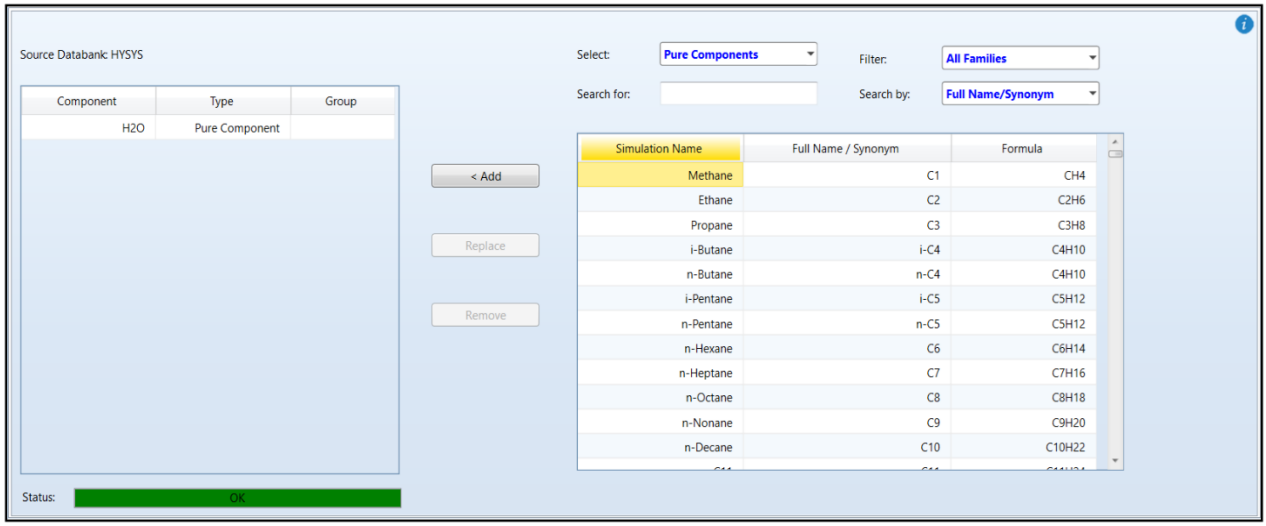
Line Simulation

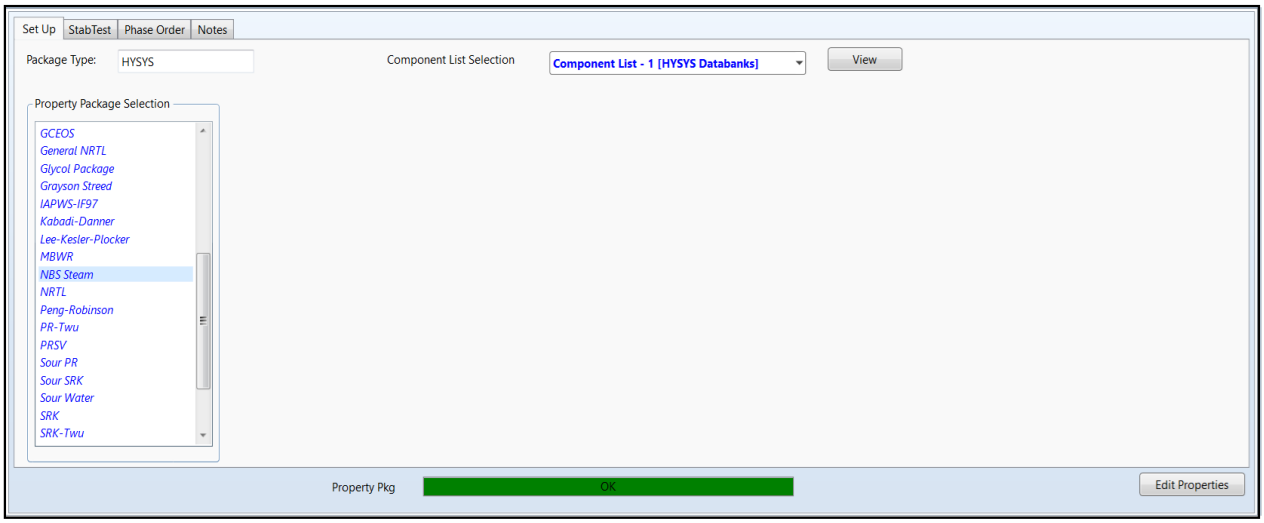
Example: 20000 kg/hr. process water at the outlet of a pump with operating pressure of 10 barg and operating temperature of 38C passes through a 500-meter mild-steel pipe to go to another unit. What is the pressure of water at the pipe outlet? The line size is 4”.

How to simulate:

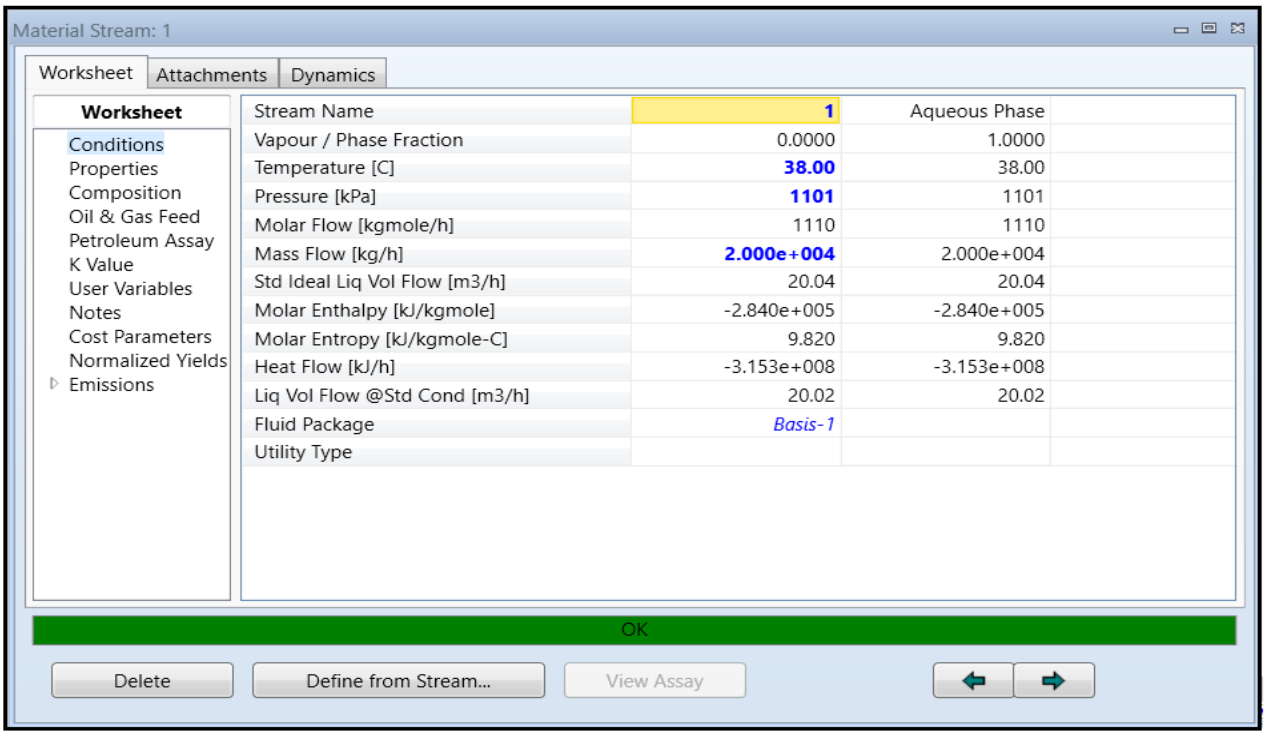
1.Add water to component list:

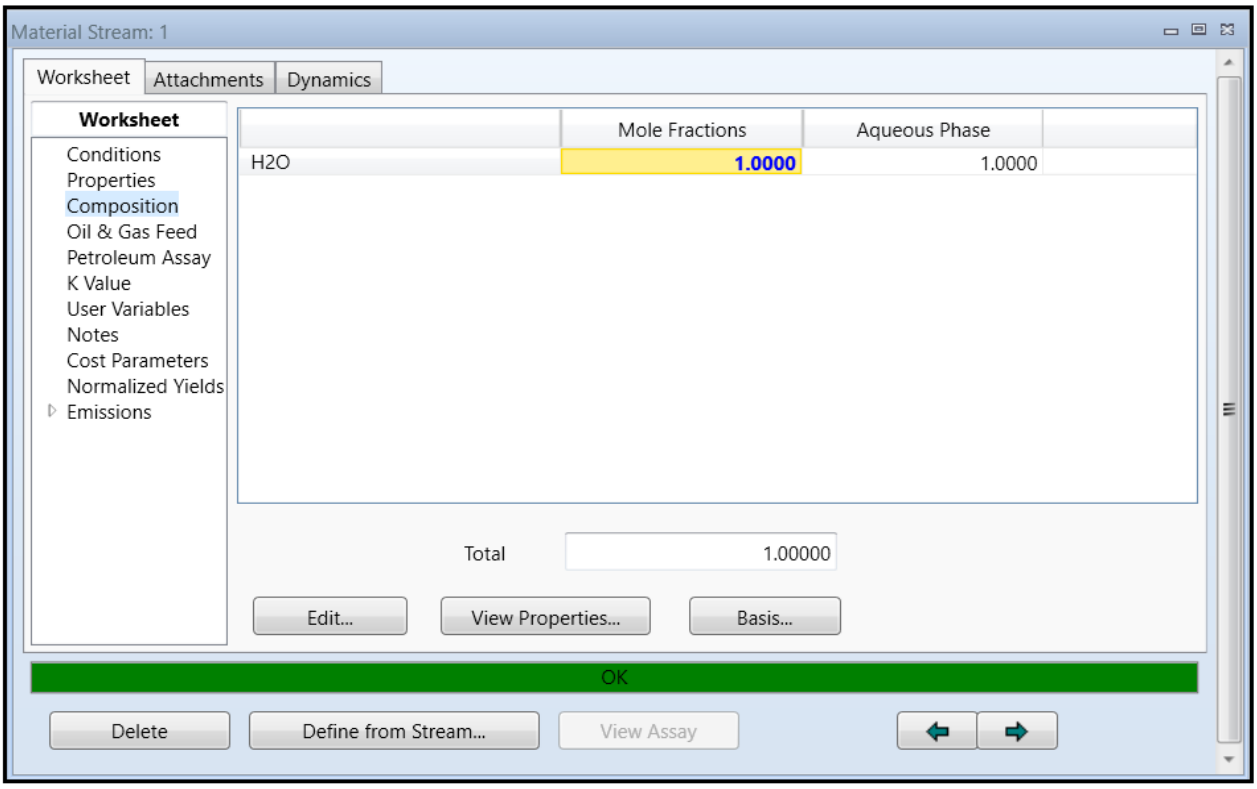


2.Select NBS steam as the Fluid Package.

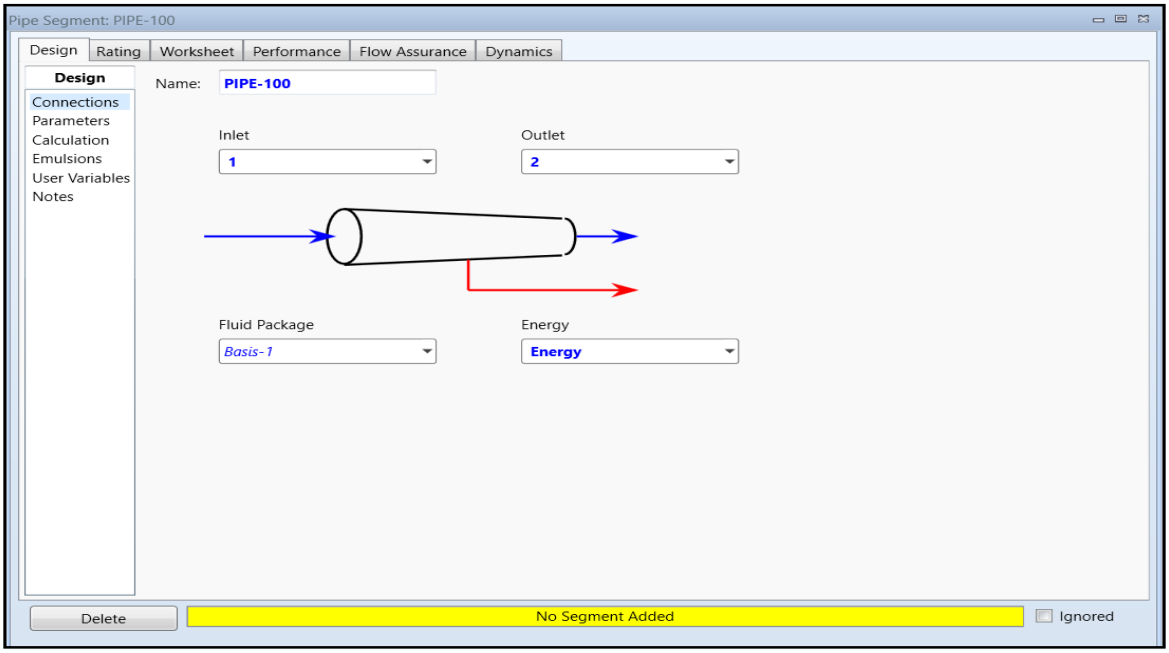


3.Enter Simulation Environment and define stream 1 like below:

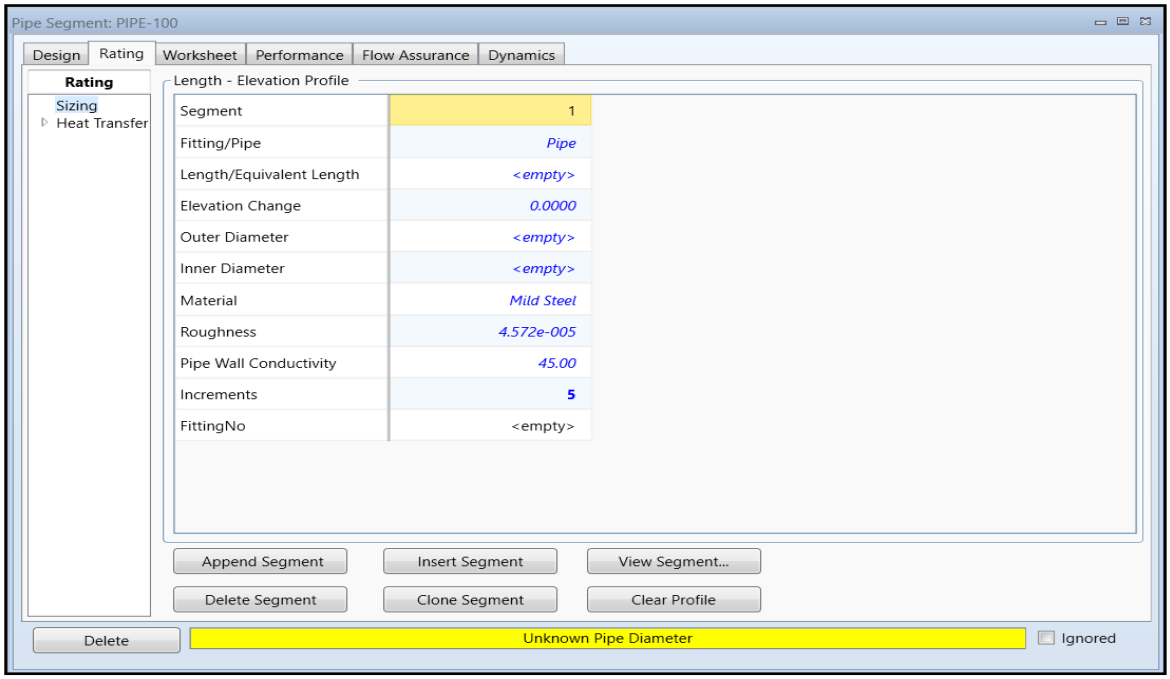




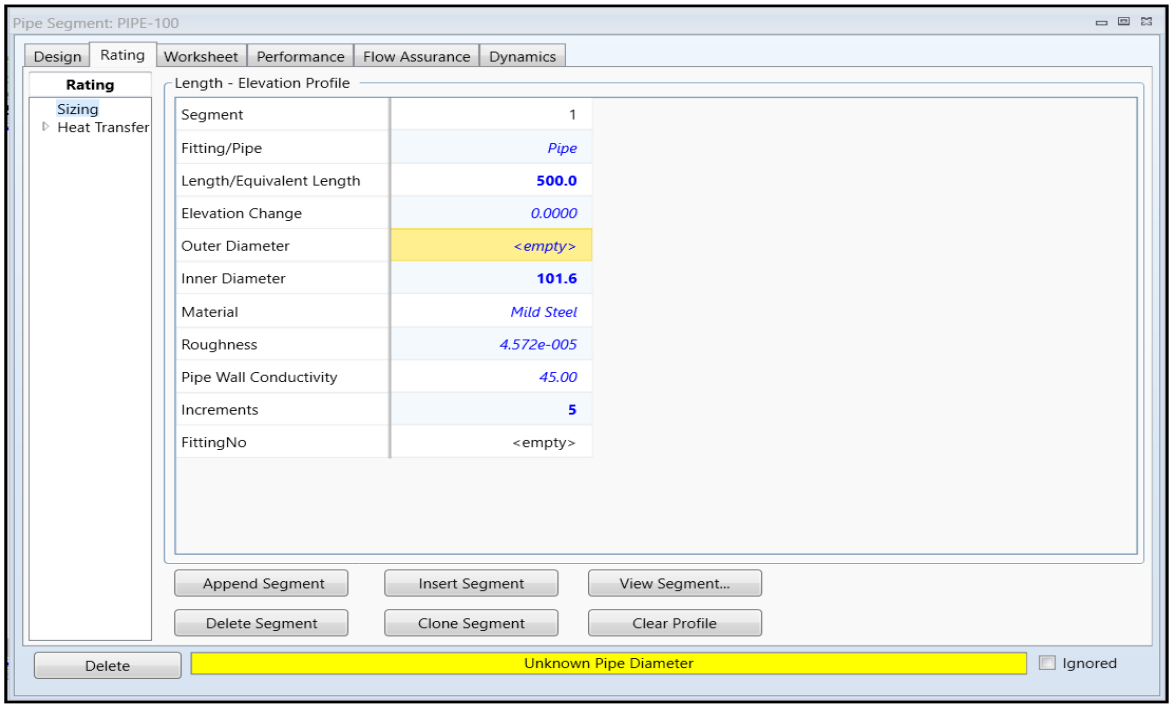
4.Add a Pipe Segment to the flowsheet from Model Pallete/ Hydraulic and Piping. On the first sheet, connect stream 1 to the inlet and define stream 2.



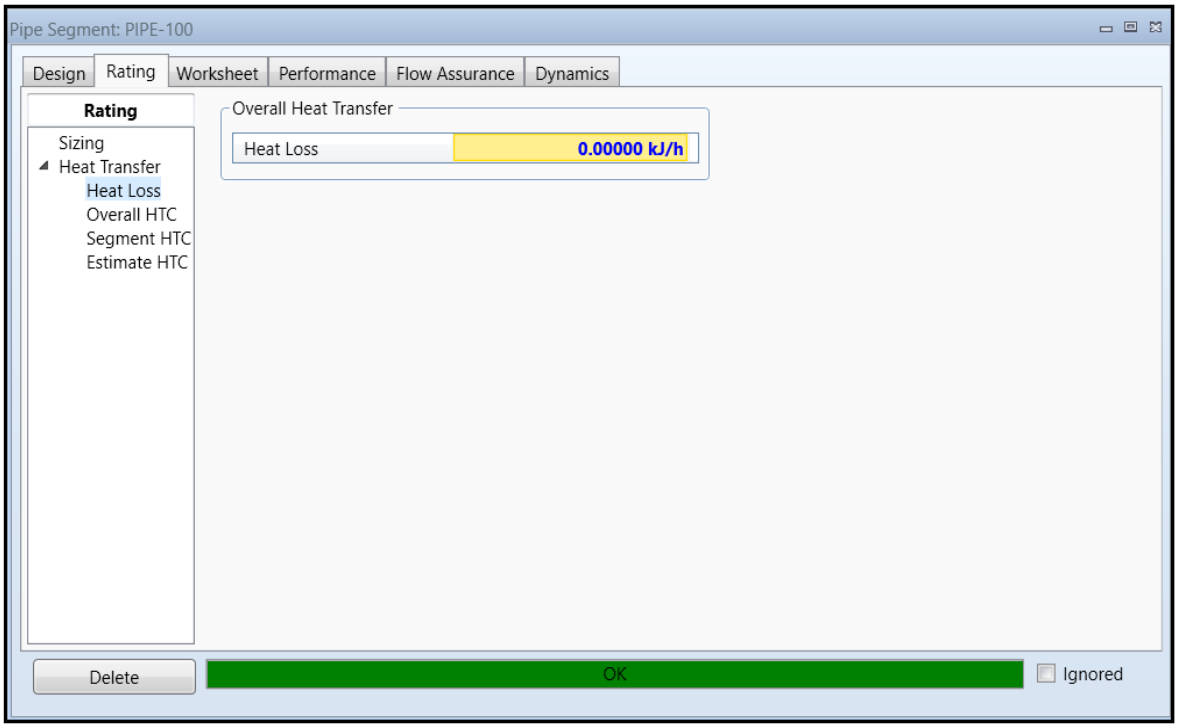
5. Under Rating/Sizing, add segment.



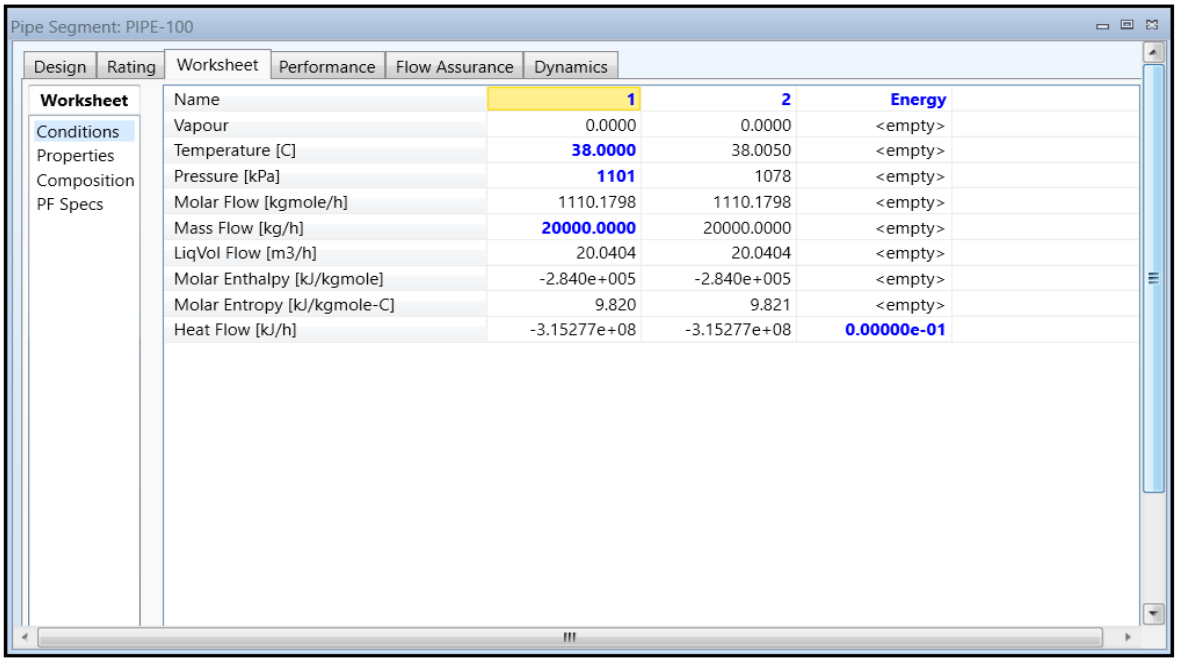
6.Provide the info like below:



7.Assume the heat loss to be zero:



8.Results



It sounds we have had 23 kPa pressure drop over the pipe.