Acme Surplus Machinery Inc.

Quality Surplus Machinery for Pulp & Paper

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A098243 87,400 TPY Coated Paper Mill

Mill

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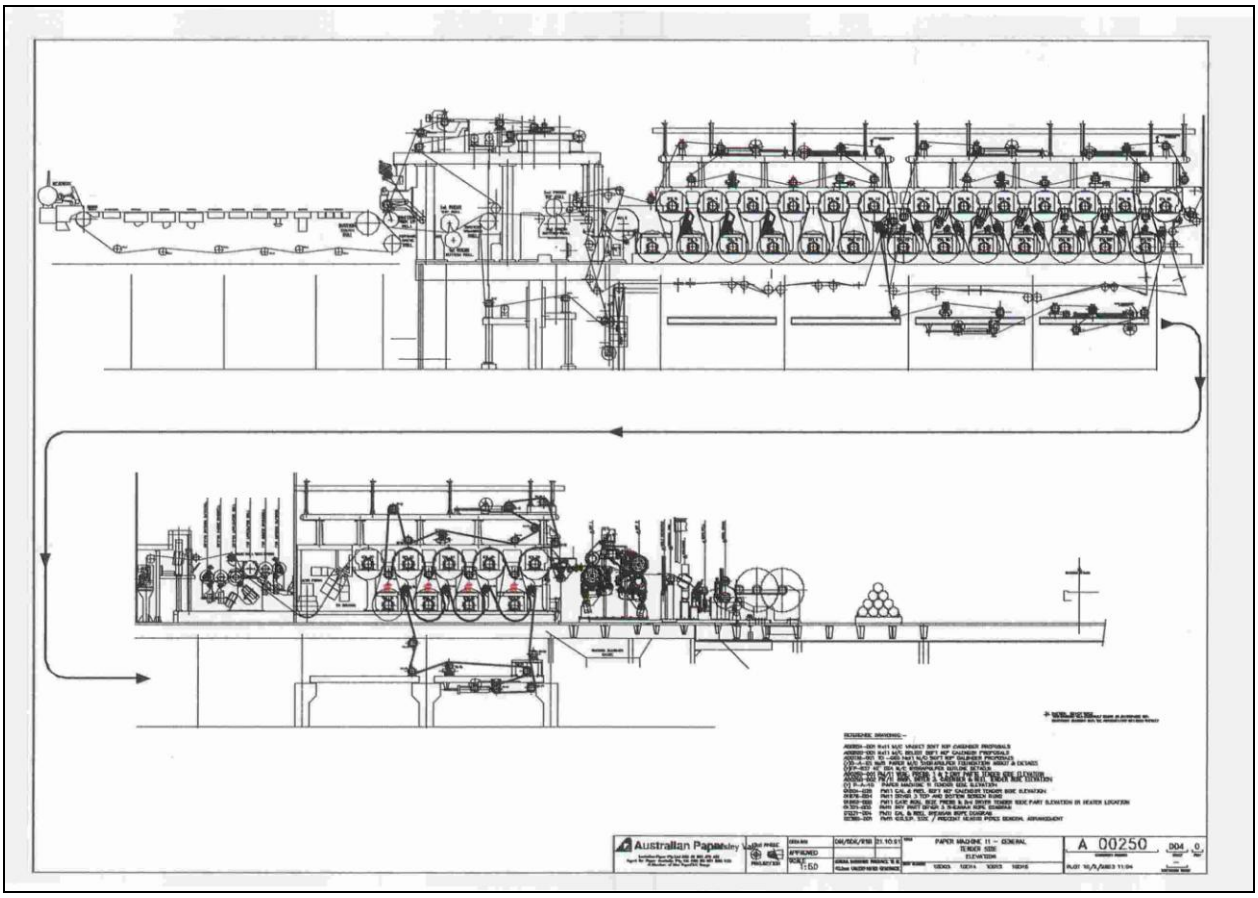
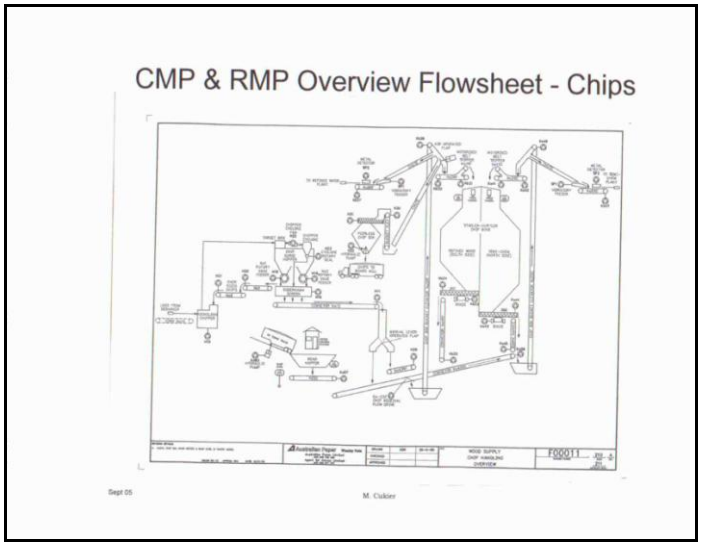
SECTION 1: PAPER MACHINE WV11

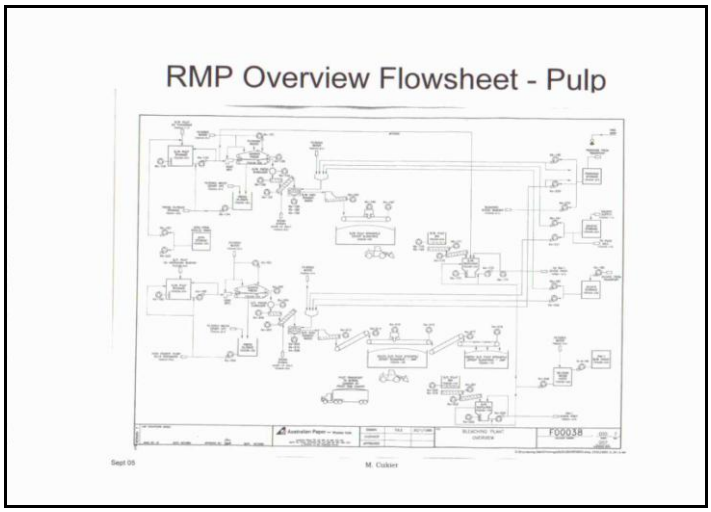


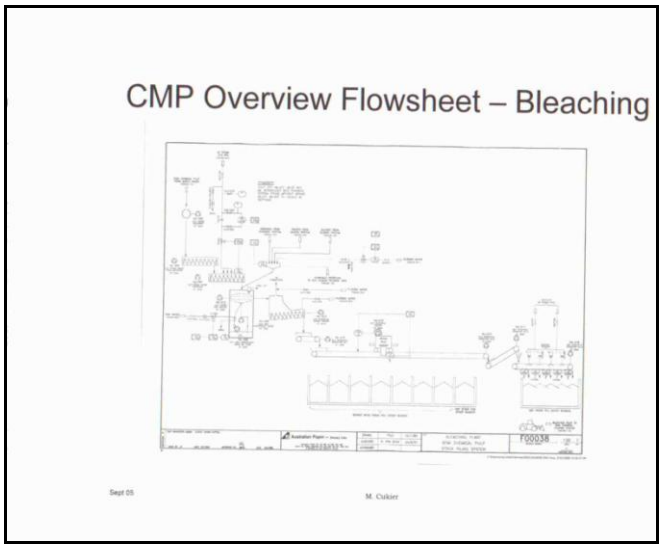
Paper Machine WV11

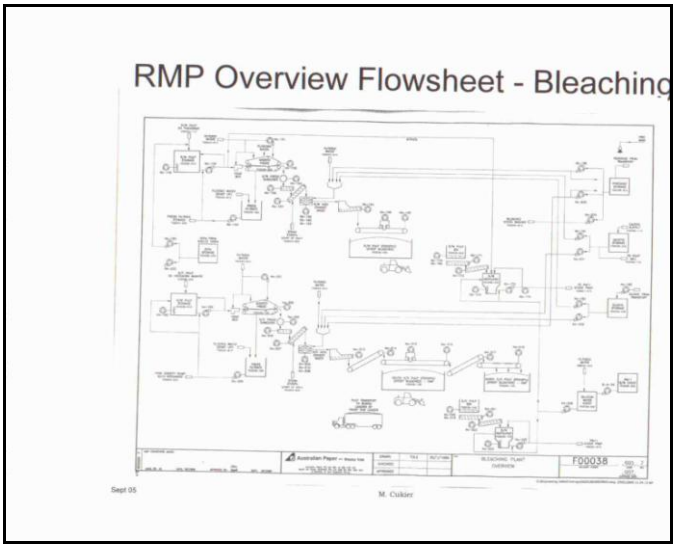
Products F.C.O. (catalogue) and publishing grade (books and magazine) papers. Current manufacture is film offset coated papers 54 to 65 gsm, paper gloss 40 to 45%, smoothness approx 2 PPS10kgf. Bulky book grades density 0.56, grammage 56 to 79 gsm and smoothness approx 400 Sheffield. Grammage FCO: 52 TO 65 GSM. Coat weight 19gsm. Starch grades: 52 gsm to 79 gsm. Coat weight 2.5 gsm starch. Moisture FCO: 5.5%:Starch grades:8%. Sheet filler approximately 10% calcium carbonate and opacifier. The furnish used is long fibre imported from either New Zealand or Canada depending on the grade of paper to be manufactured: mechanical refiner pulp using eucalyptus chips in the CMP plant and pine chips in the RMP plant.

A. Pulp plant


CMP & RMP Overview Flowsheet - Chips


RMP Overview Flowsheet - Pulp





The mill has a chip storage vessel. This is in two parts with one side holding CMP chips and other holding RMP chips. The chips are delivered to site by lorries. Transfer of chips is via conveyors and screw conveyors.

In the base of the chip storage is an unused Beloit 4000 series 16” DD refiner with motor (ex R&D).

Groundwood RMP

Pine chip line with ground wood refiners, capacity 12,000 t/year.

In the line is an unused Bauer IMPRESAREFINER.

Wood type Pinus Radiata.

Two stage atmospheric disc refiners: in the first stage, model Sunds RGP - 50S, year 1972 with a motor 4000 KW, 1500 rpm, 11,000 volt and in the second stage, a Sunds RGP 36" refiner with an 800kw 1450 rpm 3,300 volt motor.

Berg RB 200 two stage LD cleaning system, cleaners are stainless steel with continuous rejects.

Hymac gavity thickener with a 1200 mm diameter x 3810mm face drum. The unit has a rubber couch roll with thickened stock weir.

High density stock stored in 154 kl outside storage tank.

Stock reclaimed and thickened by an Andritz belt thickener model DWP27, year 1988.

The pulp passes through an Andritz H/C mixer model 057-090-060 year 1989 where Peroxide bleach is added. The bleaching is by steep system using Hydrogen peroxide to a finished brightness of 68%, shive level 0.2%, output 35 O.D. tpd, yield 90% and freeness 90CSF.

CMP

Cold Soda Semi Chem

Eucalyplus line using wood chips. Process is cold soda semi-chemical system using Sodium Hydroxide (caustic soda) capacity 32,000 t/year. Wood type is Eucalyptus, chip impregnation by caustic, three stage atmospheric refining, hydrocyclone cleaners, bleaching by steep system using Hydrogen Peroxide to a brightness of 80%, shive level 0.2%, output 95 O.D tpd, yield 85%, freenes 300CSF. Bleaching time takes two days.

Prior to refiners the chips are steam heated in a Sunds Defibrator stainless vertical digester type vessel.

Caustic is added to the chips at the base before being pressure fed forwards to the Primary refiners.

This line has two primary refiners: Sunds refiners with J&L fillings 36", each refiner model RGP, year 1969. There are two secondary refiners: Sunds RGP 36". Each refiner has a ASEA motor 800kw, 1485

rpm 3300 volts and then feeding an RX100L screen which feeds two stage L.D cleansers Richard Berg model RB200 in stainless steel.

Kaymer pulp washer with stainless drum and concrete vat is no longer in use.

Kamyer pulp washer (west) 2750mm diameter drum in a stainless vat.

Hedemora drum washer / thickener with stainless drum in a stainless steel vat.

The basement has two Drysdale Aquair vacuum pumps and various water pumps.

There are three stock chests: concrete with side entry agitators.

Outside is large green painted tank for bulk storage and a green/brown tank for broke storage.

The line has an Andritz belt thickener model DWP27, year 1988.

The pulp passes through an Andritz H/C mixer model 057-090-060 year 1989 where Peroxide bleach is added. The bleaching is by steep system.

Both lines feed single bleaching plant: bleaching by Hydrogen Peroxide with steep time for bleaching of two days.

The pulp then is transferred via a screw and belt conveyors for storage in external chip bays for two days. After bleaching takes effect, pulp is fed into the BCI Sydra pulper.

Outside the rear of the building are the concrete storage bins, chip open silo which is laded by a Volvo bucket truck.

Beside a redundant building at the rear of the mill are the Caustic Makedown and Storage tanks.

In an area beside the pulp plant, are two tanks for Peroxide and Silica storage.

Pulpers

Two batch operation pulpers, manufacture BCI Sydrapulpers, tub stainless steel, consistency 4 to5 %, year of manufacture 1991, side entry rotors and drive via v.belts. The CMP supplies 180 t/day and the RMP supplies 60 t/day of fibre.

External chest green/yellow for RMP capacity 16 tons

Green broke chest capacity 100 tons.This chest is identified by emblem on the top facing north.

Pulpers for virgin pulp

Two pulp lines comprising of two conveyors, floor mounted rising approximately 10 m feeding open top two BCI batch pulpers, BCI 12ft diameter with Volkes rotor. Drive via David Brown gearboxes. Tubs are one piece stainless steel. The consistency is set by the amount of bales on the conveyor. Year 1969. Each pulper is capable of 180 t/day.

B. Stock Preparation

The stock preparation was installed 1969 and upgraded 1984.

External chests and tanks

Green broke tank, mild steel construction.

Green /cream coloured backwater tank, mild steel construction.

Condensate tank lagged.

Longfibre concrete chest.

R/W (refined wood) concrete chest.

Opacity concrete chest.

Semi chem. Concrete chest.

MSC fibre concrete chest.

Starch chest, stainless.

Machine basement

Starch cooker: manufacture National.

Polymer make down unit with bag hopper.

Biocide feed unit with flow meters and dosing pumps.

Dye plant with four tanks M/S and dosing pumps.

Stainless steel Alum tank.

Stainless steel Defoamer tank.

Concrete blend chest.

Concrete machine chest.

Fan pump Ahlstrom with an ABB variable speed drive.

Two stainless steel in - line filters CUMO manufacture.

Shower water tank M/S.

Concrete hog pit with a side entry agitator.

Beloit Pressure screen model type M-50, stainless steel construction 316L, basket with 1.6mm holes, year 1997, body 316L stainless steel and with V. Belt drive. Motor 110 kw, 960 rpm, 10 foils, differential pressure across the screen 20-35 Kpa.

Rejects to a Johnson vibrating screen stainless steel with 1.5 mm holes on machine floor level.

Beloit Pressure screen for white water/wire returns, model M-18, 316L stainless steel, basket 1.4 mm holes, year 1997, differential pressure 20 to 35kPa, drive 15kw, 1475 rpm.

Hot water tank, stainless.

Waste water silo, concrete.

Two fans for vacuum foils on the paper machine.

Core cutter, manual operation in basement (blue in colour).

Sydrapulper under the dry end of machine is also fed from a AUSTENG roll splitter, 2830mm wide and 1650 mm diameter rolls maximum (green in colour) with infeed and outfeed flat belt conveyors. The outlet conveyor feeds into a conveyor feeding roll cut broke into the pulper. The pulper is also fed from a shute from the upper level supplying loose broke and this also feeds a flat belt conveyor into the pulper.

Located next to the roll splitter is a lift to take rolls from Burnie Mill up to coater level for coating.

Machine level

Three Esher Wyess H.D. cleaners with motor driven impellor, reject chambers with sight glasses and manual reject valves. C.I construction.

Three Beloit 2000 series refiners 26”: one long fibre, second SC2 and third MIS refiner.

One Pilao Tri Disc 20” refiner.

Broke is treated by three Esher Wyess model E1K deflakers.

Imported long fibre CSF 380-600.

Deculator with first and second stage L.D. cleaners model Berg RB200. Stages three and four and reject stage on machine floor.

Located next to the Johnson reject screen is a Cellier circular vibrating screen for screening clay.

Back water fibre recovery by EIMCO disc filter with six discs each 12 ft 6” diameter. Year 1976 with stainless steel vat and one piece segments.

C. Paper Machine

Production 87,473 t/year, deckle 4600mm, speed 480 to 760 m/min, capable of 830 m/min, gsm range 35 to 90. Production 10 to 12 t/hr at a speed range 400 to 750 m/min, producing an average grammage range of 42 to 79 gsm eg. at 54 gsm, production is 11.7 t/hr. The paper machine is of basement design and the drive is on the left side looking from the flowbox.

The paper machine is SANO manufacture (Japan), year 1969, rebuilt 1997. The paper machine runs a neutral PH system.

Wet end

Overhead crane with two 3 ton blocks.

Beloit Concept flowbox (Concept 4), year 1997, with dilution control. The slice is 5150mm, wire width is 5250mm. Deckle width 4600mm, CD basis weight approx 0.2 gsm.

Wire frame cantilever design, stainless steel, with forming board, foils, vacuum foils and suction boxes all stainless with polyethylene blades and tops, auto wire guide, pneumatic tensioners, breast to couch roll centres 13.730 m, wire length 33.2m and width 5.35 m. Sole plate centres 6100mm and no shake motion fitted.

Suction couch with A/F bearings, cantilevered design.

Press sections

Suction pick up press as part of the first press. Felt 28.8 m long and 5.5 m wide. Loading 90 kPn.

Steam box on the first press located prior to the first press nip.

Second press: through - type after vacuum transfer roll from first press, 97 kPn.

Sheet moisture after the press section: 59%.

Pre dryer sections

Total of 36 cylinders (the machine had 39 cylinders but three were removed). Cylinders are rated at an operational pressure of 60 psi. In 1982 new rotary siphons were fitted and distribution bars. Dryers on central lubrication system with bearing monitoring points on all cylinder A/F bearings. The felt roll manually greased, all bearings are A/F design. Enclosed gear drive. The machine dryers have a totally enclosed hood with sliding doors to the rear and lifting doors front side.

27 drying cylinders in two sections, 1524 mm diameter, face 5320mm width, centres 6350mm, A/F bearings, auto felt guides and stretchers, central lubrication----, 60 psi operating pressure, bolted cylinder ends, internal rotary siphons with spreader bar. Dryers have enclosed gears and bearing mentoring connections.

Honeywell Measurex MX Open installed 1994. Scanner measuring grammage, moisture and ash.

Basement pulper: stainless steel model BCI Sydrapulper running batch on paper breaks.

Size press

Beloit gate roll - type size press (6 roll), coated weight 2.5 gsm of starch and 8 to 20 gsm of coating, installed 1980.

Air turn dryers

Impact IR dryer, year 1997.

After dryers

Nine dryers, 1524 mm diameter, face width 5320mm, centres 6350mm, A/F bearings, auto felt guides and stretchers, central lubrication, 60 psi operating pressure, bolted cylinder ends, internal rotary siphons with spreader bar. Dryers have enclosed gears and bearing monitoring connections. Dryer hood totally enclosed with front lifting doors.

Under machine pulper: stainless steel, BCI Sydrapulper running on machine breaks and also used to pulp floor broke or reel end tear downs.

D. Calender

Beloit tandem two twin roll calendar, year 1997, with heated rolls, maximum loading on each stack 250 Kn/m, maximum roll surface temp 260 deg C.

Honeywell Measurex MX Open scanner measuring moisture, caliper, grammage and colour, La, Lb, and Flouorescence. Installed 1994.

Stromberg hole detector, installed 1979.

Valmet horizontal drum reel up for reel diameter 1500mm, roll accelerator, tape feed. Rebuilt 1997.

Machine drive: sectional electric drive. The drive was partially rebuilt in 1983 and 1997.

D.C. Drive details

Forward drive roll 240 kw.

Suction couch roll 240 kw.

Pick up roll 144kw.

First press 240 kw.

Second press transfer roll 144 kw.

Second press 240 kw.

Dryer section one 240 kw.

Dryer section two 240 kw.

Top applicator roll 144 kw.

Bottom outer gate roll 29. kw.

Bottom inner gate roll 29.9 kw.

Top inner gate roll 29.9.kw.

Top outer gate roll 29. kw.

Dryer section three 240 kw.

Spreader roll 5.5 kw.

Numer one SNC Thermo roll 202 kw.

CC roll 105 kw.

Number two SNC Thermo roll 202.5 kw.

CC roll 105 kw.

Drum reel up 144 kw.

Vacuum pumps

Two Sultzer blowers, model Turboair type RC41A-4NS with drives 3,300 volts, 490kw. On suction couch suction pick up.

Fuji blower, model SR935 BX/GG motor 3,300 volts, 300kw. Press one and press two Uhle boxes.

Nash CL3002: First press.

Nash CL3002: Second transfer roll.

Dry end crane with two 8 ton blocks.

E. Rewinder

Jagenberg rewinder, model 65-15/750/4800mm, year 1982, new Jagenberg unwind stand for machine reel shells in 1996, 143kw brake generator on the unwind, 13 slitters manual set and tail feed via tape transfer system, shaftless rewind for 3” and 5” cores, twin motor drives each 146 kw on the rewinder, reel ejector and lowering table, roll pneumatic brake floor- mounted and a Trancell floor- mounted roll transfer system.

Reel handling by Trancel installed 1996.

NB. Located next to the roll splitter is a lift to take rolls from Burnie Mill up to coater level for coating.

F. Chemistry

Sizing is neutral rosin.

PH is 7.0

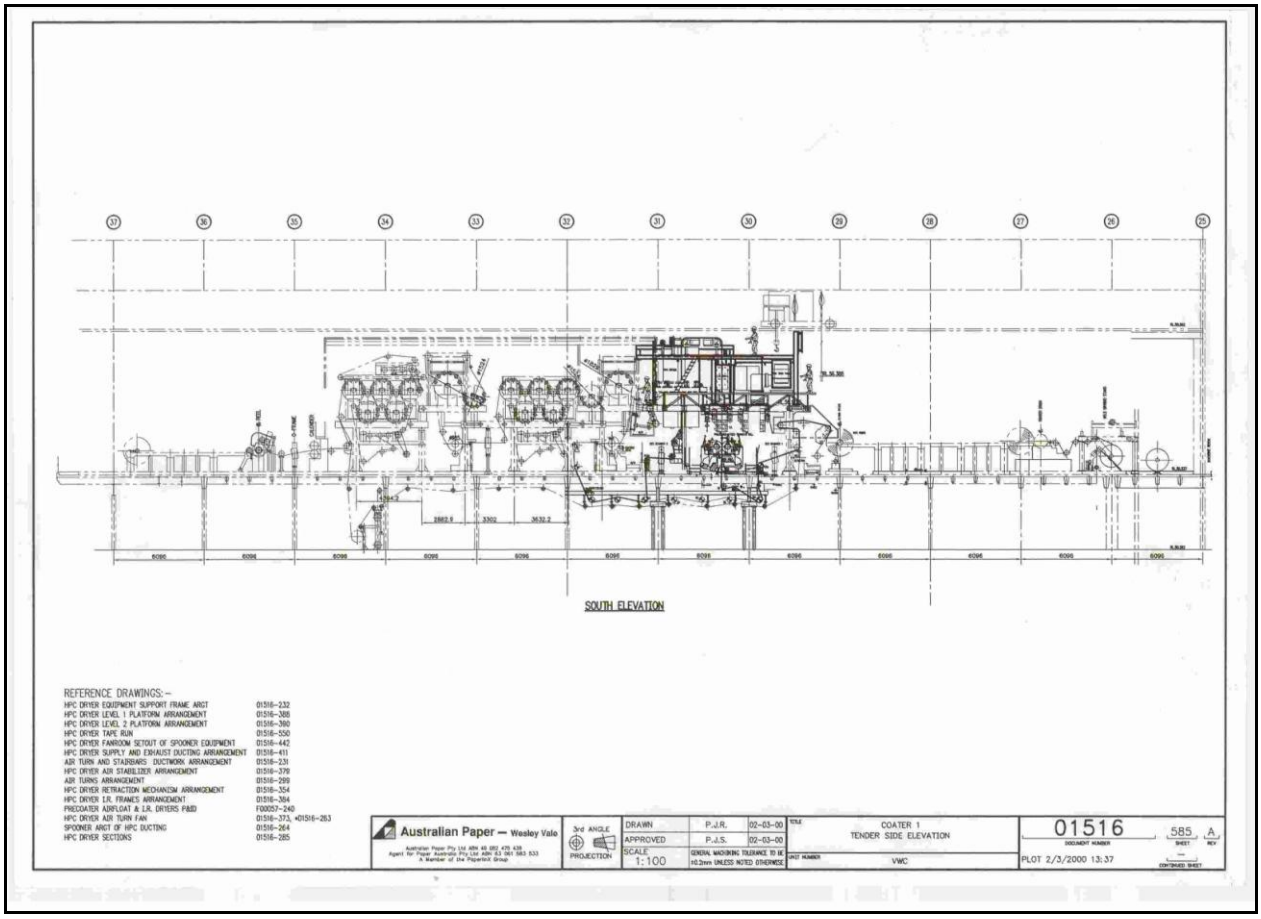
Cationic starch Tapioca at 8 kg/t.

Anionic PAM retention aid.

GCC wet end fillers 10%.

Other additives are opacifier, dyes etc.

SECTION 2: COATER WV12



Coater WV12

Coating preparation

Clay delivered to mill in powder form. Clay is fed to two high shear mixers, Chemical Plant Engineers manufacture.

After high shear mixers, the clay is cleaned by passing over two Cellier 1200mm vibrating screens with stainless micro filament wires.

Clay transferred to two external green tanks outside clay store.

Clay pumped to number one and two blend tanks located inside coater building.

Next to clay plant, stainless tank outside for calcium carbonate and after this tank product is screened by a Cellier 1200mm vibrating screen.

High shear mixer on upper level for 2-CMC product.

In basement, starch cooker using powder bag supply with make up unit and in line cooker.

External starch cooker with four tanks: one is for starch slurry and the remaining three are for cooked starch.

Two external chests, lagged (white), used for storing latex.

External tank for coater waste coatings. This is pumped to effluent Sludge Tank.

Internal pre mixing for the BTG roll coater and two in-line self cleaning filters.

In the coater basement, there are two indicators for oil flow to central lube system for the coater.

In basement, three stainless tanks with coating product for coaters and they sit next to stainless hot water tank.

Coater floor level: two sets of in-line stainless filters prior to coating heads.

Typical products

Single coated Matt- Gloss of 25% and smoothness of 3.5 PPS10. Grammage range from 75 to 150. Suitable for HSWO and sheet offset printing.

Single coated gloss papers. Gloss of 68% and a smoothness of 1.7 PPS10 Grammage range from 75 TO 90. Suitable for HSWO and sheet offset printing.

Double coated Gloss with a gloss of 80% and a smoothness of 0.8PPS10. Grammage range from 100 to 170. HSWO grade also produced.

Double coated Silk Gloss of 35% and a smoothness of 1.5PPS10.Grammage range fom115 to 170.

Double Coated Satin Gloss of 40% and a smoothness of 3.5 PPS10.

Coatings include carbonate/clay with potato starch/latex binders.

Pre - winder

Beloit pre - winder: width 3050mm, unwind diameter 1500mm. The unwind has a Jagenberg D Type inclined shaftless floor pick up unit and designed maximum weight is 12,000 kg. Brakes are water cooled drum brakes. Slitter section is followed by a bowed roll. The rewind has 2300mm diameter, design speed 1800m/min and operational speed 1400m/min, year 1970. The pre - winder has full visual computer control screens. The reel weight is 3.8 ton. Drive R/H from unwind. The drive is 75kw.

From the pre - winder the rolls are fed onto a horizontal reel store ready for the flying splice on the coater.

The crane at the pre - winder rewind side, is a Konno crane with twin lifting blocks, 2 x 7.5 tons.

Coater

Manufacturer: Beloit Walmsley, year 1987, deckle width 3000mm. Products: centrefold Gloss and Matt papers, Impress Gloss, Matt and Silk also Redan papers. Production 72,000 t/year, 3000mm deckle and speed 800 m/min. Coater speed 750 to 800 m/min, production 10 to 20 tpd, grammage 75 to 170 gsm. The coater has a high speed camera system fitted. Drive R/H fom the unwind.

Precoater

Beloit flying splice unwind with driven unwind roll and roll accelerator, working width 3000mm, base scanner: Measurex 2000 measuring the moisture and the gsm.

BTG base coater with twin HSM blade coaters and typical solids are approximately 60%. The typical coating weights approximately 10 to 12 gsm. BTG HSM coater head applying coating to both sides concurrently followed by the two Beloit blade coaters. Coating weights applied: 10 to 14 gsm/side. Beloit heads apply 10 to 16 gsm/side. The maximum coating weight applied is 50 gsm.

Impact IR dryers followed by two air float dryers then into the Spooner dryer.

Measurex scanner 2001 measuring the moisture and the gsm.

Top coater Beloit manufacture with Metso profiler unit.

Marsden IR dryer.

Air Float Dryer with air blower around dryer prior to entry to seven drying cylinder section, cylinders 1828 mm diameter, face steam pressure 410 kPa, A/F bearings and with central lubrication. Sole plate centres 4114mm.

Scanner Measurex model 2001 measuring moisture and gsm.

Beloit top coat coater with Metso automatic profiler unit.

Marsden IR dryer.

Six Beloit drying cylinders 1524mm diameter, face 3276mm, rope groove 101mm and centres 4114mm, pressure 410 kPa, 60 psi, A/F bearings and central lubrication.

Slitting section.

Calendar frames (rolls removed and not in use).

Measurex scanner 2001 measuring moisture and gsm.

Beloit horizontal reel up.

On the coater level is a set of support stands to hold reel shells with reel end paper. This area used to remove paper from reel shells which falls to base level for re- pulping.

DC sectional drive

Flying splice accelerator 34 kw.

Number one paper roll 7.5 kw.

Number two paper roll 2.2 kw.

Number six paper roll 2.2 kw.

Number one suction roll 34 kw.

Number one transfer roll 193 kw.

ASEA motor spare 193 Kw.

Number two transfer roll 193 kw.

Number one HSM roll 11 kw.

Number two HSM transfer roll 11kw.

Number 7 paper roll, number 8 paper roll, number nine paper roll, number B2 paper roll, number B3 paper roll and number B4 paper roll all each 2.2 kw.

Number three bow roll 2.2 kw.

Number one mount hope roll 2.2kw.

B6 B7 and B10 rolls all each 2.2 kw.

Number one backing roll 34 kw.

Number one applicator roll 5.5 kw.

Number one dryer 75 kw.

Number 12 and number 13 paper rolls 2.2 kw.

Number two backing roll 34 kw.

Number two applicator roll 5.5 kw.

Number two dryer 75kw.

Number 15, 19, 21 and 22 paper rolls all each 2.2 kw.

Number 16 and 17 paper rolls each 4 kw.

Reel up 42kw.

Slitters 3 kw.

Reel spool starter motor 5.5 kw.

Tape drive 7.5 kw.

SECTION 3: WESLEY VALE FINISHING

All the trim from the finishing goes to the cyclones, stainless construction, at the dry end of the paper machine.

Supercalenders

Two 10 roll supercalenders manufactured by Hunt and Moscrop, rebuilt by Klienewefers 1984, operating width each 3000m, mixture of synthetic and cotton filled rolls, Flexitherm rolls operate at 60 to 80 deg C, speed 400 m/min. Unwind with water cooled drum brakes, lateral movement on the unwind stand, maximum and minimum roll diameters 1524 mm unwind and 1500mm rewind. The supercalenders have top and bottom swimming rolls, DC drive, lifting gantry at the rear for tail feeding, camera support systems, horizontal drum reel up for reel diameter 1500mm maximum, each of the main drives is 399 kw. and rewind drives 49.98 kw.

Rolls from the coater 2300mm are transported to the Valmet rewinder via a robot operated reel trolley.

Rewinders

1. Valmet JR1000

Single drum with four unwind stations, year 1988. Single Horizontal drum reel up for reel diameter 2300mm, tape feed, finished roll diameter 1500mm. The rewinder has sets of arms each side for lowering roll and loading onto rewind drums whilst in operation, speed 1800m/min. The rewinder has a brake generator 170-200kw and a main drive of 200kw.The drive is fed via a gearbox to the two single support rolls. Automatic knife setting, 9 slitters. Drive is on the R/H from the unwind. Basement location for hydraulic unit and services.

Finished rolls are lowered by lifting arms down to floor level and the completed rolls feed into the Trancell roll conveyor system. The rolls make their way to the Trancell roll wrapper.

2. Jagenberg Vari-Dur

Model 26-12 rewinder 1980mm, shaftless D type unwind with floor pick up, lateral adjustment, drum water cooled brakes, roll diameter: maximum 1500mm, maximum shaftless rewind diameter: 1270mm, 6 manual set slitters, R/H drive, tape tail feed, single motor drive 56kw, reel ejector and lowering table.

3. Masson Scott U1A

Rewinder 3300mm width, unwind taking reel shells from the paper machine, maximum unwind diameter:1500mm. Unwind has lateral movement and Whichata water cooled disc brakes. Rewind is shaftless with 5 manual set slitters, drive single motor 75 kw, reel ejector and lowering table.

Both the Jagenberg and the Masson Scott rewinders can feed finished reels into the Trancell system.

Manual core cutter located at the edge of the building

Sheeters

Three Masson Scott sheeters: two working width 2400mm and one at 1750mm width, total production 50 t/day. Minimum sheet size 380mm and 450mm cutting width and maximum sheet length 1700mm on the LQH 1000 and length 1300mm on the two LQ 1000 sheeters. All reject sheets from the sheeters are fed by conveyor into a hopper which feeds continuous self - tying baler, Godswill manufacture, model DB1100.

Sheeter one:

Masson Scott LQ 1000 sheeter, width 2400mm, speed maximum 600 fpm, two double Langston shaftless unwind stands with floor pick up and lateral movement, brakes: Wichata disc brakes, 5 manual slitters, pneumatic lifting nip roll, fly and dead knife cut, belt delivery on first stage of delivery, reject gate, overlap running tapes, hydraulic rising layboy, three dividers with vibrators and three tape inserters for sheet counter in reject basement of the sheeter.

Sheeter two:

Masson Scott LQ 1000 sheeter, width 2,400 mm, speed max 600 fpm, reels are loaded by means of a crane and reel clamp, eight shaftless unwinds and manual lateral movement, brakes: Wichata disc brakes on one side, 5 manual slitters, pneumatic lifting nip roll, fly and dead knife cut, belt delivery on first stage of delivery, reject gate, overlap running tapes, hydraulic rising layboy, three dividers with vibrators, and three tape inserters for sheet counter in reject basement of the sheeter.

Sheeter three:

Masson Scott LQ 1000 sheeter, width 1,750 mm, speed max 600 fpm, reels are loaded by means of a crane and reel clamp, eight shaftless unwinds and manual lateral movement, brakes: Wichata disc brakes on one side, 4 manual slitters, pneumatic lifting nip roll, fly and dead knife cut, belt delivery on first stage of delivery, sheet length indicated on overlap section is 450mm to 1650mm, reject gate, overlap running tapes, hydraulic rising layboy, three dividers with vibrators and three tape inserters for sheet counter in reject basement of the sheeter.

Stevens folio wrapper

Folio ream wrapper, manual ream feed with pusher/lifter for reams, paper wrap from unwind stand which holds two rolls, one in use and one spare, edge slitter for wrapping paper, adjustable centre section for different ream width , hot melt gluing and folding on the ream edges, side labeller station, reject conveyor on the side of ream conveyor, single layboy for loading complete reams onto a pallet.

Finpack wrapper: model Speedy A33L -218, in line conveyor from the ream wrapper, a plastic sack is formed and then placed over the pallet, year 1985. ***(Included with folio wrapper)***

Conveyor positioned between wrapper and the shrink heating unit has one section on load cells for weighing the wrapped pallets. ***(Included with folio wrapper)***

Verpackingstechnik model ZZ5, year 1985 LPG gas heated plastic shrink unit. ***(Included with folio wrapper)***

Completed wrapped pallets continue along conveyor into the roll/pallet warehouse. ***(Included with folio wrapper)***

Guillotine

Snider Senator guillotine 2200mm width and depth of 155mm with two Vacuumatic air float load and unload tables, power back fence, air float table, light guarding, Micro cut computer.

Pallet turner (red) make unknown, hydraulic operation with own power pack.

Roll wrapper

Trancel roll wrapper accepting rolls from paper machine, coater, Jagenberg and Masson Scott rewinders by way of roll conveyor systems. Option available to feed rolls from fork truck. Roll pushers and stoppers, traversing head wraps roll in plastic and the head traverses side to side to give a complete wrap, end covers are cut on end cover and placed manually prior to plastic wrapping. The complete rolls continue to roll warehouse where they can be lifted horizontally or turned on a reel upender.

SECTION 4: COMPRESSORS

Compressors

Three horizontal air receivers located outside the compressor room. These receivers are painted white and are of horizontal and riveted construction.

Two Ingersol Rand cylinder type compressors, water cooled are in standby mode. Model 14.5, rated 100 psi and 600cfm each.

Alas Copco compressor screw type in cabinet rated 1200 cfm at 100 psi.

Outside under cover is an Atlas Copco screw type compressor model ZR4, 1000 cfm and pressure 100 psi and a Fridgematic air dryer.

Located in a building near to the effluent plant is a Alas Copco compressor screw type in cabinet rated 1200 cfm at 100 psi and an air dryer Fridgematic.

SECTION 5: WORKSHOPS AND LABORATORY EQUIPMENT

Roll grinding workshop

Overhead crane with two lifting blocks each rated 12.5 ton.

Churchill roll grinder with swing 1524 mm and bed 7m, with sandpaper belt head and the conventional rotary stone grinding head. Computer control, camber grinding capable, year 1965.

Daintchi lathe for rolls, 1m swing and 6m bed.

Naguhura roll balance machine with various roll supports. Maximum roll diameter at present balanced 800mm

Workshop

Yomis knife grinder with magnetic bed, model N1-35 and year 1971

Makino horizontal planer model 0-40.

Cockel angle knife grinder for slitter knives.

Butler surface planer.

Binns and Berry lathe model Trident 1000, 7 m bed and 1 m swing.

Glentonnex lathe type GT-900 year 1990.

Industtria Meccaniiche Padovane surface planer model FUS-3, year 1965.

Gorky milling machine model 6T8SH-27, number GT83W-27 81100 and year 2007.

Rigid pipe threader.

Two washing units, one turbowash and one Saftley kleen.

Hydraulic press.

In corner: manual vertical press, metal sheet cutter and Mega sheet bending unit.

SOCO electric metal disc saw model MC-370F.

Three small pillar drills, vertical operation.

Walsdown piller drill.

Hercus craftsman lathe.

Solberg vertical drill.

Mogigs vertical drill.

Breirly drill sharpene.

Brookhirst surface planer number B2048/65/1.

Okuma type L-8 Mitshi lathe.

Takisawa lathe year 1978 number A3Y81762.

MWS circular grinder.

At the rear of the workshop is a band saw under cover.

Welding area

Transmig 350 pulse welder ,Linton electric welder, Transtig 300 pulse welder, Kello double vertical stone grinder and an anvil.

Small workshop situated near to roll wrap area

Two small vertical drills, washing unit for grease removal, twin stone disc grinder, p twin welding bottle set on barrow, hydraulic press, electric disc saw, portable electric welder and small lathe.

Laboratory

General gas ware, two ovens, tensile tester, print tester, standard sheet maker comprising of disintegrator, sheetmaker with vacuum leg and sheet press, 24 drying chromed rings, Canadian freeness tester, Bauer McNet fibre length analyser, Orteling pan balances, guillotine, Gloss meter model T480, print tester, two Sheffield porosity testers, Bensten smoothness and porosity tester, L&W TSO tester, L&W PPS tester, electronic thickness tester, Prafbaus print tester, Pan balance and three microscopes.

SECTION 6: POWER PLANT, WATER FILTRATION AND EFFLUENT PLANT

Power plant

Three package boilers: Easteel manufacture, model WT.11,250, year 2007 Each boiler with single burner running on natural gas, design pressure 1850 kPa, temperature 298 deg.C, operating pressure 1500kPa, volume at NWL 10 m^3, rating 17,250 kw.

Standby boiler is George & George package boiler, single burner, natural gas, 1500 Kpa output, 9t/hr of steam.

Stal steam turbine built 1960s, rated at 4 MW, 11,000 volts, runs on superheated steam 300psi.

De min plant located next to the three boilers.

One old oil tank still on site, located opposite redundant Cell Plant building.

Water Filtration

Water for the mill is pumped from a river approx 3 miles from the mill. The water is pumped to concrete tanks and passed over four sand filter beds. Chlorine is added and the cleaned water is pumped to a concrete chest at the hill top where the water flows by gravity to the mill.

Effluent Plant

At the lower level of the mill is a settler fed from a concrete inlet works. At this point there are two coarse filters for removal of large solids and a fine screen prior to water flowing to the settler.

The settler rotates and has a base scraper. Polymer is added to settle the sludge. The sludge consistency is controlled by means of a De Zurich consistency transmitter. The sludge is extracted by pumps.v

Sludge tank, concrete with a vertical mixer, is located next to the belt press building.

Two polymer make up units fed by powder bags, Allied Colloids supply.

Two Sernagiottio belt presses 2000 mm width with M/S frames, pneumatic loaded belts, the infeeds with polymer mixing units to assist operation of the presses. Normal recovered solids are 30% dry. Cationic polymer used.

The final sludge is taken from belt presses by a flat belt conveyor to an outside storage area prior to being collected from site.