Assignment

1. Consider a Linde – Hampson cycle with Nitrogen as working fluid. The system is operated between 1.013 bar (1 atm) and 101.3 bar (100 atm) at 300 K. Determine

   1. Liquid yield
   2. Work per unit mass compressed
   3. Work for unit mass liquefied.

2. Calculate the above parameters if the same cycle is operated with air as working fluid.

Assignment

3. Determine the liquid yield for a Linde – Hampson cycle with Nitrogen as working fluid for the following operating conditions. Comment on the results.

	Point 1	Point 2
I	250 K, 1 bar	250 K, 50 bar
II	300 K, 1 bar	300 K, 200 bar

Verify your answers from the yield versus temperature chart for Nitrogen.