

SECTION A: ERROR DETAILS

Bugzilla Error Number	BUG4565		
Description of Error: Temperature and quality and quality only boundary conditions are not applied correctly during transient events. This leads to incorrect enthalpies being applied on these nodes when selecting the non-iterative transient solver with both pure two-phase fluids as well as mixtures of a two-phase fluid with non-condensable gas(es). When selecting the iterative transient solver with a two-phase and non-condensable mixture, convergence of the energy solution is not obtained. The case for a pure two-phase fluid works correctly with this solver selection.			
Comments: The specific combinations of boundary conditions are not applied correctly. The quality was ignored in both cases.			
First Incorrect Version:	8.0.11	Corrected Version:	8.15.0.5062

SECTION B: WORKAROUND

Workaround Description: Specify a pressure and quality boundary condition instead. For Azeotropic two phase fluid, the relation between temperature and pressure is unambiguous; thus, a 100% equivalent boundary condition can be established using a pressure instead of a temperature in conjunction with a quality as a two-phase boundary condition.
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SECTION C: SIGNOFF

Person Responsible for Fix:		
Bennie du Toit		2023/07/11
Name	Signature	Date
Person Responsible for Review:		
Eugene van Heerden		2023/07/26
Name	Signature	Date