



Pulp and Paper Mills & Equipment

VanTek inc.

7632 NE Hazel Dell Avenue
Vancouver, WA 98665, USA
Phone: 360-694-9922

www.vantekinc.com
vantek@vantekinc.com



Banknote & Security Paper Machine

VanTek Ref. No. 223

Contents

1. Stock Prep
2. Approach Flow System
3. Wire Section
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6. Additional Equipment



Stock Prep

• System Components

- 2 Bleaching towers
- 4 Conical Refiners
- 6 Papillon for pregrinding
- 4 Disc refiners for regrinding
- 2 Pulpers
- Various stainless steel vats
- Various pumps



• Stock Prep Parameters

- Throughput in each bleaching tower – 1.2 tons/hour
- Pulp density in pulper, 4% consistency, 12m³ volume

Approach Flow

- Components
 - Metso refiner
 - 2 stage cleaners
 - 2 former screens
 - Deltaflow flotation saveall



Paper Machine Parameters

- Product: Banknotes & security papers, passports, documents, checks, labels
- Basis Weight: 60 – 120 g/m²
- Design Speed: 100 m/min
- Operating Speed: 90 m/min
- Working Width: 2300 mm
- Steam Pressure: 2, 5 bar 3 bar

Paper Machine



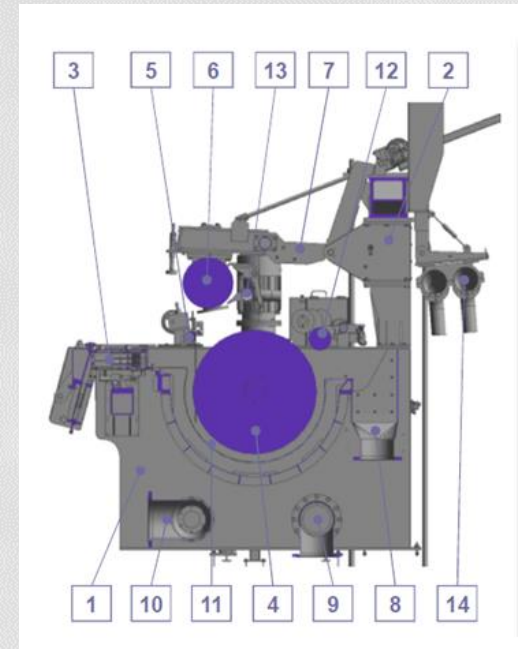
- Forming section – Kurzformer 12 gsm
- Cylinder mold with thread guide and dandy roll
- Compact press with two nips and watermark correction
- VTP
- Size press
- Air turn and infra-red dryers
- NTP with cooling cylinders
- Kusters matt, online 2-roll calendar for matte finish, and smoothing
- Metso process control system
- Reel
- Slitter Rewinder
- Cross cutters

PM - Wet End



PM – Cylinder Mold System Components

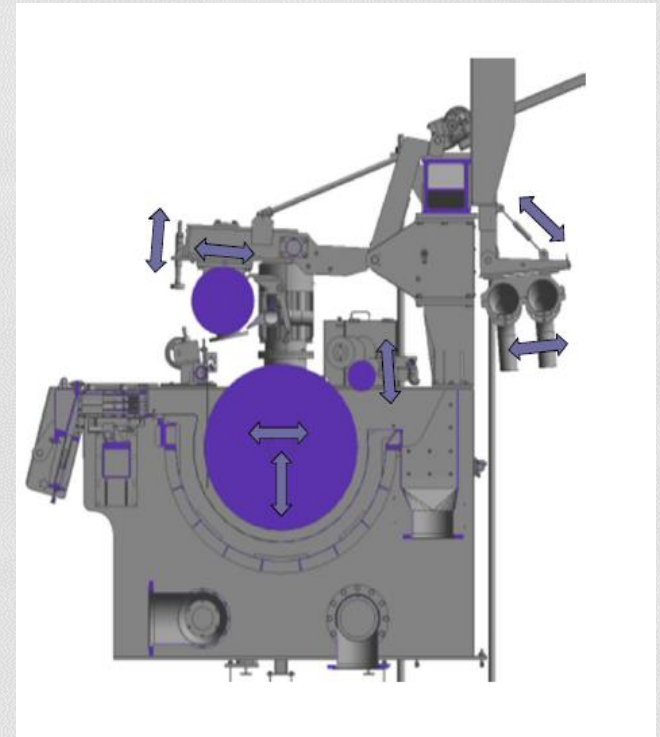
1. Cylinder vat
2. Frame
3. Air blower
4. Expanding cylinder mold
5. Spray tube
6. Couch roll
7. Pivoting lever
8. Overflow
9. White water transfer
10. Vacuum feed
11. Feed tank
12. Dandy roll
13. Schnabel suction
14. Suction control



Technical Description

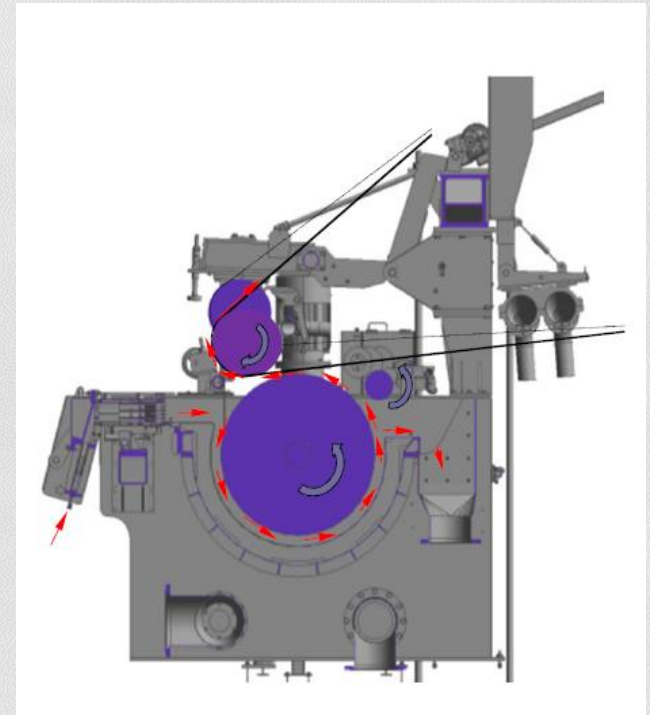
Operation:

- **Adjustable**
 - Controllable vacuum with top exhaust system with slide to supply secondary air
 - Position section control
 - Dandy roll orientation and immersion depth
 - Couch roll roll-off point and orientation
 - Alignment for expanding cylinders
- **Interchangeable**
 - Matching insert trays for respective diameters of expanding cylinder mold



Technical Description - Continued

- Interchangeable (continued)
 - Feed mixture over air blower
 - Sheet formation and drainage by the height difference between pulp stock level in the trough and water level in the cylinder
 - Dandy roll for watermarks, couching or to improve transparency
 - Top exhaust system to increase speed by additional drainage
 - Acceptance by suction couch roll



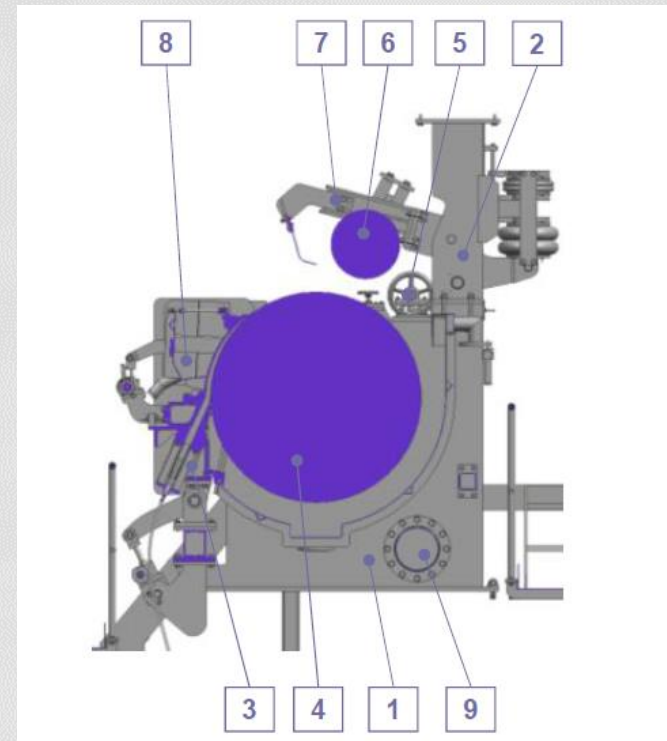
PM – Cylinder Mold



Technical Description - Continued

Components of Cylinder Mold

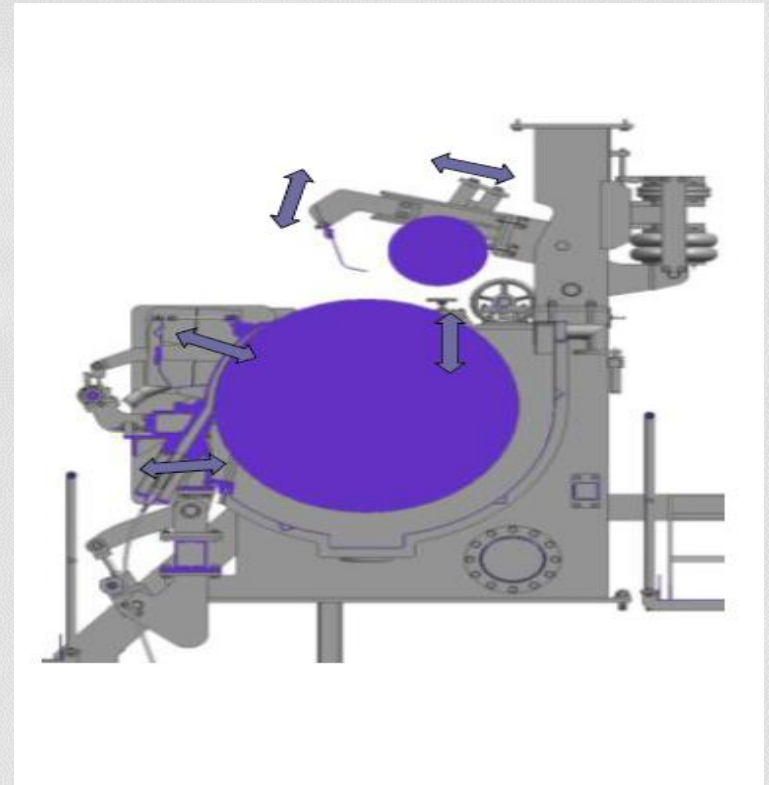
- Cylinder vat
- Cantilever frame
- Air blower
- Cylinder mold
- Spray tube
- Couch roll
- Pivoting lever
- Overflow
- White water transfer



Technical Description - Continued

Components of Cylinder Mold (Continued)

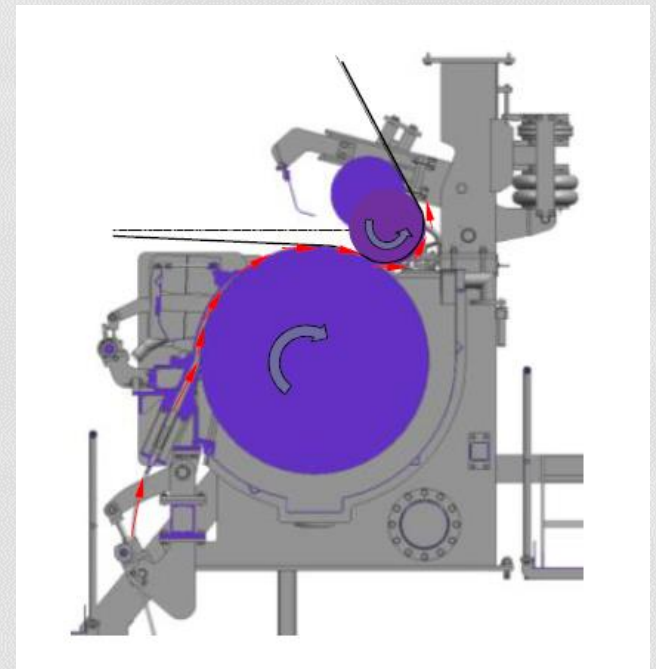
- Adjustable:
 - Water storage level of the white water in the trough
 - Distance of the upper lip to cylinder mold
 - Couch roll-off point orientation and position
 - Air blower



Technical Description - Continued

Components of Cylinder Mold (Continued)

- Pulp stock over the air blower
- Sheet formation and drainage by the height difference between fuel level in the trough and water level in the cylinder
- Trough is used to transfer white water or control height difference
- Acceptance by suction couch roll



Press Section

Components

- Pick – up roll
- Compact press
- 2nd press with transfer into the dryer section



PM – Dryer Section



PM – Size Press, Dip, Airturn Infra-Red Dryer



Calendar, QCS & Reel

