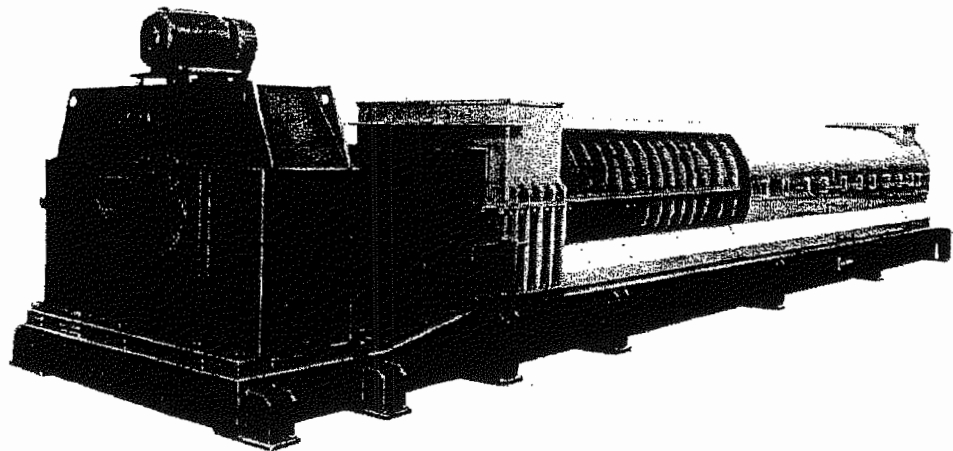
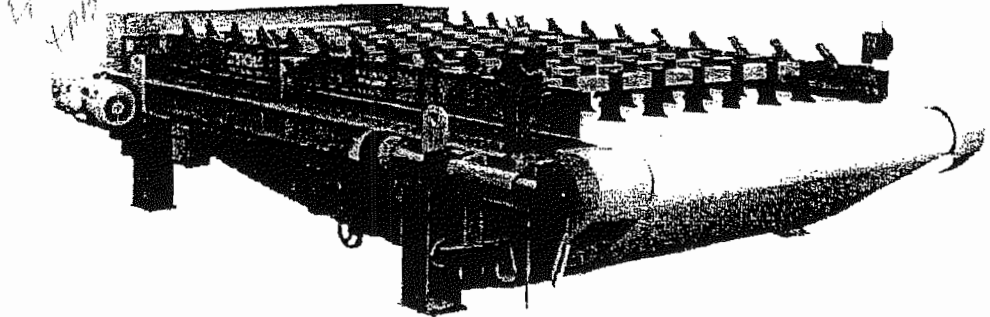


Andritz Sludge Dewatering System



Andritz Purchase Proposal PS-1351-99-046A

December 20, 1999

In response to

Garden State Paper
Garfield, New Jersey

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ANDRITZ

Andritz
Purchase Proposal #PS-1351-99-046A

to

Garden State Paper
Garfield, New Jersey

December 20, 1999

A. Scope of Supply

ITEM	REQ'D	DESCRIPTION
1.	1	Andritz 3.0 meter Gravity Belt Thickener including: <ul style="list-style-type: none">• The main structural frame shall be carbon steel hot dip galvanized per ASTM A 123 and constructed of members conservatively designed to minimize deflection. The main structural frame shall be constructed of members having a minimum thickness of 1/4 inch. The gravity belt thickener frame shall provide a minimum safety factor under maximum load of three times the design yield strength of any member. Moment of inertia is 158 in⁴ in the major load bearing axis.• 316L stainless steel wetted parts• Fabric• Triple-sealed bearing housings, L-10 rated bearing for a 300,000 operating hours with six month lubrication cycle• Rilsan and Buna-N covered rolls• Upper and lower automatic fabric tracking and tensioning devices (pneumatic)• Sumitomo reducers complete with motor mounting bracket, high speed coupling, and guards (motor & VFD by owner)• Wiring of emergency stop and belt runoff limit switches• Pneumatically & electrically wired to junction boxes• Gravity zone plows with stainless steel assembly and fixtures• SS distribution feed box• SS tank mixer with mixer blade, reducer and mechanical variator (500 gallon capacity)• SS discharge box designed to fit into screw press feed hopper
2.	1	Andritz 3620C Screw Press including: <ul style="list-style-type: none">• Perforated shaft in high pressure section• Replaceable hardened wear plates in high pressure section• Center shaft steam injection and Johnson rotary steam joint• ASME manufactured and code stamped shaft (100 PSI)

- Remotely adjustable pneumatic choke
- 316L stainless steel shaft
- 316L stainless steel cages
- 316L stainless steel press covers
- One piece, heavy structural steel support frame with 316L stainless steel filtrate pan
- 316L stainless steel discharge box
- 316L stainless steel feed hopper headbox with transfer chute

1 Screw Press Drive System, Including:

- Falk heavy duty quadruple gear reducers with carbonized gear (772:1 gear reduction) 1.8 million inch pound torque rating)
- Zurn low speed gear coupling
- Sheaves, V-belts, Safety Guards (Motors and VFD's by customer)

4. **1 Fabricated Feed Hopper Headbox** for discharge from Gravity Belt Thickener and feeding the Screw Press (316 stainless steel construction)

5. **1 Gravity Belt Thickener Control Panel**

Each gravity belt thickener will be provided with a NEMA 4X 316L SS wall mount enclosure. Panel will include gauges, pushbuttons, indicators, speed control transmitters, control valves, pressure switches, pneumatic control regulators and terminals for connection to customer DCS/PLC system for remote control and monitoring.

Gravity Belt Thickener control panel will require the following PLC interface:

- 3 - 5 discrete inputs
- 2 - 4 discrete outputs with 115 VAC power
- 1 analog input

Screw Press

Each screw press will be provided with a NEMA 4X 316L SS wall mount enclosure. Panel will include gauges, pushbuttons, indicators, speed control transmitters, solenoid valves, pressure switch, current to pneumatic transducer, pilot operated regulator, and terminals for connection to customer DCS/PLC system for remote control and monitoring.

Screw press control panel will require the following PLC interface:

- 5 – 10 discrete inputs
- 3 - 5 discrete outputs with 115 VAC power
- 1 analog input

- 1 analog output

6. 5 man-days 1 trip **Erection, Training, and Start-Up Supervision**
7. 1 lot **Basic Engineering and Documentation including:**
 - Arrangement drawings with dimensions for the Andritz scope
 - Foundation drawings showing details needed for building work
 - Flow sheet for sludge, polymer, & utilities showing equipment, pipes, & control loops as well as technological quantities
 - Motor list
 - Written sequence of operation including all interlocks
 - Control panel layout
 - Electrical and pneumatic schematics
 - Terminal box details
 - Erection, operating and maintenance manuals
 - Part manuals

B. Andritz Dewatering System – Unit Summary

Item	Description
1.	One (1) Andritz 3.0 meter Gravity Belt Thickener..... (316L SS wetted parts)
2.	One (1) Andritz 3620C Screw Press, complete with Falk gearbox and coupling (316L SS construction)
4.	One (1) Fabricated Feed Hopper Headbox - 316L SS construction
5.	One (1) Gravity Belt Thickener and one (1) Screw Press Standard Electrical / Pneumatic Control Panel
6.	Erection, Start-up and Commissioning (5 man-days/1 trip)
7.	Engineering/O&M Manuals, Drawings, Project Labor, etc. ...
	Total Price (FOB Garfield, NJ)

**This proposal is based on the attached Andritz-Ruthner, Inc.
"Standard Terms and Conditions of Sale". We draw your**