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

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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,

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***Content Based
Chemical Engineering***

FLASH - % condensate flashed at lower pressure
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BASIS: Enthalpy balance from the initial saturated condensate to the combined flash steam and remaining condensate.

REFERENCES: PERRY'S CHEMICAL ENGINEERS HANDBOOK

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.

H = Enthalpy	1 = Initial conditions
f = saturated liquid	2 = Final conditions
g = saturated gas	

- 1.) Enter identification at [C4].
- 2.) Enter the initial condensate pressure at [D5].
- 3.) Enter the flashing pressure at [D6].

The percent flash steam is calculated and shown at [D18].

Print out using direct Excel commands. This application is provided by Chemical Engineers Resource Website, via cheresources.com for additional selections.

Print out using direct EXCEL commands.

<<<<<<<< Psafety © January 2001, by Don Coffman >>>>>>>>

The originator of these spreadsheet(s) specifically excludes all warranties, expressed or implied, as to the accuracy of the data and other information set forth and assumes NO liability for any losses or damage resulting from the use of the materials or application of the data.

Consistent with GOOD ENGINEERING PRACTICE, the burden rests with the USER of these spreadsheets to review ALL calculations, and assumptions. The USER IS FULLY RESPONSIBLE for the results or decisions based on calculations.

This Spreadsheet Requires MACROS to be ENABLED to ASSURE proper operation. See the Workbook Help Sheet for Additional Instructions on Use.

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FLASH - % condensate flashed at lower pressure
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SERVICE: 15# CONDENSATE TO ATMOS. FLASH TANK, HAZ.#5

$$P_1 = 150 \text{ psig}$$

$$P_2 = 0 \text{ psig}$$

$$x = \frac{H_{g2} - H_{f1}}{H_{g2} - H_{f2}} \text{ liquid fraction}$$

$$= \frac{(1150.5 - 338.6)}{(1150.5 - 180.2)}$$

$$= 83.7\% \text{ liquid}$$

$$(1-x) = 16.3\% \text{ flash steam}$$

FLASH - % condensate flashed at lower pressure
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SERVICE: 15# CONDENSATE TO ATMOS. FLASH TANK, HAZ.#5

$$P_1 = 10.3421 \text{ bar ga}$$

$$P_2 = 0 \text{ bar ga}$$

$$x = \frac{H_{g2} - H_{f1}}{H_{g2} - H_{f2}} \text{ liquid fraction}$$

$$= \frac{(2675.5 - 787.2)}{(2675.5 - 417.5)}$$

$$= 83.6\% \text{ liquid}$$

$$(1-x) = 16.4\% \text{ flash steam}$$