

**From:** "Wayne Miller" <miller99@llnl.gov>  
**To:** "Griffiths, Stewart" <skgriff@sandia.gov>, "Ratzel, "Arthur C" <acratze@sandia.gov>, "Dykhuizen, "Ronald C" <redykhu@sandia.gov>, "Ammerman, "Curt N. \LANL\" <ammerman@lanl.gov>, havstad1@llnl.gov  
**Cc:** "P. Derek Wapman" <wapman1@llnl.gov>  
**Bcc:**  
**Date:** 07/13/10 01:10:34 pm  
**Subject:** Multiphase choke models  
**Attachments:** Evaluation of multi#5510CA5.pdf

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Thanks for the reference on the Perkins model for multiphase choke flow. I am attaching a different article that compares several multiphase choke models, including Perkins. They describe several standard correction factors, called two-phase multipliers, for single phase Cv data that appear to work well compared to experiment (see Fig. 11, and Conclusions). I'll try to code them up for comparison using our valve. The more complex models, Perkins, Hydro, etc., would require significant software time to implement and may not be worth it from the error measurements.

Wayne

At 10:11 AM -0600 7/13/10, Griffiths, Stewart wrote:

Attached is an old paper addressing the issue of two-phase flows through a choke under both critical (sonic) and subcritical conditions. Contains fairly simple and perhaps useful correlations.

Stewart

Wayne O. Miller  
Thermal Fluids Group Leader  
Associate Program Leader for Renewable Energy  
Lawrence Livermore National Laboratory  
7000 East Ave., L-140  
Livermore, CA 94551  
(925) 424-4472

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