
SPECIFICATIONS OF RECYCLED CARTONBOARD MILL

May 2009

MAIN DETAILS:

- ◆ RECYCLED TRIPLEX.
- ◆ COATED CARTONBOARD
- ◆ Trim width: 2.180 mm.
- ◆ Working speed: 50-220 mpm
- ◆ Basis weight range: 150-650 g/m²
- ◆ Production: 45.000 Tn / Year.
- ◆ Average 190 Tn / Day.

STOCK PREPARATION

FIBER FLOW PULPER (Ahlstrom 1995) of middle layer



STOCK PREPARATION



- ◆ Bottom layer
 - Low density AP-10 pulper
 - Contaminex
 - Turboseparator ATS 12
 - Vibrating screen
- Voith 1975

STOCK PREPARATION



- ◆ White top layer
 - Lamort helical pulper 10 m³ (1982)

STOCK PREPARATION



- ◆ Bottom layer
 - Voith hot dispersion (1975)



STOCK PREPARATION



- ◆ High density cleaner
 - S-3 Voith in bottom layer (1978)
 - Lamort in middle layer (1997)
 - Escher Wyss in white top layer (1975)

STOCK PREPARATION



- ◆ Turbosorter Voith of 0,65 mm slots (1985) of middle layer

STOCK PREPARATION



- ◆ Pressure screen of bottom layer
 - C-300 of 3 mm diam. Basket (Licar 1971)
 - Fibericer of 3 mm diam. holes (Escher Wyss 1981)

STOCK PREPARATION



- ◆ Pressure screen of white top layer
 - Moduscreen C4R to Andritz of 3 mm diam. basket (2001)

STOCK PREPARATION



- ◆ Maule hot dispersion (1974) of middle layer



STOCK PREPARATION



- ◆ Voith hot dispersion (1975) of white top layer

STOCK PREPARATION



- ◆ Pressure screen of bottom layer
 - F-20 Andritz (2001) of 0.25 mm slots basket
 - F-10 Andritz (2001) of 0.25 mm slots basket

STOCK PREPARATION



- ◆ White top layer
 - Vibrating screen ME-10 of Licar (1982) of 5 mm diam. holes



COATED BOARD MACHINE

Trim width: 2.180 mm

Working speed: 50 – 220 mpm

Basis weight range: 150 – 650 gsm

TOP Forming wire:



Middle forming wire



Bottom forming wire



Section press



Predrying seccion



COATING AREA:





SOFT CALENDER, ACURAY POPE:



FINISHING AREA:

REWINDER:



PASABAN CUTTER:







FINISHING CONVEYOR:



PACKAGING LINE:





JAGENBERG CUTTER:



COATING PREPARATION:

COATING PREPARATION:



COGENERATION PLANT:

COGENERATION PLANT:





SPARE PARTS:

SPARE PARTS Cutting Machines:



Spare parts machine and wet area:





Spare Parts WORKSHOP:





TECHNICAL SPECIFICATIONS:

White top layer composed of:

- ◆ Lamort helical pulper 10 m³ (Lamort 1982)
- ◆ Contaminex (diam. 3 mm) (Voith 1984)
- ◆ Vibrating screen (Lamort 1982)
- ◆ High density cleaner (Escher Wyss 1975)
- ◆ C-300 (diam. 3 mm) (licar 1971)
- ◆ Moduscreen C4R (diam. 2,2 mm) (Andritz 2001)
- ◆ Vibrating screen (Licar 1978)
- ◆ Voith hot dispersión (voith 1975)

- ◆ Approach flow:
- ◆ Low density cleaners in 4 stages (Celleco 982)
- ◆ Moduscreen HB3R of 0,15 mm. slots (Andritz 2000)
- ◆ Minisorter of 0,35 mm. Slots (Voith 1986)
- ◆ Thickener (Dor Oliver 1986)

Middle layer composed of:

- ◆ 1 Escher Wyss low density pulper of 12 mm. diam. perforated plate (1982)
- ◆ 1 Horizontal drum pulper of 6 mm. diam. holes, year 1.995 Ahlstrom
- ◆ High consistency cleaner (Lamort 1997)
- ◆ Turbosorter of 0,65 mm. Slots (Voith 1985)
- ◆ Vibrating screen (Voith 1985)
- ◆ Thickener (Escher Wyss 1971)
- ◆ Maule hot dispersion (1974)
- ◆ C-600 pressure screen of 4 mm. diam. (Licar 1971)
- ◆ Vibrating screen Licar 1971)

- ◆ Approach flow:
- ◆ 4 Stages cleaners (Celleco 1983)
- ◆ Ahlstrom sorter 400, 0,35 mm. slots basket (1990)
- ◆ Minisorter 1,4 mm. diam. Basket (Voith 1986)
- ◆ Thickener (dorr Oliver 1986)

Bottom layer composed of:

- ◆ 1 Low density AP-10 pulper of 18 mm. perforated plate with ragger (Voith 1975)
- ◆ Contaminex (Voith 1980)
- ◆ Turboseparator ATS 12 (Voith 1975)
- ◆ Vibrating screen (Voith 1975)
- ◆ C-300 pressure screen of 3 mm. diam. Basket (Licar 1971)
- ◆ Fiberizer of 3 mm. diam. Holes (Escher Wyss 1981)
- ◆ Voith hot dispersion (1975)
- ◆ F-20 pressure screen of 0,25 mm. slots basket (Andritz 2001)
- ◆ F-10 pressure screen of 0,25 mm. slots basket (Andritz 2001)

- ◆ Approach flow:
- ◆ 4 Stage centricleaners (Celleco 1984)
- ◆ 2 SP-600 pressure screen with 0,35 mm. slots basket (Licar 1965)
- ◆ Minisorter of 0,25 mm. slots basket (Voith 1988)
- ◆ Thickener (Dorr Oliver 1988)

COATED BOARD MACHINE:

- ◆ **Trim width: 2.180 mm.**
- ◆ **Working speed: 50-220 mpm**
- ◆ **Basis weight range: 150-650 gsm**
- ◆ **Composed of the following elements:**
 - 3 Hogenkamp air cushion headboxes with manual adjustment of lip
 - 3 Forming wires (Voith 1977, Blanes 1984 y DG 1971)
 - 1 DGI top former (DGI 1998)
 - 1 transporting felt (Blanes 1971)
 - 1st Suction press with top and bottom felt (DG 1977)
 - 2nd and 3rd DGI Tem-Sec press (DGI 1989)
 - Predrying section with 22 dryers of 1.500 mm. diam.:
 - 16 Dryers of 2.400 mm. at 3,5 Kg./cm² (Blanes 1971, DG 1977 y Gorostidi 1965)
 - 6 Dryers of 2.400 mm. at 5 Kg./cm² (DG 1977)
 - Yankee cylinder of 2.400 mm. face x 4.000 mm. diam. 3 Kg./cm², with high efficiency hood (Maquinista 1965)
 - Inclined size-press of 500 mm. diam. x 2.500 mm. face (Gorostidi 2000)
 - Postdrying section with 12 dryers of 1.500 mm. diam. x 2.400 mm. face, 3,5 Kg./cm² (Blanes 1971, DG 1977 y Gorostidi 1965)
 - 1st Calender stack with 3 fixed crowning rolls (Gorostidi 1965)

Coating section:

- ◆ Coating head Roll Flex with Brunschweiler intermediate drying tunnel (Voith 1984 y Brunnschweiler 1984)
- ◆ Air knife coating head Bachofen/Meier with infrared panel (240.000 Kcal.) and Brunschweiler tunnel (Bachofen/Meier 1984 y Brunnschweiler 1971)
- ◆ 2nd Calender stack with 3 fixed crowning rolls (Gorostidi 1972)
- ◆ 1 Dryer and 1 cooler of 1.500 mm. diam. (the cooler's construction is identical to a dryer), 3,5 Kg./cm² (Gorostidi 1971)
- ◆ Voith-Sulzer soft calender: soft and hard rolls. Thermal oil. Variable crowning (1998)
- ◆ 3 Brushers (DGI 1999)
- ◆ Honeywell 4000 moisture and grammage control system. 3 Units (2002):
 - Before MG cylinder: humidity
 - Before coater: grammage and humidity
 - Before pope reel: grammage, humidity and caliper
- ◆ Pope reel (DG 1965)

Auxiliary equipments

- ◆ AC drive motors for de middle vire, bottom wire, DGI top former and soft calender.
- ◆ Line shaft drive c;with:
 - Main DC motor
 - Helper DC motor
 - Transmition by belts and pulleys
- ◆ Air circulation with:
 - Closed an insulated Brunnschweiler hood in three bodies: pre dryer, Yankee and post dryer
 - Heat recovery with mist collection and two heat exchangers
 - Drying of some felts.
- ◆ Steam and condensate system
- ◆ Vacuum system with 7 pumps
- ◆ Compressed air with 3 screw compresors
- ◆ Coating and starch kitchen
- ◆ Spray starch preparati3n system and silo
- ◆ 2 broke pulper under machine, one is located after press section (wet broke) the other one is located after postdrying section (dry broke)

REWINDER:

◆ Manufacturer	Pasaban
◆ Year of manufacture	1.999
◆ Face width of rolls	2.300 mm
◆ Working width	2.200 mm
◆ Max Working speed	1.000 m/min
◆ GSM range	200 to 550 g/m ² board
◆ Unwinding stand	for machine spool
◆ Installed power	315 kW (approx)
◆ Main tension	380 V triangle
◆ Auxiliar tension	220 V AC

PASABAN SHEET CUTTER:

◆ Year of manufacture	1999
◆ Max machine width	2.600 mm
◆ Max working width	2.500 mm
◆ Max reel width	2.500 mm
◆ Max reel width with central arm	2 x 1.200 mm
◆ Number of unwinding stands	2 with automatic splicers
◆ Max working speed	300 m/min
◆ Max sheet length	1.600 mm
◆ Min sheet length	400 mm
◆ Min sheet width	300 mm
◆ Max pallet height	1.800 mm
◆ Grade to be cut	board
◆ GSM	200-600 g/m ²
◆ Max knife load	600 g/m ²
◆ Optical fault detector	
◆ Automatic slitter setting	
◆ Automatic pallet feeding	

SHEET CUTTER JAGENBERG

- ◆ Manufacturer: JAGENBERG
- ◆ Year of manufacture: 1.986
- ◆ **Electronic updated in year 2.000**
- ◆ Type: SYNVERT 215
- ◆ Synchro cut
- ◆ Doble unwinding stand with intermediate arms
- ◆ Automatic splicers
- ◆ Optical fault detector Machine
- ◆ Max working width: 2.230 mm
- ◆ Number of slitters: 7
- ◆ Automatic slitter setting
- ◆ Max knife load: 1.000 g/m²
- ◆ Max working speed: 300 m/min
- ◆ Compressed air: 6 bar
- ◆ Main electrical tension: 380 V y 50 Hz

Packaging:

- ◆ Transfers
- ◆ Roll transporter
- ◆ Tumbler of sinks (Volteador pilas)
- ◆ Platform scales (Bascula)
- ◆ Packager (Embaladora)
- ◆ Shrinking oven (Horno de retractilado)
- ◆ Straper
- ◆ Tumber of reel

COGENERATION PLANT:

- ◆ Year of manufacture: 12/1.995
 - (change every 30.000 hours. Last change in 2.007)
- ◆ Generator GEC ALSTHOM of 6,4 MVA
- ◆ SOLAR TAURUS 5,2 MW gas turbine
- ◆ STEJASA diverter 1500x1500/1500x1500/1500 diam
- ◆ Post combustion burner VAI-C 5.600 te/h
- ◆ Recovery boiler of 22 ton/hour of steam with post combustion burner.
 - (without post combustion burner the boiler gives 11 ton/hour of steam).
- ◆ Combustible: gas
- ◆ Auxiliaries installed power: 308,5 kW
- ◆ Total annual production 36.728 MWh (year 2007 with 7800 work hours)
- ◆ Net sellable production 36.385 MWh (year 2007 with 7800 work hours)
- ◆ 2 Gas compressor 16 bar
- ◆ 1 Trafo of 6 kV to 45 kV and 5 MVA
- ◆ 1 Trafo of 6 kV to 380 V and 800 KVA

MAIN SPARE PARTS:

- ◆ 1 x Suction couch cylinder shell
- ◆ 1 x 1st press suction roll shell
- ◆ 1 x 1st press top roll
- ◆ 1 x 2nd or 3rd press roll
- ◆ 1 x Tem-Sec central roll
- ◆ 1 x rubber press roll (against Yankee)
- ◆ 1 x size press top roll
- ◆ 1 x size press bottom roll
- ◆ 1 x Roll Flex counter roll
- ◆ 1 x Roll Flex applicator roll
- ◆ 1 x Air Knife applicator roll
- ◆ 3 x brushes
- ◆ 2 x Roll calendar
- ◆ Several roll drying section
- ◆ 1 x hard calendar roll (Voith-Sulzer calendar)
- ◆ 1 x soft calendar roll (Voith-Sulzer calendar)
- ◆ 1 x soft calendar roll shell (Voith-Sulzer calendar)
- ◆ 1 x breast roll for (bottom, middle or top) wire
- ◆ 1 x 5 m³ coating dilutor
- ◆ 3 x Vacuum pumps
- ◆ 1 x square section shaft for outside tank's agitator
- ◆ several new spare wires, felts and drying fabrics
- ◆ miscellaneous spares parts for line shaft: pulleys, gear wheels, shafts, ...
- ◆ miscellaneous motors, pumps and pump parts
- ◆ miscellaneous bearings