

## APPARATUS AND METHOD FOR GAS-LIQUID SEPARATION

### Abstract

A multi-phase separation apparatus is provided that shapes the flow in a flow shaping  
5 line having a plurality of loops with consecutively decreasing diameter. Centrifugal force  
drives the heavier, denser liquid of a two-phase flow to the outside wall of the flow shaping  
line and allows the lighter, less dense vapor or gas to occupy the inner wall of the flow  
shaping line. With the gas positioned on the inner wall of the flow shaping line, an exit port  
10 on the inner wall will allow the majority of the gas, along with a low amount of liquid, to be  
sent to a conventional separator. The remaining liquid is subsequently introduced into an  
adjustable phase splitter to separate different liquid components from one another.

[Fig. 2]