About this document

This document contains screenshots of software available from Cheresources.com. You can find this title in our online store at:

http://www.cheresources.com/cheplusstore/catalogue.php

Clicking the above link should activate your default browser and launch the site.

We recommend using our search feature to find the title.

If you haven't visited our site before, you can find the main page at:

http://www.cheresources.com

Thanks for visiting our site,

Chris Haslego
President
Cheresources, Inc.

1422 Goswick Ridge Road
Midlothian VA 23114

Fax: 561-658-6489
Email: support@cheresources.com

Content Based
Chemical Engineering

PAPER STOCK FLOW THRU SLICE (HEADBOX), find flow

REFERENCES: Fluid Mechanics Committee of the Engineering Division - TAPPI; "Fan Pump Calculations", TIS 0410-01; "Flow from a nozzle (slice) with inclined upper lip," - TIS 0410-04; "Flow from a vertical slice," - TIS 0410-02; "Flow from a 45 degree," - TIS 0410-03; "Head of stock behind slice (Head/jet relationships)," - TIS 0410-05

NOTE: Always begin a new case by retrieving the original file. Direct entry of data in cells that originally contain table lookups could cause functions to be lost, or incorrect calculations. I format cells requiring entry colored **RED**; calculated values are black.

1.) Enter the service at [C4].
2.) Enter the motive pressure either fan pump or padding/hydraulic head at [C8].
3.) Enter the slice height at [F8].
4.) Enter the slice width at [F9].

The "jet velocity" in feet per minute (imperial) or meter per minute (metric) is calculated and shown at [C9]. The unit conversion constant of 0.05195 (imperial) or 1.67E-08 (metric) is given at [C10].

The FLOW in GPM (imperial) or M^3/sec (metric) is calculated and shown at [E13].

Print out using direct EXCEL commands.

dmcoffman@aol.com

04/24/04

Paper Stock Flow Thru Slice, Find Flow

HEAD BOX: # 5 Paper Machine

· STOCK DATA ·			**· SLICE DATA ·**		
P_1 =	12.00	psig	h =	0.100	height of opening, in
V_1 =	2532	ft/min	w =	130.000	width of opening, in
K_1 =	0.05195	unit conv.	A =	13.000	in^2

$Q = h * w * V_1 * K_1$ = 1,710 gpm

04/24/04

Paper Stock Flow Thru Slice, Find Flow

HEAD BOX: # 5 Paper Machine

· STOCK DATA ·			**· SLICE DATA ·**		
P_1 =	82.737088	kPa	h =	2.540	height of opening, mm
V_1 =	772	meter/min	w =	3302.000	width of opening, mm
K_1 =	1.67E-08	unit conv.	A =	8387.080	mm^2

$$Q = h * w * V_1 * K_1 = 0.107884 \ m^3/sec$$