VOITH

Headbox Design Data

Headbox Type----------W6000

Deckle----------97.0 Inches

Minimum Speed----------370 FPM

Maximum Speed----------1000 FPM

Grades----------43-140#/3300 Sq.Ft. C.M Carb., Rel.Liner, Comp.Label, Q-S-12, Plain

VOITH

CUSTOMER

Date: REVISED 7-20-77
R. W. MATLACK

By:

MACHINE DATA

Machine No.: 6

Headbox Pond Width = 97.0 in.

Wire Width = 103.0 in.

Breast Roll Dia. = 19.81 in.

Wire Height Above Soleplate = 48.0 in.

Drive side, standing at the headbox looking toward the reel: Left ☐ Right ☒

Machine Speed: Minimum = 350 ft./min. Maximum = 1000 ft./min.

Soleplates In Headbox Area
Width = 14.0
Length (℄ Breast Roll to Upstream) = TO SUIT Distance Between = 109.0

Current Characteristics For Motors: 440-3-60

Type Of Fan Pump: Constant Speed ☒ Variable Speed ☐

Maximum Fan Pump GPM = 4550

Normal Height Of Liquid Level In The White Water Chest=
(For W-Headbox Application)

Shake Spring Mounting Or Breast Roll Lock-Up Required To Be Mounted To Headbox: NO

OPERATING DATA

Grades: (Enter data below the associated basis weight)	C.M. CARB.	REL. LINER	COMP. LABEL	PLAIN	Q-S-12	PLAIN
Basis Weight: lbs. / Ream Size: (3300) ft.²	43#		58#	55#	140#	80#
Production Percentage of Each Grade:	5%	30%	30%	20%	1%	5%
Reel Speed: ft./min.	1000	700	980	1000	370	860
Width Off Couch: in.	97	97	97	97	97	97
Width On Reel: in.	86	86	86	86	86	86
Reel Dryness: %BD	5%	10%	4%	5%	5%	5%
Stock Consistency Chest: %BD	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Stock Consistency Headbox: %BD	.5%	.4%	.8%	.8%	1.2%	1.0%
Stock Consistency Tray Water Avg.: %BD	.15%	.05%	.14%	.14%	.08%	.12%
Stock Temperature: °F	95°	95°	95°	95°	95°	95°
Stock PH:	4.5	8.0	8.0	8.0	4.5	8.0
Freeness of Stock in Headbox: CSF	325	200	350	350	350	350

Type "W" Headbox

General Operation

(See Fold-Out Page 9)

The stock enters from the drive or tending side thru a side inlet distribution manifold (1). Circular in cross section, the manifold tapers parabolically in the direction of flow to insure that the same pressure distribution and same flow velocities are maintained over the full machine width.

After flowing thru the tube-bank flow evener (2) which provides a specific relationship between inflow and outflow velocities, the stock enters the mixing chamber (3). This chamber balances local concentration fluctuations which are a natural consequence of the outflow from the individual pipes into a common chamber. The angular approach flow in this chamber also prevents fibre from depositing on the edges of the entry holes of the turbulence tube-bank (4). Furthermore, the geometry of this chamber is ideally suited for the creation of the machine width overflow channel which connects to the air cushion.

Generated inside the turbulence tube-bank (4) is a short wave turbulence of high intensity which extends beyond the headbox nozzle far into the formation zone. This highly intensive micro-turbulence fully satisfies the requirement for the perfect sheet formation with optimally directional fibre distribution. The exit of the turbulence tube-bank (4) is a honeycomb cross section so that a homogeneous fibre distribution and a uniform flow profile are achieved.

A compressed air cushion (5) above the stock level near the headbox nozzle performs the task of a pulsation-dampening surge tank with the advantage of continuous air and foam removal into the machine width overflow channel (6). The level in the overflow channel discharge pipes is used as a sensitive impulse for the pneumatic headbox control system.

A regulating plate (7) actuated by interconnected anti-backlash worm gear jacks provides horizontal adjustment of the top lip.

The top lip vertical adjustment is with anti-backlash worm gear units (8). The cross direction profile is corrected by a number of anti-backlash micro-adjusting rods with indicator handwheels (9).

Interior lighting of the air cushion chamber for observation of the overflow rate and a rotatable shower (10) complete the headbox equipment.