



**CHEMWORK Collection**  
**Software Package**  
**Ver. 2.1**

<b>PROJECT :</b>	AAA	<b>CLIENT P. NO.:</b>	DDD
<b>PROJ. NO.:</b>	CCC	<b>REV. No. :</b>	GGG
<b>CLIENT :</b>	BBB	<b>DOC. NO.:</b>	EEE
<b>UNIT :</b>	JJJ	<b>BY :</b>	FFF
<b>DATE :</b>	05/01/2010 12:08		

**General Data:**

Line No.	HHH
P & ID No.	III
From/To	KKK
Service	Two Phase

**Process Data:**

Liquid Flow Rate	12500	kg/hr
Vapor Flow Rate	1800	kg/hr
Liquid Density	850	kg/m3
Vapor Density	15	kg/m3
Liquid Viscosity	0.8	Cp
Vapor Viscosity	0.01	Cp
Liquid Surface Tension	5	dyn/cm

**Line Specifications:**

	<u>Trial 1</u>	<u>Trial 2</u>	<u>Trial 3</u>	
Pipe Length	100	100	100	m
Internal Diameter Size	52.5	62.7	77.9	mm
Pipe Roughness	0.0018	0.0018	0.0018	in

**Calculation Results :**

Liquid Superficial Velocity	1.880	1.320	0.860	m/sec
Vapor Superficial Velocity	15.380	10.780	6.980	m/sec
Liquid Superficial Reynold	1.05E+05	8.81E+04	7.09E+04	----
Vapor Superficial Reynold	1.21E+06	1.02E+06	8.17E+05	----
Mixture Density	106.16	106.16	106.16	kg/m3
Baker X Parameter	341.71	341.71	341.71	----
Baker Y Parameter	52122.01	36530.86	23658.73	----
Flow Pattern	Bubble	Bubble	Bubble	----
Pressure Drop ( $\Delta P$ )	7.77900	3.39100	1.24000	bar

**Limit Values:**

Pressure Drop ( $\Delta P$ )	bar/100 m
Mixture Velocity	m/sec

**Notes:**

C:\program files\chemwork\Worksheetline WS\Two Phase WS.xls\Sheet1