ITEM	Q'TY	MAIN EQUIPMENT

E004 **1** **VALMET DRUM SCREEN VDS 20**

for washing and thickening of rejects from feed 1.5 % up to 8-20 %, returns fiber and water back to process

Capacity (flow into drum screen) from 31 to 60 tpd

Construction and materials:

- stock contacted parts are made of stainless steel SS 2343 or equivalent
- supporting parts are of mild steel / epoxy painted
- main parts: drum, vat, cover, shower pipe, two drum supporting wheels at outlet end and gear with tube shaft supporting the other end of drum

Dimensions:

- two diameter drum		
diameters	6.6 / 3.9	ft
lenghts	9.8 / 6.6	ft
- screen hole dia.	0.31	in
- screen slot size	-	in
- screening part open area	22	%
- revolution	5-9	rpm
- shower water	150	gpm

Additional equipment included:

- light reject screw conveyor
- heavy reject screw conveyor
- reject chute
- foundation bolts

Connections:

- reject inlet, chute for light reject, heavy reject outlet, filtrate outlet and shower water

Required motors:

1	10 hp, 1800 rpm, flange motor, included
1	2.0 hp, 1800 rpm, gear motor, included
1	0.75 hp, 1800 rpm, gear motor, included

1. CONSTRUCTION AND OPERATION

The drum screen consists of large diameter and small diameter parts.

The large diameter part is partly immersed into the water pond. The drum rotates and at 6 o'clock position suspension sunk into water pond and fibers are separated from the rejects. Lenghtwise lifting bars cause suction at the back side and front side lifts rejects up from water at 10 o'clock position rejects drop back into the water. At the same position cleaning shower is directed. Shower water washes the rejects too and cleans the drum holes.

Suspension is lead through gear box into the drum.

The fibers in the rejects are washed through the Drum Screen hole screen into the water.

There are conveying arms attached in lifting bars. These arms convey the suspension and rejects and finally lift the washed rejects to the small diameter drum. There are lifting bars and screw flights inside the small diameter drum. The rejects are dried and conveyed to the outlet end and out of the drum to reject handling system.

The drum has one outside shower pipe at 10 o'clock position for cleaning the drum holes. The shower pipe is common for total length of the drum. There are more water nozzles at washing part than in drying part of the drum.

The heavy rejects sunk down in water pond and are conveyed out by the Heavy Rejects Screw Conveyor.

The heavy rejects from the HC-Cleaner are directed into the water pond too.

The floatable light rejects are on the surface of the water pond and rotating drum coveys them to the other side of the vat (rising side of the rotating drum).

The floatable light rejects are conveyed along the water to the Light Reject Screw Conveyor. The light rejects from the Coarse Pressure Screens are directed on to the surface of water pond.

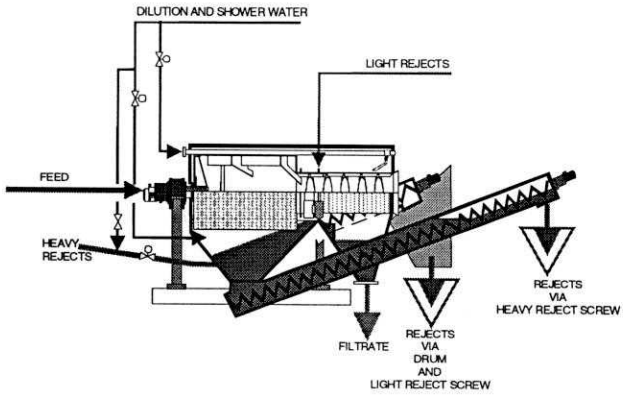
The level in the water pond is carried out by the overflow edge. After the overflow edge, water is collected and lead into the Pulper Water Tank.

Fibers are recovered with water. The water consistency stays at low level, because all level control water for the Pulper Water Tank is taken via the water pond. Clear filtrate is used and there is a constant large need for water.

Both Reject Screws have a shaftless screw conveyor where water overflows back to the pond at the open center of the screw. Rejects are dried when screw outlet end is over the water pond level.

The rejects from the drum and the Light Reject Screw Conveyor are collected by a chute onto the Screw conveyor for further drying by the Press.

The heavy rejects are lead into the Dumpsite.


DILUTION AND SHOWER WATER
LIGHT REJECTS
FEED
HEAVY REJECTS
REJECTS VIA HEAVY REJECT SCREW
FILTRATE
REJECTS VIA DRUM AND LIGHT REJECT SCREW