


<b>PROJECT :</b>			<b>DATE :</b>	
<b>PROJ. NO. :</b>			<b>BY :</b>	S.R. M.
<b>CLIENT :</b>			<b>REV :</b>	
<b>UNIT :</b>			<b>DOC NO.:</b>	

### PLATE PACK SIZING

Stream Input Data	Unit	Heavy Phase	Light Phase
Mass Flowrate	kg/h	1145	19085.00
Density	kg/m <sup>3</sup>	984.70	820.60
Dynamic Viscosity	Cp	0.70	4.34
heavy Phase Droplet to be separated	microns	100	
light phase Droplet to be separated	microns	100	

Plate Pack Input Data			
Plate Distance	$d_{PP}$	mm	15
Plate Thickness	$t_{PP}$	mm	1
Corr. Fac. for construction	$F_{loss}$	---	0.90
Corr. Fac. for lost area	$F_{PP}$	---	0.80
Plates angle with horizontal plane	$\theta$	deg.	45
Critical Reynolds Number	Re	---	850

Plate Pack Sizing			
Hydraulic Diameter	$d_H$	m	0.030
Light Phase Frontal Req Area	$A_{F,L}$	m <sup>2</sup>	0.043
Heavy Phase Frontal Req Area	$A_{F,H}$	m <sup>2</sup>	0.016
Light Phase Frontal Avail. Area		m <sup>2</sup>	0.650
Heavy Phase Frontal Avail. Area		m <sup>2</sup>	0.150
Mean Velocity of the Light Phase	$(V_{PP})_L$	m/sec	0.010
Mean Velocity of the Heavy Phase	$(V_{PP})_H$	m/sec	0.002
Settling Velocity of droplet	$(V_{P,Set})_L$	m/sec	0.000
Settling Velocity of droplet	$(V_{P,Set})_L$	mm/sec	0.206
<b>Length for heavy droplet sep.</b>		<b>m</b>	<b>1.151</b>
Settling Velocity of droplet	$(V_{P,Set})_H$	m/sec	0.001
Settling Velocity of droplet	$(V_{P,Set})_H$	mm/sec	1.269
<b>Length for light droplet sep.</b>		<b>m</b>	<b>0.163</b>
<b>Plate Pack Selected Length</b>		<b>m</b>	<b>1.50</b>

#### Notes