LUMP CRUSHER . CLEAN WORKING ATMOSPHERE.

WITH INSTALLATION OF LUMP CRUSHER PRODUCTION CAN BE INCREASED FROM 120 TONS/HR TO 140 TONS/HR

PAY BACK OF INVESTMENT LESS THAN 6 MONTHS .

PG2

MANUFACTURE OF CTA POWDER USED FOR MANUFACTURE OF PTA PROBLEMS FACED BY LUMP CATCHER IN CTA PLANT

Crude Terephthalic Acid (CTA) is produced by oxidation of PX in presence of catalyst at 200 deg C and 16 barg with acetic acid as solvent. CTA produced immediately precipitates to form slurry. The slurry is filtered and the filter cake is dried in a rotary steam tube drier to give dry CTA powder (Mean Particle Size) = 95 - 110microns. The CTA powder at 143 deg C is pneumatically conveyed in to a CTA Silo.

DURING ANY PROCESS UPSET IN THE CTA DRIER PROBLEMS FACED

LUMPS of CTA are formed which have an average size of 3”–4” (with max of 6”). The quantity of lumps is 2 – 3% with maximum of 5%. The CTA powder from Silo is fed through a rotary valve by gravity to Feed Slurry Drum (FSD) and slurried with water for further processing.

When lumps get conveyed into the CTA Silo, it results in poor formation of slurry and blockage of suction nozzles/lines, creating an upset in downstream process.

THE SOLUTION FINEX LUMP CRUSHER

FINEX OFFERS A CONTINUOUS INLINE LUMP CRUSHER FITTED IN LINE ABOVE ROTARY VALVE IN PLACE OF LUMP CATCHER. BY THE ROTATING JAWS IN BETWEEN STATIONARY SLOTTED PLATE LUMPS ARE CRUSHED. ALL LUMPS OF MAXIMUM 6 INCHES ARE REDUCED TO POWDER .

ADVANTAGES INSTALLING FINEX CTA LUMP CRUSHER

NO DOWN TIME LOST IN REMOVAL OF HOT LUMPS

NO LUMPS TO BE THROWN AWAY / RECOVERY OF MATERIAL CONVERTED TO POWDER FROM LUMPS.

NO CHOAKING OF NOZZLES AND LINES /NO DAMAGE OR LOSS OF PRODUCTION TO DOWNSTREAM UNITS .

NO DUSTING NO POLLUTION GENERATED BY LUMP CRUSHER . CLEAN WORKING ATMOSPHERE CAN BE CONTINOUSELY MAINTAINED .

WITH INSTALLATION OF LUMP CRUSHER PRODUCTION CAN BE INCREASED FROM 120TONS/HR TO 140 TONS/HR.

PAY BACK OF INVESTMENT LESS THAN 6 MONTHS .

PROVEN EQUIPMENT FINEX LUMP CRUSHERS ARE RUNNING IN THREE PTA RELIANCE INDUSTRIES LTD PTA PLANTS IN INDIA SINCE 1999. AT CAPACITY 70TONS/HR TO 120TONS/HR

CONTACT

PADMAK SHAH

FINEX SIEVES PVT LTD

606 GIDC MAKARPURA BARODA INDIA

TEL 00919376232820

www.finexsieves.com