SUBJECT:	OJIFS KINLEITH #1 PULP MILL SPECIFICATIONS

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Note: NOT INCLUDED

1) Buildings and essential Mill services (air-water-power, etc) including structures supporting the services such as but not limited to pipe bridges, supports, cable trays, etc. To be identified on site.
2) Control System
3) Weighometer in the Chip Tripper (See page 6)

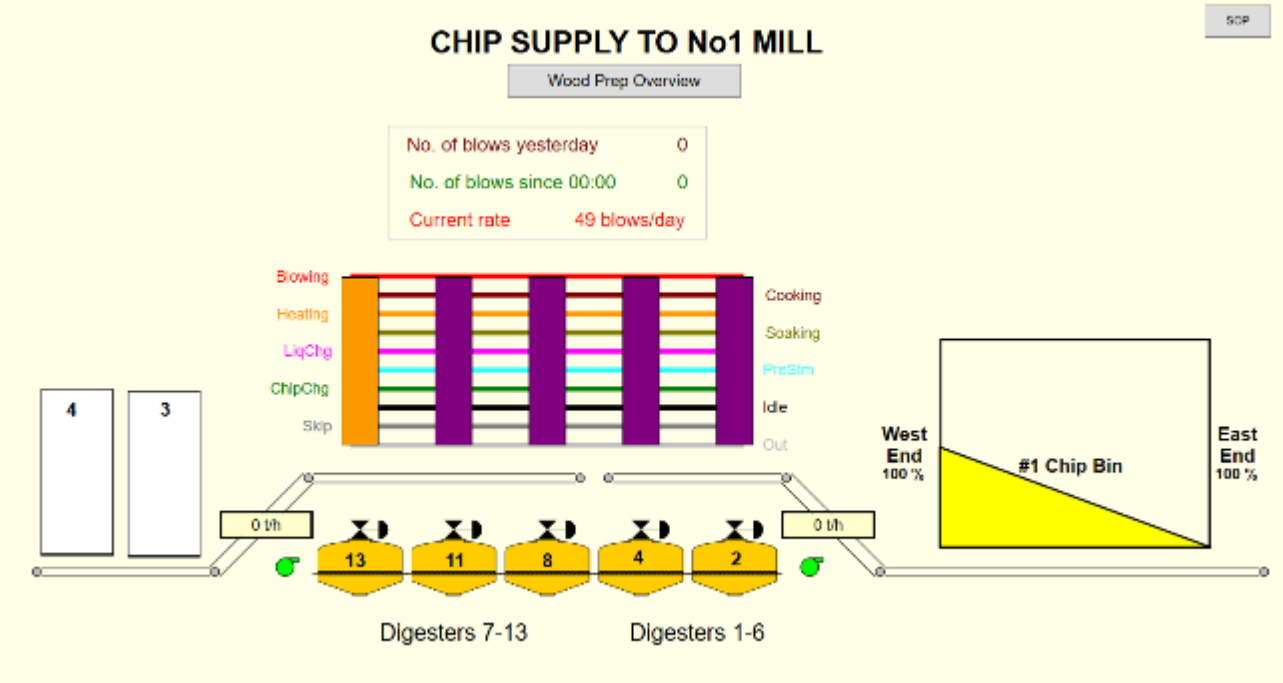
#1 PULP MILL

Kraft Pulp mill consisting of 5 batch digesters. Defirbilizing, Screening and Cleaning Systems. DD Washer and Blow Heat Evaporating system, producing 600 ADTPD

BASIS OF DESIGN

KAPPA range:	28-60 (Target 55)
Cook/Day:	50
Capacity:	600 Tonnes/Day
Total Steam Usage:	26T/Cook

CHIP SUPPLY



CHIP STORAGE 1-6

1-6 Chip Supply

Chip Storage





CHIP BIN TWIN SCREW



Make: IMPCO

Model: Twin Screw Mechanical Feeder

Serial: G-322

Motor: MetroVC, KNB284, 415V/7.5kW/4P

G/Box: HOLROYD HUA, 5.0:1

CHIP BIN OUTFEED CONVEYOR



Motor: CMG, D160M, 415V/15kW/4P

G/Box: BORG WARNER, 15:1

INCLINDED CONVEYOR



Motor: POPE, D200L, 415V/30kW/4P (note: conveyor structure not included)

G/Box: Holroyd HU 12in, 40:1

BELT OVER CONVEYOR



Motor: CMG, D160L, 415V/15kW/4P

G/Box: CROFTS 12MT, 24.8:1

CHIP TRIPPER



Motor: DEMAG, 19/11/K4, 415V/3kW/4P

G/Box: DEMAG, 92D, 37.2:1

(Weighometer not included)

7-13 CHIP SUPPLY

CHIP STORAGE



INCLINED CONVEYOR





Motor: AEI, D180M, 415V/18.5kW/4P

G/Box: RADICON 10in, 40:1

BELT OVER CONVEYOR



Motor: CMG, D132M, 415V/7.5kW/4P

G/Box: OPPERMAN, SGM5

CHIP TRIPPER

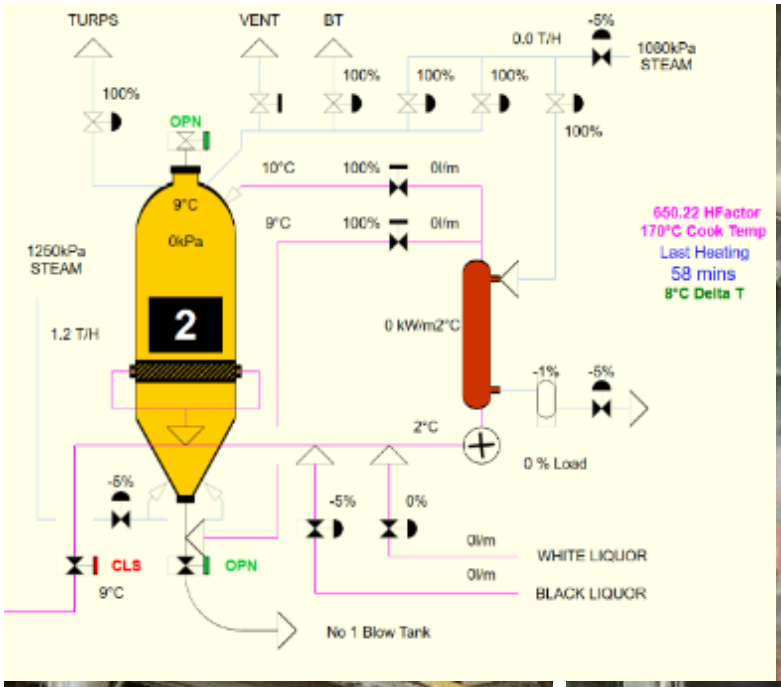


Motor: DEMAG, 19/11/K4, 415V/3kW/4P

G/Box: DEMAG 92D, 37.2:1

DIGESTERS

#2 DIGESTER:









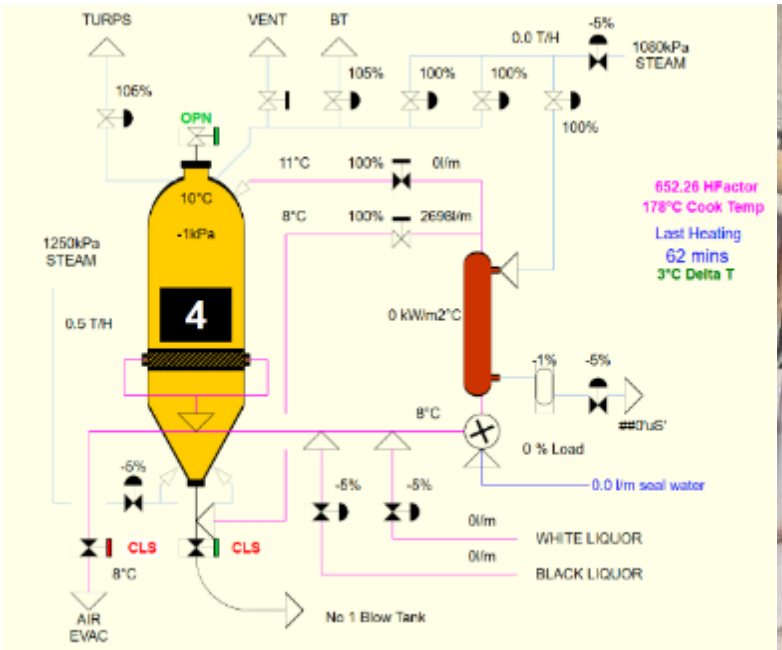
Manufacturer:	SUNDS DEFIBRATOR AB/FITZROY ENGINEERING
DOM:	1988
Design:	BS5500 Cat 1/NZS4203:84
Volume:	125 Cubic Metres
Construction:	2205
Certified:	Lloyds 04/11/88
Design Pressure:	215PSI
Test Pressure:	497 PSI

Circulating Pump:

Motor: POPE, D315M, 415V/90kW/6P

Pump: AHLSTROM, ERS-30-3, 22M, 245L/S

#4 DIGESTER:









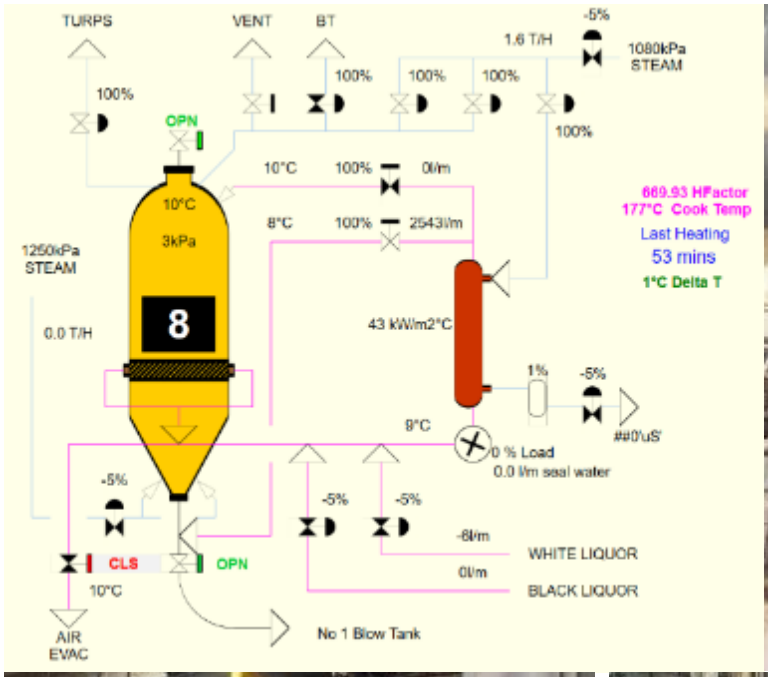
Manufacturer:	SUNDS DEFIBRATOR AB/FITZROY ENGINEERING
DOM:	1990
Design:	BS5500 Cat 1/NZS4203:84
Vessel #:	V-242
Volume:	125 Cubic Metres
Construction:	2205
Temp:	0-200 Dec C
Design Pressure:	215PSI
Test Pressure:	497 PSI

Circulating Pump:

Motor: POPE, D315M, 415V/90kW/6P

Pump: AHLSTROM, ERS-30-3, 22M, 245L/S

#8 DIGESTER:









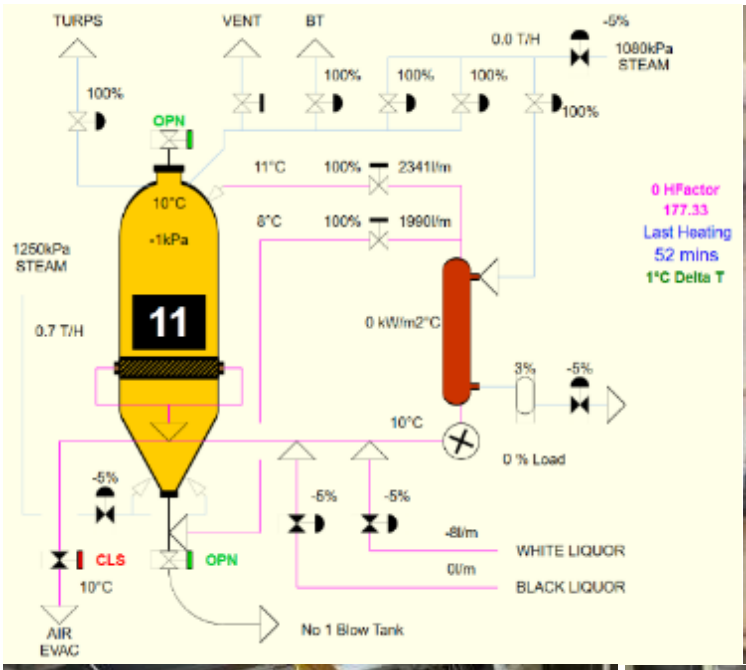
Manufacturer:	SUNDS DEFIBRATOR AB/FITZROY ENGINEERING
DOM:	1990
Design:	BS5500 Cat 1/NZS4203:84
Vessel #:	V-244
Volume:	125 Cubic Metres
Construction:	2205
Temp:	0-200 Dec C
Design Pressure:	215PSI
Test Pressure:	497 PSI

Circulating Pump:

Motor: POPE, D315M, 415V/90kW/6P

Pump: AHLSTROM, ERS-30-3, 22M, 245L/S

#11 DIGESTER:









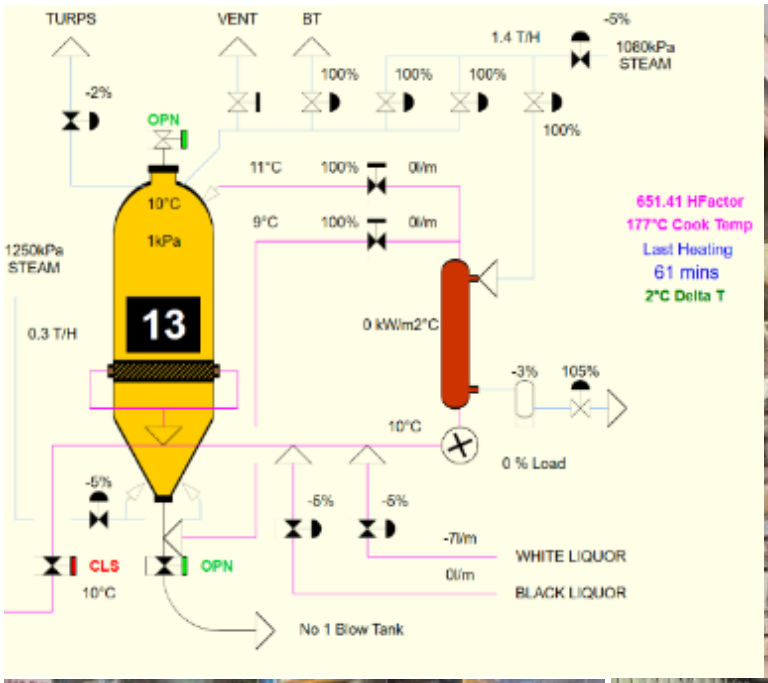
Manufacturer:	SUNDS DEFIBRATOR AB/FITZROY ENGINEERING
DOM:	1990
Design:	BS5500 Cat 1/NZS4203:84
Vessel #:	V-243
Volume:	125 Cubic Metres
Construction:	2205
Temp:	0-200 Dec C
Design Pressure:	215PSI
Test Pressure:	497 PSI

Circulating Pump:

Motor: POPE, D315M, 415V/90kW/6P

Pump: AHLSTROM, ERS-30-3, 22M, 245L/S

#13 DIGESTER:









Manufacturer	SUNDS DEFIBRATOR AB/FITZROY ENGINEERING
DOM:	1989
Design	ASME VIII DIV 1 1989
Volume:	125 Cubic Metres
Construction:	2205
Temp:	0-200 Dec C
Design Pressure:	1100 MPa
Test Pressure:	1800 KPa

Circulating Pump:

Motor: POPE, D315M, 415V/90kW/6P

Pump: AHLSTROM, ERS-30-3, 22M, 245L/S

AIR EVACUATION FANS

Digesters 1-6



Motor: BROOK HANSEN, D180M, 415V/18.5kW/4P

Fan: ASEL 900 RB33

Digesters 7-13



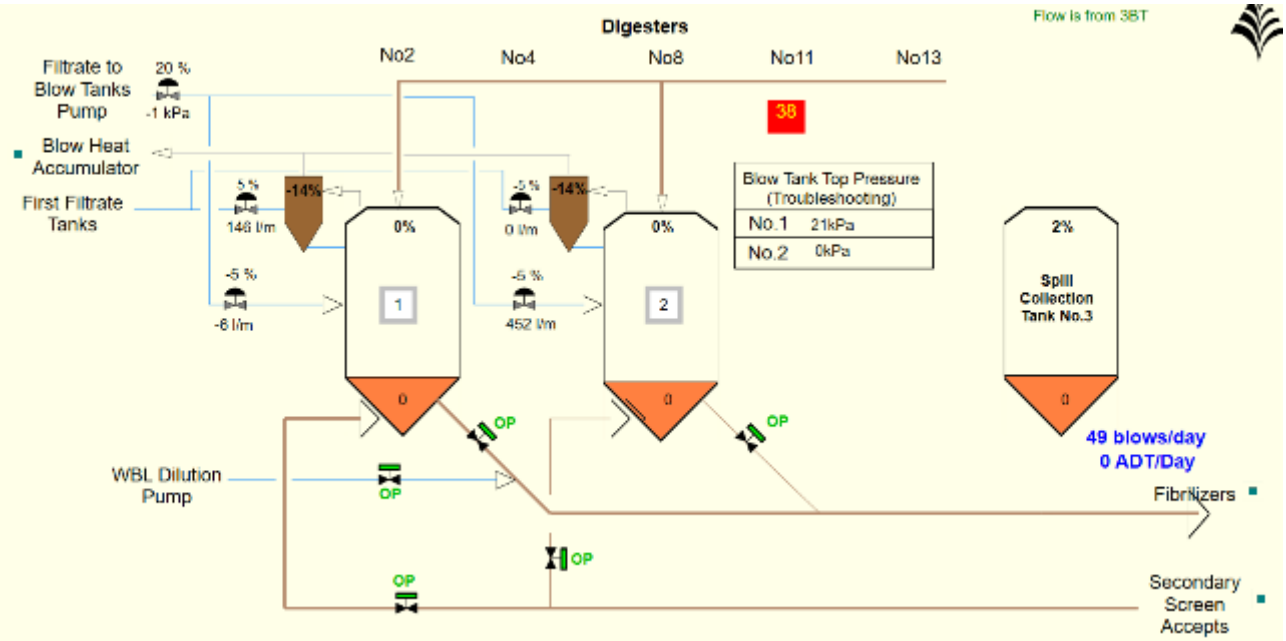
Motor: CMG, D180M, 415V/18.5kW/4P

Fan: ASEL 900 RB34

DIGESTERS STEAM HEADER



BLOW TANKS 1&2, SPILL COLLECTION TANK







BLOW TANK 1 AGITATOR

Motor: POPE, D225S, 415V/37kW/4P

G/Box: HOLROYD, HVA 10in, 15:1

BLOW TANK 2 AGITATOR

Motor: POPE, D225S, 415V/37kW/4P

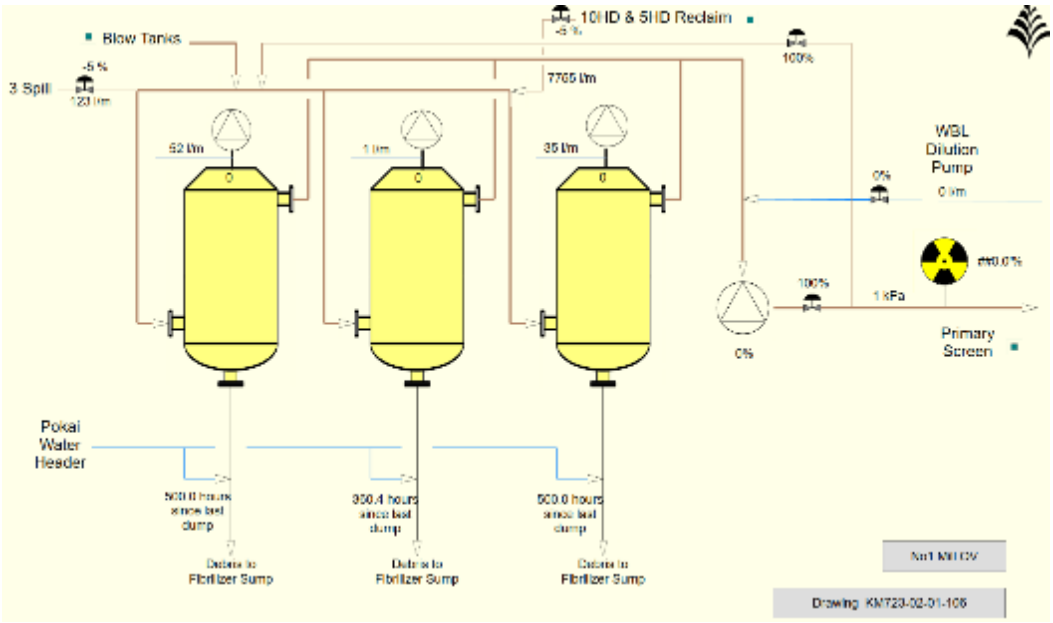
G/Box: HOLROYD, HVA 10in, 15:1

SPILL COLLECTION TANK AGITATOR

Motor: POPE, D225S, 415V/45kW/4P

G/Box: HOLROYD, HVA 10in, 15:1

FIBRILISERS



SUPPLY PUMP

Spill From Collecting Tank 3 to Fibrilizers Pump



Motor: CMG, D200L 415V/30kW/4P

Pump: AHLSTROM APP32-125, 17.5m, 70l/s

FRIBILIZER UNITS



No. 1 Fibrilizer

Motor:	POPE, D315L, 415V/150kW/6P
Machine:	BELOIT IMPCO 3-25V

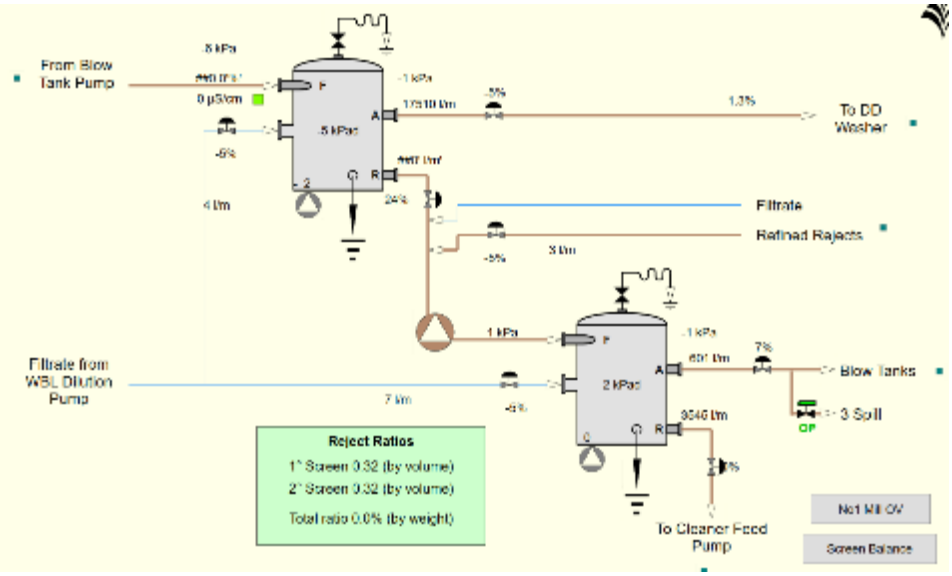
No. 2 Fibrilizer

Motor:	CMG, D315L, 415V/150kW/6P
Machine:	BELOIT IMPCO 3-25V

No. 3 Fibrilizer

Motor:	POPE, D315L, 415V/150kW/6P
Machine:	BELOIT IMPCO 3-25V

SCREENING



PRIMARY SCREEN FEED

Pump Blow Tank



Motor: POPE, D315L 415V/150kW/6P

Pump: AHLSTROM APP55-300, 30.8m, 319.8l/s

PRIMARY SCREEN



Motor: POPE, 315LY, 3300V/250kW/4P

Machine: VALMET MODUScreen F4, 0.3mm Slot

SECONDARY SCREEN FEED

Secondary Screen Pump



Motor: POPE, D315L 415V/150kW/6P

Pump: AHLSTROM APP55-300, 37.5M, 263.2l/s

SECONDARY SCREEN

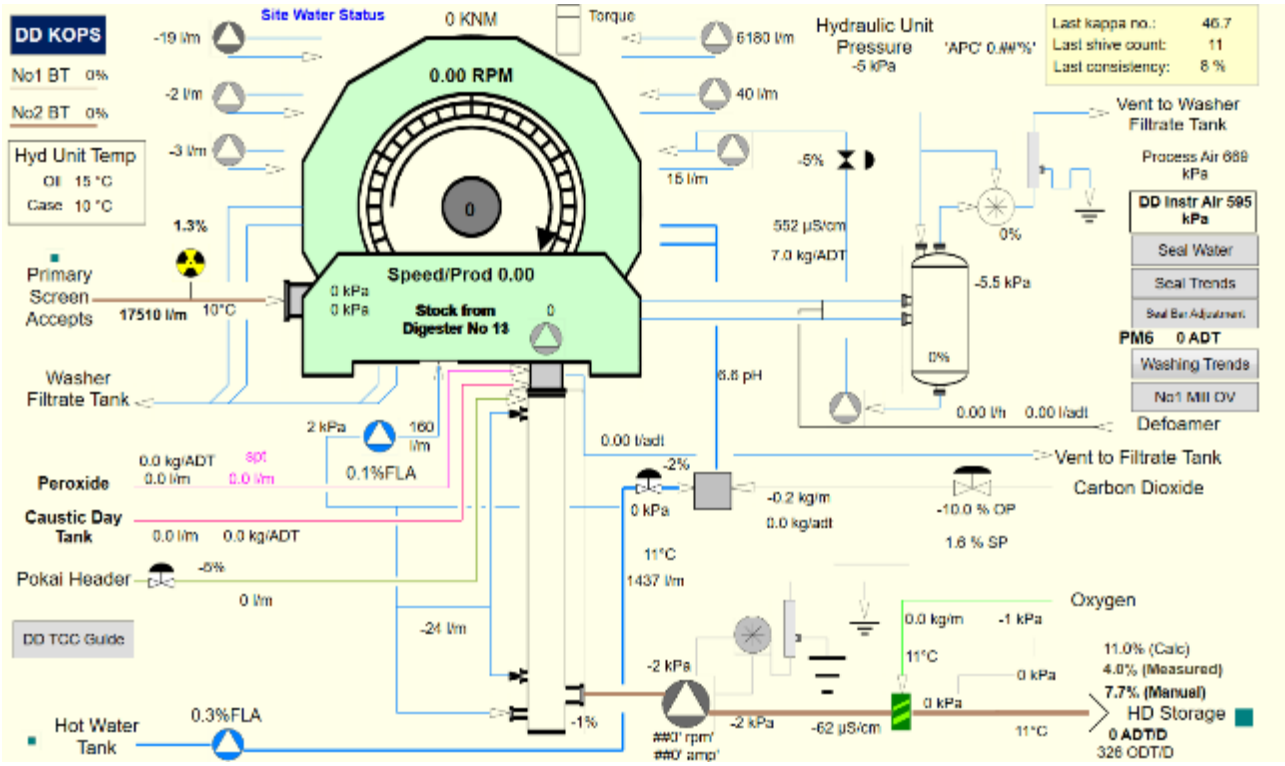




Motor: POPE, D315L, 415V/185kW/4P

Machine: VALMET MODUScreen F3, 0.3mm Slot

WASHING



DD WASHER



Manufacturer: AHLSTROM
Model: DD4560.4 LCV
DOM: 1997

DD WASHER REPULPER



Motor: CMG, D180L, 415V/22kW/4P
G/Box: SANTASALDO, 2DC200, 14.12:1

DD WASHER VACUUM PUMP

DD Washer Vacuum Pump



Motor: POPE, D250M 415V/37kW/6P

Pump: NASH SC6

VACUUM SYSTEM FILTRATE PUMP



Motor: POPE, D200L 415V/30kW/4P

Pump: AHLSTROM APP32-65, 26.9m, 12.5l/s

WASHER DRUM CLEANING PUMP



Motor: POPE, D200L 415V/30kW/2P

Pump: AHLSTROM APP23-40, 83m, 10l/s

DD WASHER SHOWER PUMPS

1st Stage Pumps 1 & 2



Pump 1	Motor:	CMG, D160L-FL 415V/15kW/4P
	Pump:	KOLMEKS, AL-1154/4KT, 20m, 45l/s
Pump 2	Motor:	OKN, 164BJ2FK31-FL, 415V/15kW/4P
	Pump:	KOLMEKS, AL-1154/4KT, 20m, 45l/s

2nd Stage Pumps 1 & 2



Pump 1 Motor: MARATHON, D160L-FL 415V/15kW/4P

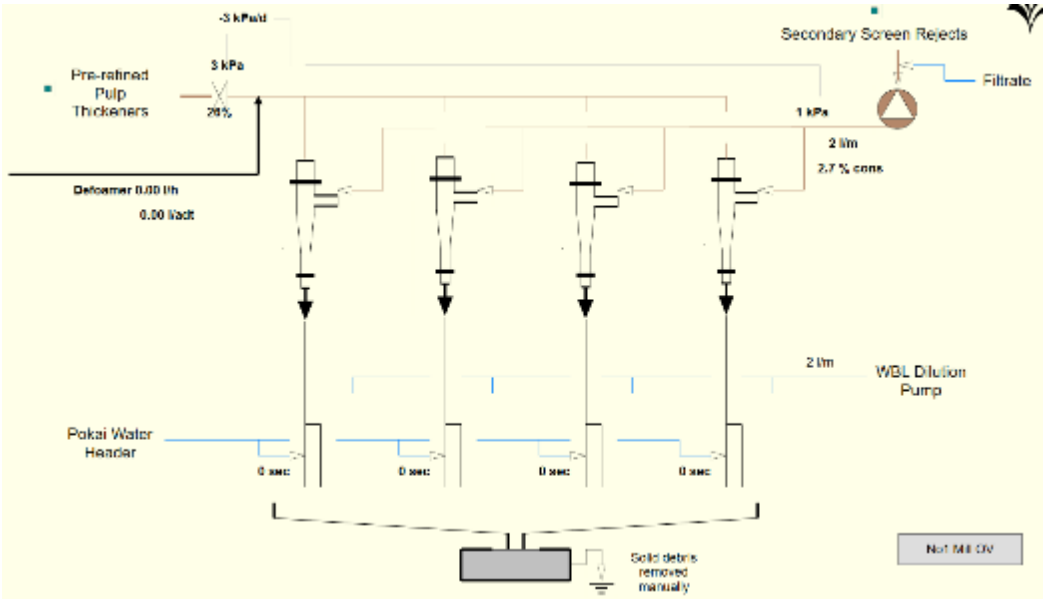
	Pump:	KOLMEKS, AL-1154/4KT, 20m, 45l/s
Pump 2	Motor:	OKN, 164BJ2FK31-FL, 415V/15kW/4P
	Pump:	KOLMEKS, AL-1154/4KT, 20m, 45l/s





Pump 1	Motor:	CMG, D160L-FL 415V/15kW/4P
	Pump:	KOLMEKS, AL-1154/4KT, 20m, 45l/s
Pump 2	Motor:	OKN, 164BJ2FK31-FL, 415V/15kW/4P
	Pump:	KOLMEKS, AL-1154/4KT, 20m, 45l/s

CLEANING



FEED PUMP

Cleaner Feed Pump



Motoe: POPE, D315M 415V/110kW/6P

Pump: AHLSTROM APP55-200, 43.5m, 160l/s

MD CLEANERS



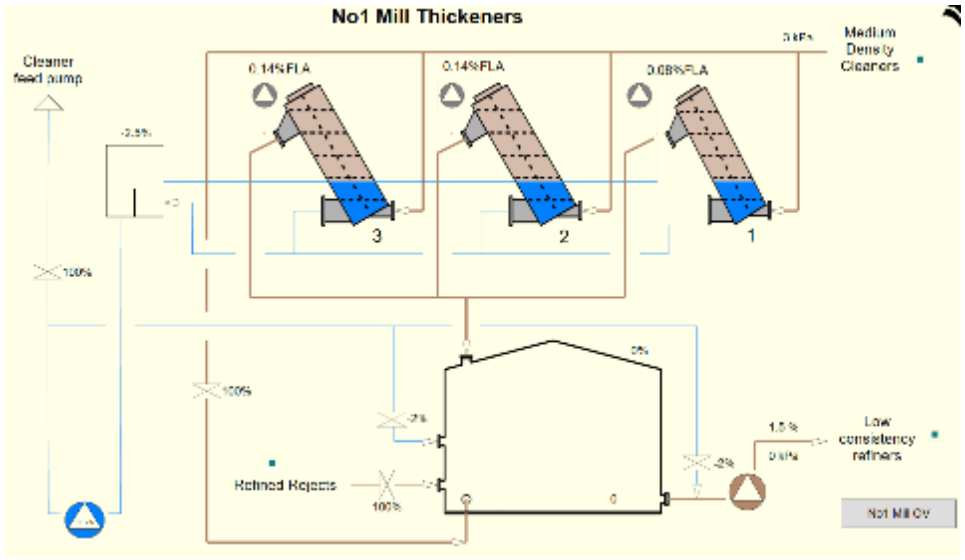




Make: AHLSTROM

Model: AHLCLEANER RB 300 HD x 4

THICKENERS





THICKENER 1

Motor:	SIEMENS, D160M, 415V/11kW/4P
G/Box:	FALK, 4315J025, 24.9:1
Unit:	BLACK CLAWSON 1.B.16 HYDRADENSER #0256

THICKENER 2

Motor:	CMG, D160M, 415V/11kW/4P
G/Box:	FALK, 4315J025, 24.9:1
Unit:	BLACK CLAWSON 1.B.16 HYDRADENSER #0258

THICKENER 3

Motor:	CMG, D160M, 415V/11kW/4P
G/Box:	FALK, 4315J025, 24.9:1
Unit:	BLACK CLAWSON 1.B.16 HYDRADENSER #0257

REFINING

FEED PUMP

Low Consistency Refining Feed Pump



Motor: POPE, D315L 415V/150kW/6P

Pump: AHLSTROM APP55-100, 65m, 83.9l/s

PRE-REFINED STOCK TANK AGITATOR



Motor: CMG, D250S, 415V/55kW/4P

Agitator: JONES

DISC REFINER (815-51-66)




Motor: CGE, 779Y, 3.3kV/1100kW/12P

Refiner: BELOIT JONES, DD 3000

DISC REFINER (815-51-64)




H.C REFINER (815-51-62)





H.C REFINER (815-51-63)



MC STOCK PUMPS

HD MC FEED PUMP



Motor: POPE D355L 415V/315kW/4P

Pump: AHLSTROM MCA32-100, 145m, 30.7l/s @2100 1/min

HD MC FEED DEGASSING PUMP



Motor: POPE, D132M 415V/7.5kW/4P

Pump: NASH AHF75MC

MC STOCK FLUSH BOOSTER PUMP



Motor: POPE, D225S 415V/37kW/4P

Pump: AHLSTROM APP33-10S, 46m, 33.3l/s

BOOSTER 1 & 2 PUMPS





Booster 1

Motor: POPE, D355L 415V/315kW/4P

Pump: AHLSTROM, MCA32-100, 145m, 3017l/s @ 2100 1/min

Booster 2

Motor: POPE, D355L 415V/315kW/4P

Pump: AHLSTROM, MCA32-100, 145m, 30.17l/s @ 2100 1/min

FLUSH WATER BOOSTER PUMP



Motor: WEG, D280M 415V/75kW/2P

Pump: SULZER APP22-80, 90m, 26.67l/s

LIQOUR PUMPS

WHITE LIQUOR PUMP #1



Motor: NEWMAN, D180L 415V/22kW/4P

Pump: WORTHINGTON, 4CNG104

WHITE LIQUOR PUMP #2



Motor: POPE, D180L 415V/22kW/4P

Pump: WORTHINGTON, 4CNG104

PRODUCT LIQUID STORAGE TANK TO EVAPORATORS PUMP



Motor: CMG, D280S 415V/75kW/4P

Pump: ALLIS CHALMERS, PWO 8x5x17, 25m, 82l/s

WEAK BLACK LIQUOR DILUTION PUMP



Motor: POPE, D355L, 415V/225kW/4P

Pump: AHSLTROM APP53-250, 62.3m, 231.2l/s

NO 2 EVAPORATOR STORAGE PUMP



Motor: ASEA, MBRF27 415V/110kW/4P

Pump: AHLSTROM TLS-15

NO 1 EVAPORATOR STORAGE PUMP



Motor: ASEA, MBRF27 415V/110kW/4P

Pump: AHLSTROM TL0-20

1ST FILTRATE HEADER PUMP NO 4



Motor: POPE, D280M 415V/75kW/4P

Pump: GOULDS 3196XLT

1ST FILTRATE HEADER PUMP NO 2



Motor: POPE, D280M 415V/75kW/4P

Pump: GOULDS 3196XLT 1x1.5-6

WEAK BLACK LIQUOR 1-13 DIGESTORS



Motor: ABB, D280S 415V/75kW/4P

Pump: GOULDS 3196XLT

HEAT EXCHANGER/CONDENSATE PUMPS

STANDBY HEAT EXCHANGERS PUMP



Motor: POPE, D280S 415V/75kW/4P

Pump: THOMPSON 8x10

CLEAN CONDENSATE PUMP



Motor: CMG, D180L 415V/22kW/4P

Pump: GOULDS, 3196, 3x4x17, 46m, 1000l/min

CONDENSATE TO BOILER HOUSE PUMP



Motor: CMG, D180M 415V/18.5kW/4P

Pump: GOULDS 3196MTX, 3x4x13

No 2 STAGE CONDENSER HOT WATER TANK PUMP



Motor: CMG, D225S 415V/37kW/4P

Pump: ALLIS CHALMERS, PWO 6x3x14

EVAPORATOR FOUL CONDENSATE TO COLLECTING TANK PUMP



Motor: CMG, D132M 415V/7.5kW/4P

Pump: AJAX 3L

BORE WATER PUMPS

BORE WATER 2 BLOW HEAT CONDENSER PUMP



Motor: CMG, D225M 415V/45kW/4P

Pump: THOMPSON 7x8

SURFACE CONDENSER WARM BORE WATER PUMP



Motor: CMG, D315S 415V/132kW/4P

Pump: ALLIS CHALMERS, PWO 8x6x17

PUMP #1 BORE WATER EVAPORATOR SURFACE CONDENSER



Motor: METROVIC, GK6335 415V/37kW/4P

Pump: THOMPSON 7x8

WATER PUMPS

HOT WATER TANK TO NO 6 MACHINE PUMP



Motor: CMG, D225S 415V/37kW/4P

Pump: AJAX, 4MS, 125ft, 530GPM

HOT WATER RECIRCULATION



Motor: NEWMAN, D200L 415V/30kW/4P

Pump: SULZER APP31-150, 13.5m, 100l/s

FRESH WATER HP CLEANING WATER PUMP



Motor: CMG, D160M, 415V/11kW/4P

Pump: AJAX 2LS 2x3x13

NO 1 PULP MILL SEAL WATER BOOSTER PUMP



Motor: POPE, D160L 415V/18.5kW/2P

Pump: AHLSTROM APP22-32, 77.5m, 4.8l/s

NO.1 AIR STATION COOLING WATER RECLAIM PUMP



Motor: MARATHON, D160M 415V/11kW/2P

Pump: SULZER, A11-40, 385kPa, 800l/min

DD WASHER FILTRATE TANK





Washer Filtrate Tank Foambreaker

Motor: POPE, D200L-FL 415V/22Kw/6P

Agitator: AHLSTROM

NO1 SOAP PUMP



Motor: CMG, D250M, 415V/55kW/4P

Pump: AHLSTROM ARP33-100, 50m, 17l/s

SOAP DEGASSING PUMP



Motor: ABBD132S, 415V/5.5kW/4P

Pump: NASH AHF75MC

SPILL PUMPS

NO 1 SPILL PUMP

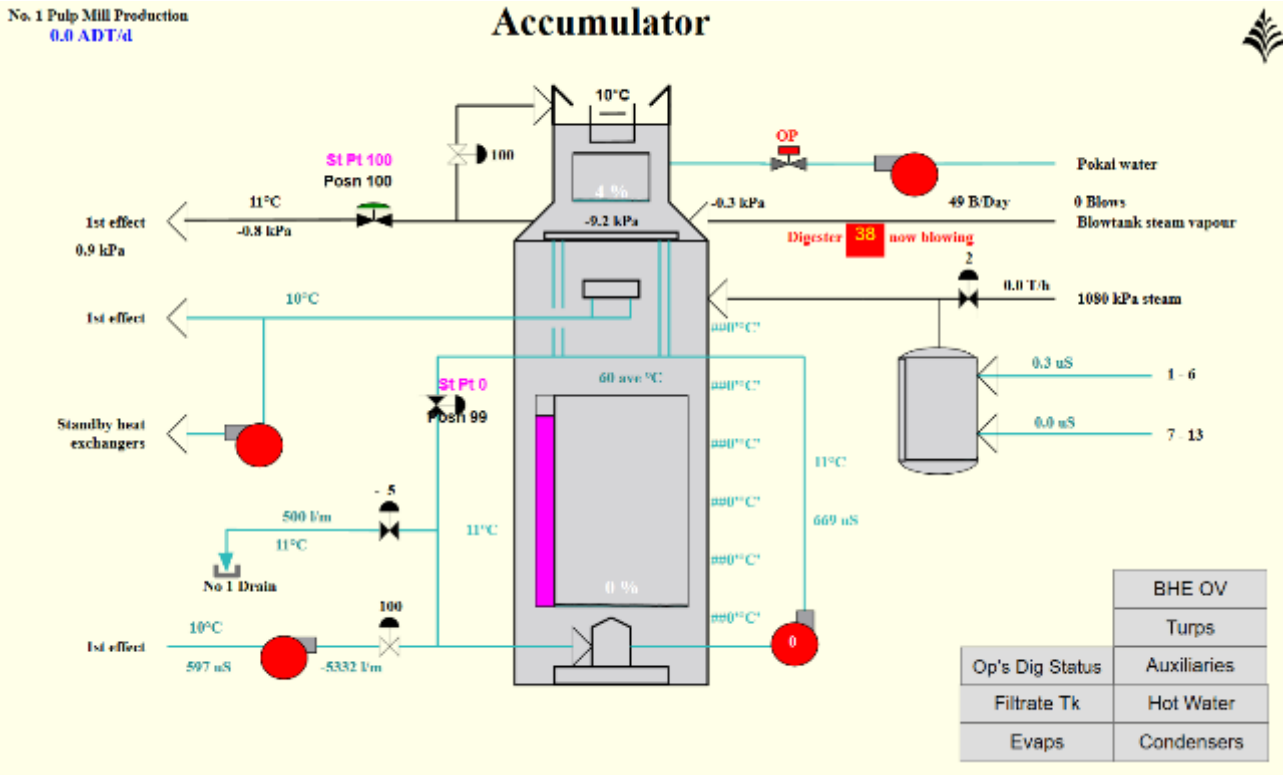


Motor: NEWMAN, D225M 415V/45kW/4P

Pump: Vaughn V4PB-118, 33.5m, 192m^3/hr, Belt Drive

BLOW HEAT EVAPORATORS

ACCUMULATOR





ACCUMULATOR COLD CONDENSATE PUMP



Motor: CMG, D315M 415V/132kW/6P

Pump: MORRIS 30 SEAF

ACCUMULATOR SEALING WATER PUMP



Motor: AEI, D225S 415V/45kW/4P

Pump: AJAX, 5MS, 6x5,

PUMP ACCUMULATOR HOT CONDENSATE



Motor: POPE, D280M 415V/55kW/6P

Pump: ALLIS CHALMERS, PWO 17”, 13.5m, 280l/s

EVAPORATOR VACUUM PUMP



Motor: POPE, D225M, 415V/45kW/4P

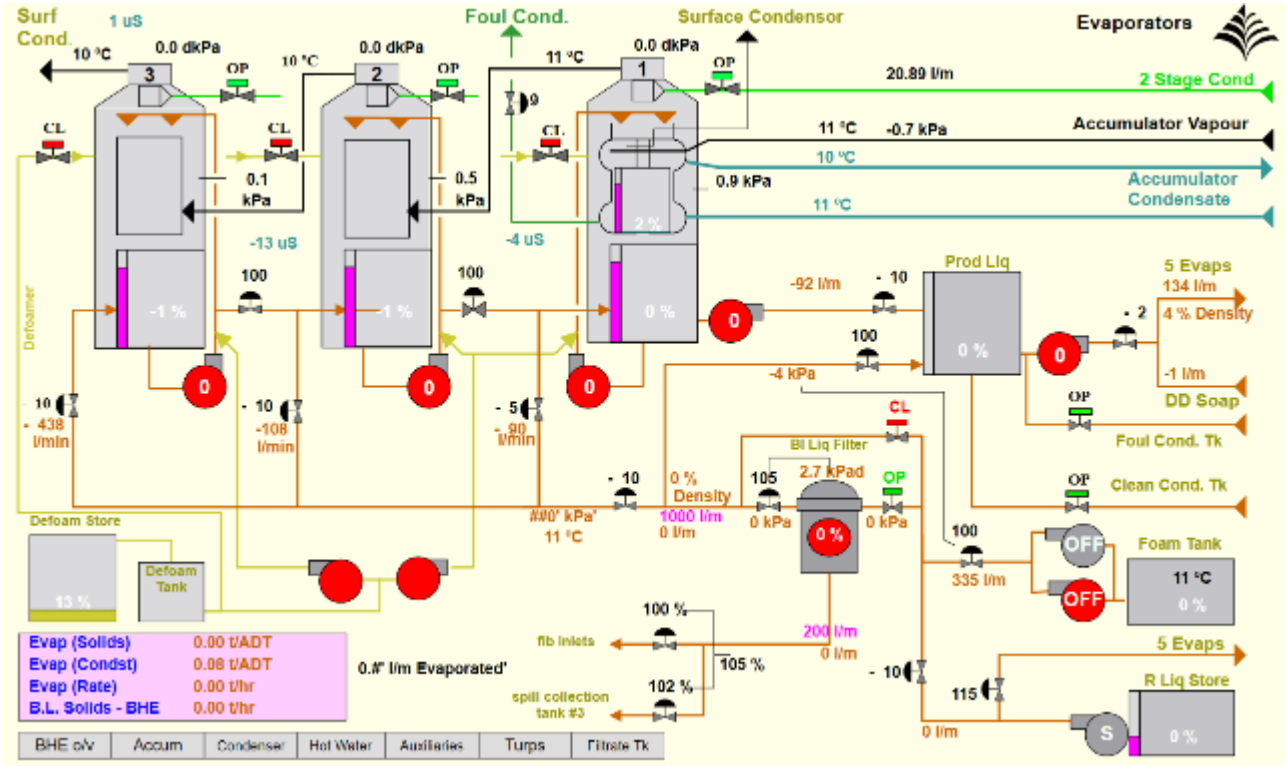
Pump: NASH CL1003, 760 CFM @ 25” Hg, Belt Drive

EVAPORATOR VACUUM SYSTEM SEALING WATER PUMP



Motor: MARATHON, D100L, 415V/2.2kW/4P

Pump: MACEWANS CHP2, 48 ft, 3000 GPH



1ST EFFECT EVAPORATOR



EVAPORATOR 1ST EFFECT CIRCULATING PUMP



Motor: POPE, D180S, 415V/30kW/4P

Pump: ALLIS CHALMERS, PWO 10x12x17, 11m, 190l/s

2nd EFFECT EVAPORATOR



EVAPORATOR 2ND EFFECT CIRCULATING PUMP



Motor: CMG, D225S 415V/30kW/6P

Pump: ALLIS CHALMERS, PWO 10x12x17, 11m, 190l/s

3rd EFFECT EVAPORATOR



EVAPORATOR 3RD EFFECT CIRCULATING PUMP



Motor: POPE, D225M 415V/30kW/6P

Pump: ALLIS CHALMERS, PWO 12x10x17, 11m, 190l/s