

# *Acme Surplus Machinery Inc.*

Quality Surplus Machinery for Pulp & Paper

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## **GYPSUM AND CORE BOARD MILL, 45,000 TPY Acme A098352**

### **GENERAL DATA:**

Type of paper: Test-Liner, gypsum board and core board

Basis-Weight: 120-450 gsm

Paper width at reel: 2850 mm (wet-end prepared up to 3000 mm)

Actual Production: 45,000 Tons/year

Actual maximum working speed: (250 m/min (wet-end prepared up to 450 m/min)

Power supply: 380 Volts/50 Hz

**THE MILL WILL BE RUNNING UNTIL 31<sup>ST</sup> OF MARCH 2011.**

### **MAIN UPGRADES**

- Bottom wire made in 1998
- Top wire made in 2000
- Top former made in 2005
- Press part made in 1998
- Stock preparation to great extent from 1997, 2000

### **WET END:**

Built complete NEW in 1998 (Bottom wire), in 2000 (Top wire) and in 2005 (Top former) by DGI fully in stainless steel.

### **BOTTOM WIRE:**

- Hydraulic Head box complete in stainless steel (rebuilt in 2005 to dilution system with automatic valves for profile control).
- Pond width: 3100 mm for a maximum flow of 24,000 L/min
- (1) Forming Board
- (3) Hydrofoils
- (4) Vacufoils for low vacuum with automatic vacuum valves and pre-separators
- (2) Top former transfer box with automatic vacuum valves and pre-separators.
- (1) Dewatering box double chamber for medium vacuum with automatic vacuum valves and pre-separators
- (2) Top wire transfer boxes with automatic vacuum valves and pre-separators.
- (3) Double chamber suction box for high vacuum with automatic vacuum valves and pre-separators.
- (1) Breast roll of 640 mm with bearing housing in bronze. Includes cleaning doctor in stainless steel.
- (1) Couch roll of 850 mm with two vacuum chambers. Shell and suction chamber in stainless steel.
- (1) Helper roll of 640 mm with bearing housing in bronze. Includes cleaning

doctor in stainless steel.

- (7) Wire rolls of 280 mm with bearing housing in bronze designed for a wire tension of 7 Kg/cm. Includes cleaning doctors in stainless steel.
- (2) High pressure shower for wire cleaning, 1 high pressure shower for couch roll shell cleaning, low pressure shower for wire rolls, cleaning, edge cutting shower & Tailcutter (automatic control by paper break).
- (1) Automatic guide.
- (2) Manual stretchers with gear-motor built in stainless steel.
- (1) Automatic stretcher.
- (1) Steam box.
- (1) Couch pit.
- Cantilever frame "C" type built complete in stainless steel.
- Handrails and catwalks in stainless steel.

**TOP FORMER:**

- (1) Inlet roll of 775 mm with cleaning doctor in stainless steel.
- (1) Drive roll of 775 mm with cleaning doctor in stainless steel.
- (2) Wire rolls of 425 mm with bearing housing in bronze. Designed for a wire tension of 7 Kg/cm.
- (1) Three chamber Inverted suction box (first chamber for low vacuum, and the other for medium vacuum) with curved plate. Built in stainless steel.
- (1) High pressure shower for wire cleaning.
- (1) Automatic guide.
- (1) Automatic stretcher.
- Cantilever frame "C" Type built complete in stainless steel.

**TOP WIRE:**

- Hydraulic Head box complete in stainless steel.
- Pond width: 3100 mm for a maximum flow of 14,000 L/min
- (1) Forming Board
  - (1) Hydrofoils
  - (2) Vacufoils for low vacuum with automatic vacuum valves and pre-separators.
  - (1) Dewatering box double chamber for medium vacuum with automatic vacuum valves and pre-separators.
  - (1) Double chamber suction box for high vacuum with automatic vacuum valves with pre-separators
  - (1) Breast roll of 640 mm with bearing housing in bronze. Includes cleaning doctor in stainless steel.
  - (1) Ply-bond roll of 800 mm built in stainless steel.
  - (1) Helper roll of 640 mm with bearing housing in bronze. Includes cleaning doctor in stainless steel.
  - (3) Wire rolls of 400 mm (2 units) & of 280 mm (1 unit) with bearing housing in bronze designed for a wire tension of 7 Kg/cm. Includes cleaning doctors in stainless steel.
  - (1) High pressure shower for wire cleaning & low pressure shower for wire rolls cleaning
  - (1) Automatic guide.
  - (1) Automatic stretcher.

- Cantilever frame "C" type built complete in stainless steel.
- Handrails and catwalks in stainless steel.

**PRESS SECTION:**

Built complete NEW in 1998 by DGI.

Working Pressure: 70 kg/cm (1<sup>st</sup> Nip of K-Press)

100 kg/cm (2<sup>nd</sup> Nip of K-press)

150 kg/cm (1<sup>st</sup> Nip of Tem-Sec)

180 kg/cm (2<sup>nd</sup> Nip of Tem-Sec)

**K-PRESS:**

- 1<sup>st</sup> Nip press roll of 850 mm with rubber cover.
- 2<sup>nd</sup> Nip press roll of 850 mm with micro-rock cover with cleaning doctor in stainless steel.
- Suction press roll with 3 vacuum chamber. Shell and internals in stainless steel.
- (11) Felt roll of 280 mm. Designed for 5 kg/cm felt tension.
- (1) Paper roll of 280 mm.
- (2) Uhle box with 2 slots. Built in stainless steel.
- (2) Automatic felt guides.
- (2) Automatic felt stretcher
- (2) High Press Shower.
- Cantilever frame in steel.
- Handrails and catwalks in stainless steel.

**TEM-SEC-PRESS (HOT PRESS):**

- (2) Press roll of 850 mm with rubber cover.
- (1) Center roll of 2000 mm with hard-chromed coating cover.
- (11) Felt roll of 280 mm. Designed for 5 kg/cm felt tension.
- (1) Paper roll of 280 mm.
- (2) Uhle box with 2 slots. Built in stainless steel.
- (2) Automatic felt guides.
- (2) Automatic felt stretcher
- (2) High Press Shower.
- Cantilever frame in steel.
- Handrails and catwalks in stainless steel.
- Steam & condensate system for center roll heating.

**WET-END AND PRESS SECTION AUXILIARIES:**

- Hydraulic unit for press rolls loading.
- Oil lubrication unit for press rolls bearing housing.
- Multi-motor drive built by Control technics in 1998, 2000 & 2005.
- Vacuum system consists of:

Low vacuum fan for bottom & top wire vacuo-foils

Medium vacuum fan for dewatering boxes.

Medium vacuum fan for Top Former.

Nash vacuum pump CL2001 for Couch roll low vacuum. Built in 1998

Nash vacuum pump CL3001 for K-press suction roll low vacuum. Built in 1998

Nash vacuum pump L8 for K-press 1<sup>st</sup> felt. Built in 1998

Nash vacuum pump CL2002 for Tem-sec 1<sup>st</sup> felt. Built in 1998

Nash vacuum pump CL2002 for Tem-Sec 2<sup>nd</sup> felt. Built in 2006

Nash vacuum pump CL3001 for K-press 2<sup>nd</sup> felt. Built in 1998

Nash vacuum pump CL4002 for K-press suction roll high vacuum. Built in 1998

Nash vacuum pump CL3002 for Couch roll high vacuum. Built in 2004

Nash vacuum pump CL3002 for Wire suction boxes. Built in 1998

- Power cabinets with motor starters

- Control panels by Siemens PLC.

**DRYING SECTION:**

- 17 Drying cylinders of 1250 mm. Maximum working pressure: 4 Bar (recoded in 1995) complete with cleaning doctors and frame.

- 1 Yankee cylinder of dia. 3200 mm, frame but no touch roll

- 9 Drying cylinders of 1250 mm. Maximum working pressure: 4 Bar (recoded in 1995) complete with cleaning doctors and frame.

- (90) Drying felt rolls of 200-220 mm.

- (8) Automatic felt guides.

- (6) Manual stretchers

- (2) Automatic stretchers

- Steam and condensate system Cascade Type built by Langbein.

- Open Hood with extraction fans.

- Heat recovery unit for building ventilation.

- (2) Infrared frames for humidity profile control (966 Kw). Built by Compact In 2000.

- Shaft line drive complete of gearboxes, pulleys and belts.

**FINNISHING SECTION:**

- Quality control system by LSC (Germany) for basis-weight and humidity profile both direction (cross machine & machine direction).

- Pope reel for reels up to 2000 mm diameter. Built by Kværner Eureka in 1962, rebuilt in 2006

- Jagenberg winder. Model VariDur 33-15, single motor drive

Double carrying drums dia. 400 x 3450 mm

Maximum speed: 600m/min mm (original speed: 800m/min)

Maximum finished reel diameter: 2100 mm

Min slitting 75 mm (about 36 knives)

**MAIN STOCK PREPARATION:**

Capacity: 200 Tons/day

- Conveyor: Built by STEKO, Year of manufacture: 1997

- Pulper 30 m<sup>3</sup>: Built by DGI, Year of Manufacture: 1997.

Model: ECOPULPER EPG-30

Built in stainless steel, including ragger and reject handling.

Installed Motor: 250 Kw/1500 rpm

- (3) High Density Cleaner: Built by DGI, Year of Manufacture: 1997.

Model: HDC-3000 in stainless steel with automatic reject system.

- (1) Turbo-separator: Built by Voith, Year of Manufacture: 1974

Model: ATS 20 With holes of 2.8 mm.

Installed Motor: 160 Kw/1500 rpm

- (1) Reject sorter: Built by Escher Wyss, Year of manufacture: 1983

Model: RS2 with holes of 2.4/2.8 mm.

Installed Motor: 55 Kw/1500rpm

- (1) KRIMA Dispersion system: Built by Cellwood Machinery, Year of manufacture: 1990, rebuilt in 2004. Consisting of:
  - (3) Pre-thickeners model: SDPP 2040 with installed motor: 15 Kw
  - (1) Press model: RR 550 With installed motor: 45 Kw
  - (1) Plug screw model: T-PLSK3823 With installed motor: 22 Kw
  - (1) Heating screw model: 800x5500 With installed motor: 5.5 Kw
  - (1) Feeder model: T-INM 350 With installed motor: 4 Kw
  - (1) Dispersion system model: KD710 With installed motor: 410 kw

**TOP LINE STOCK PREPARATION:**

Capacity: 80 Tons/day

- (1) Pulper 15 m3: Built by Black Clawson, Year of manufacturing: 1954
- (1) Drum Thickener
- (1) MODUScreen type C2R: Built by ANDRITZ, Year of manufacturing: 1999  
With screen basket 2.5 mm holes.
- (1) MODUScreen reject screen MODUScreen F0, screen basket 2.0 mm holes
- (1) MODUScreen type F10: Built by Andritz, Year of manufacturing: 2000  
- With screen basket 0.25 mm slots

**STOCK PREPARATION AUXILIARIES:**

- Agitators
- Stock pumps by Andritz, Year of manufacturing: 1999-2003  
Motor included. Some pumps are with frequency converter.
- Complete Instrumentation including consistency transmitter, flowmeters, pressure transmitter,...
- Power cabinets with motor starter.
- Regulation by Siemens PLC.

**BOTTOM WIRE APPROACH FLOW:**

- 4 Stage low density cleaner. Built by CYCLOTEC. Year of manufacture: 1998.
- (1) Pressure screen. Built by DGI. Year of manufacture: 2000  
Basket with holes of 2.5 mm with a capacity of 24,000 l/min.  
Motor installed: 45 Kw/1500 rpm
- (1) MODUScreen reject screen MODUScreen F0, screen basket 2.0 mm holes
- Stock pump and fan pump built by Andritz.

**TOP WIRE APPROACH FLOW:**

- (1) Pressure screen. Built by Andritz. Year of manufacture: 2003  
Basket with holes of 1.8 mm with a capacity of ... l/min.  
Motor installed: 15 Kw/1500 rpm
- Stock pump and fan pump built by Andritz

**WATER TREATMENT:**

- Disc filter by GL&V Celleco Center Disk CDP with 13 discs of 3360 mm in diameter. Capacity: 600 m3/hr, made in 1992
- Microfilter. Built by ALGAS in 2008. Model AMF 50 W for a capacity of 500 m3/hr.

**AUXILIARIES:**

- Reject handling/transportation: Built by Spirac AS
- Automation/operator interface: Built by LSC

- Metering pumps
  - 6 Chemical tanks
  - Starch unit
  - Several spare parts such as press roll, wire & felt rolls, suction press shell.
  - Helper roll
  - Electrical transformers (5kV/400V 1250kVA)
  - Gearboxes
  - Pumps
  - Electrical motors 0,75 Kw – 410 Kw
  - Bearing units to pumps, screens, pulper
  - 1 complete pre-thickener
  - Press screw
  - Plug screw
  - Screensplates/rotors
- And much much more to maintain production stability...





