

## CMC PVA

가

. 가

가

.

. 가

.

CMC (CMC-WS)

.

CMC-WS , , , 가 가  
(가 ) . , CMC-WS

. CMC-WS (wood chip) (cotton linter) .

CMC-WS 4 가

가 .

CMC-WS . 가

(99%) PVA

CMC-WS

가 . CMC-WS

.

가

. ( ,  
 , )  
 .  
 가 .  
 ( )  
 ( )  
 가 .  
 .  
 .  
 (1) .  
 .  
 가  
 . , , ,  
 .  
 .  
 / (ft<sup>2</sup>)/ [GFD ; Gallons/square foot of membrane/day]  
 . 가 가  
 . 180  
 .  
 .  
 .  
 가 .  
 가 . 가 (single  
 pass) .

(1000psi)

(11.4ft/sec) . 가 (200psi)

가 .

.

.

가

(cartridge) .

가 .

가

.

(3~4) 1

.

.

(Zirconium oxide)

가

(1000psi)

(212 )

. Carre .

.

.

가 , , , .

가

가 , , .

1 1% 가 GFD .  
1% 가 가 . CMS-  
WS PVA 가  
(3.2~11.4ft/sec)가 가 .  
(1% ) (1000psi) (11.4ft/sec)

. 2 3%  
PVA CMC-WS . CMS-WS

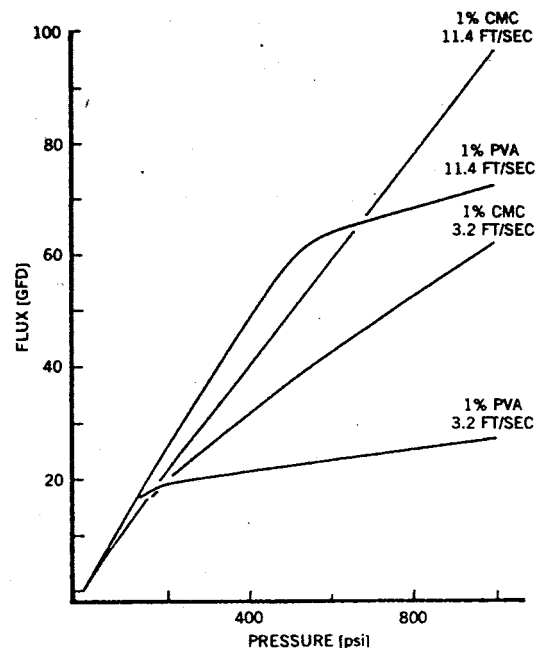
1 96GFD 2 39GFD  
. 1% 3% 가 가

.  
6% 16GFD .  
CMS-WS .

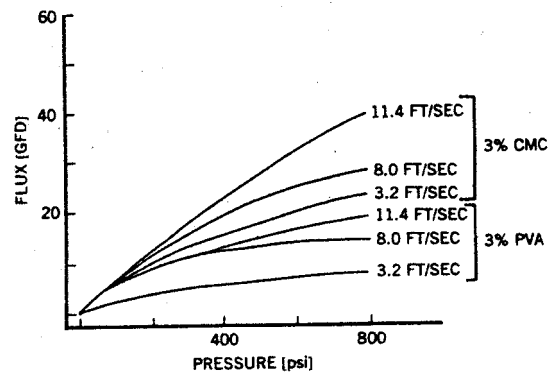
PVA 가  
.

가 ,  
. 180 .

가 .



< 1> 1% 가 :



< 2> 3% 가 :

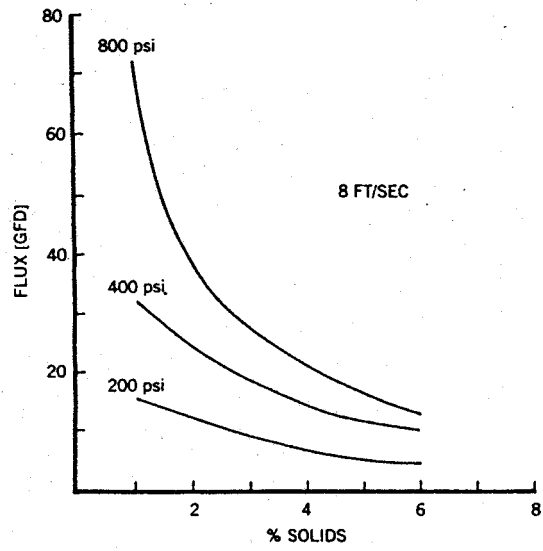
CMS-WS 가

가 3 4 .

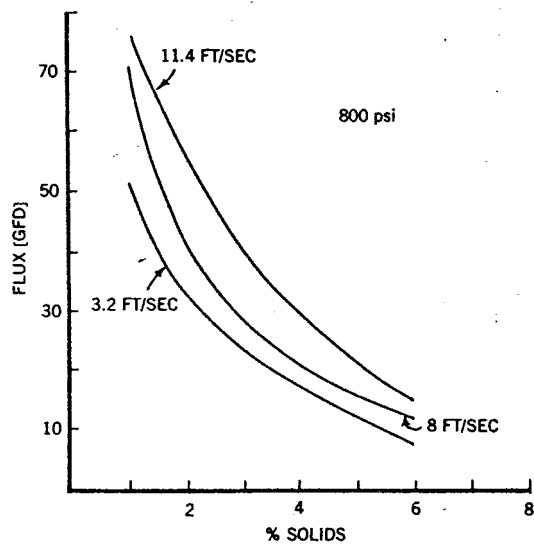
가

가

가 .



< 3> CMC :



< 4> CMC :

PVA 5 6 , ,

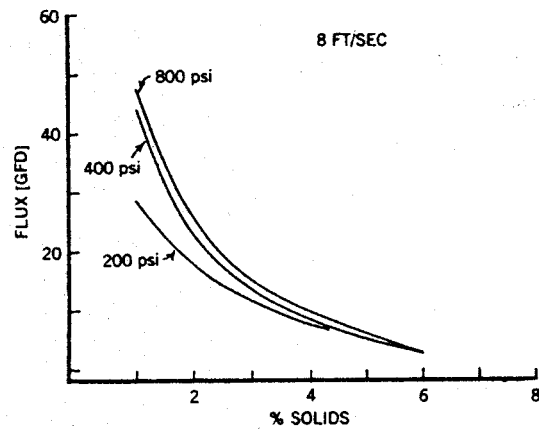
가

CMC-WS PVA . 7 8 ( , ,

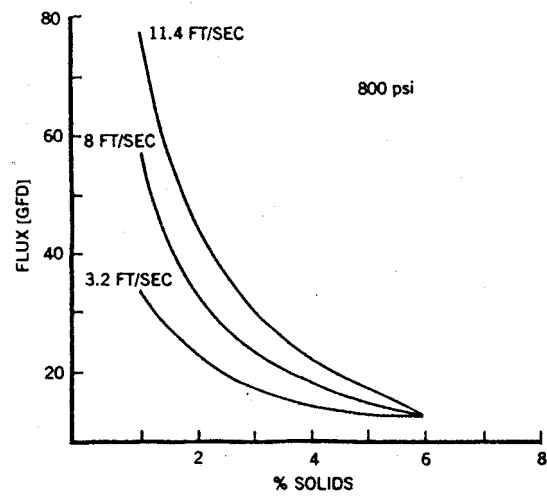
, ) CMC PVA .

CMC-WS

PVA



< 5> PVA :



< 6> PVA :

CMC-WS

. CMC-WS PVA

가 .

CMC-WS

PVA

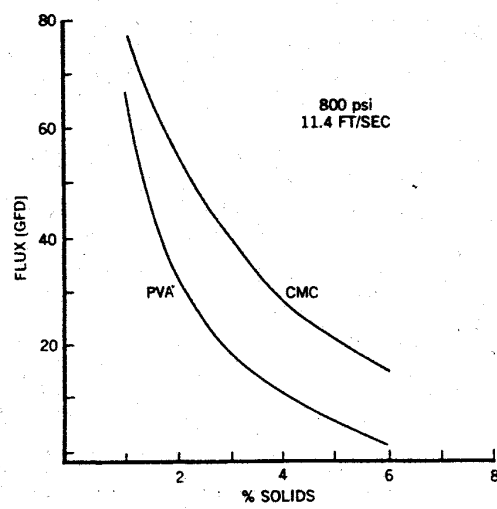
PVA

CMC-WS

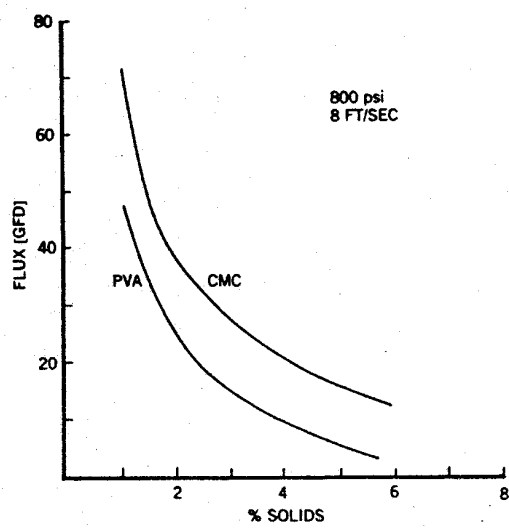
CMC-WS

CMC-WS

PVA



< 7> CMC PVA :



< 8> CMC PVA :

$37.5\text{ft}^2$  .

9 Abcor CMC-WS PVA .

가 180 가 153 .

70psi .

가 .

9 , CMC-WS 1% 65GFD

4% 12GFD . CMC-WS PVA

4% .

가 가

가 CMC-WS . 가 가

가 70psi

. 가 .

가

. Romicon 가 .

45mil

. 가

(shell) . 25psi .

가

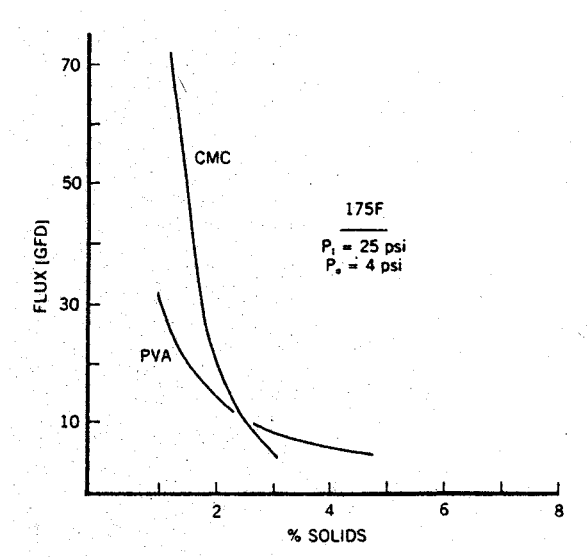
가 10 .

. CMC-WS 1% 63.5GFD

3% 3.3GFD . PVA 1%

30GFD 5% 5GFD . CMC-

WS 가 .



< 10>

Gaston County Dyeing machine

(Zirconium Oxide)

1/4 "

1000

150psi

200gal

30

( 7.8ft<sup>2</sup>)

11

CMC-WS

PVA

2~2.5

가

100

lb

CMC-WS

4

. PVA 100 7

. CMC-WS

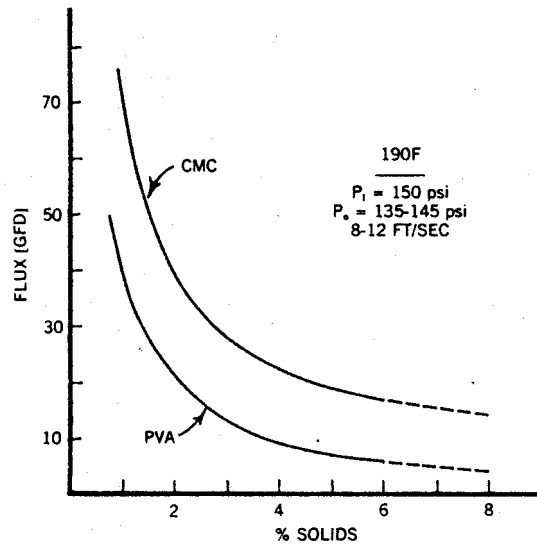
43%가 . CMC-WS

200gal 가

25

. 100 CMC-WS PVA 가

31%가 .



< 11>

CMC-WS

CMC-WS

(180 ) 가 3

. CMC-WS 6% 180 3

가 21

625cp 21 221cp .

21

, , 가 .

CMC-WS가 .

CMC-WS가

가 .

. CMC-WS

. CMC-WS 가

CMC-WS .

1% CMC-WS 가 .

. , , 가

,  
가 .

<Ultrafiltration Study ; CMC warp sizing VS. Polyvinyl Alcohol, TCC 4/80 >