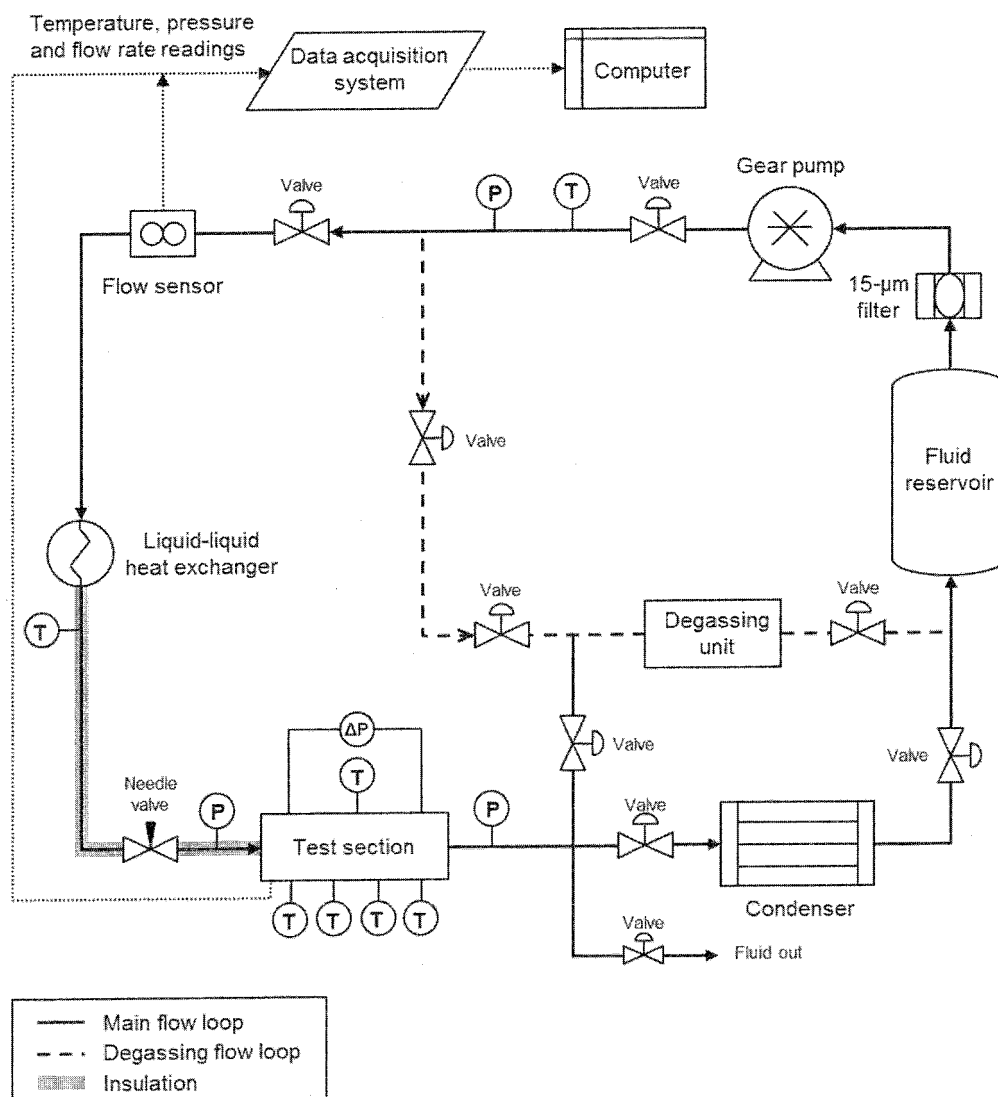
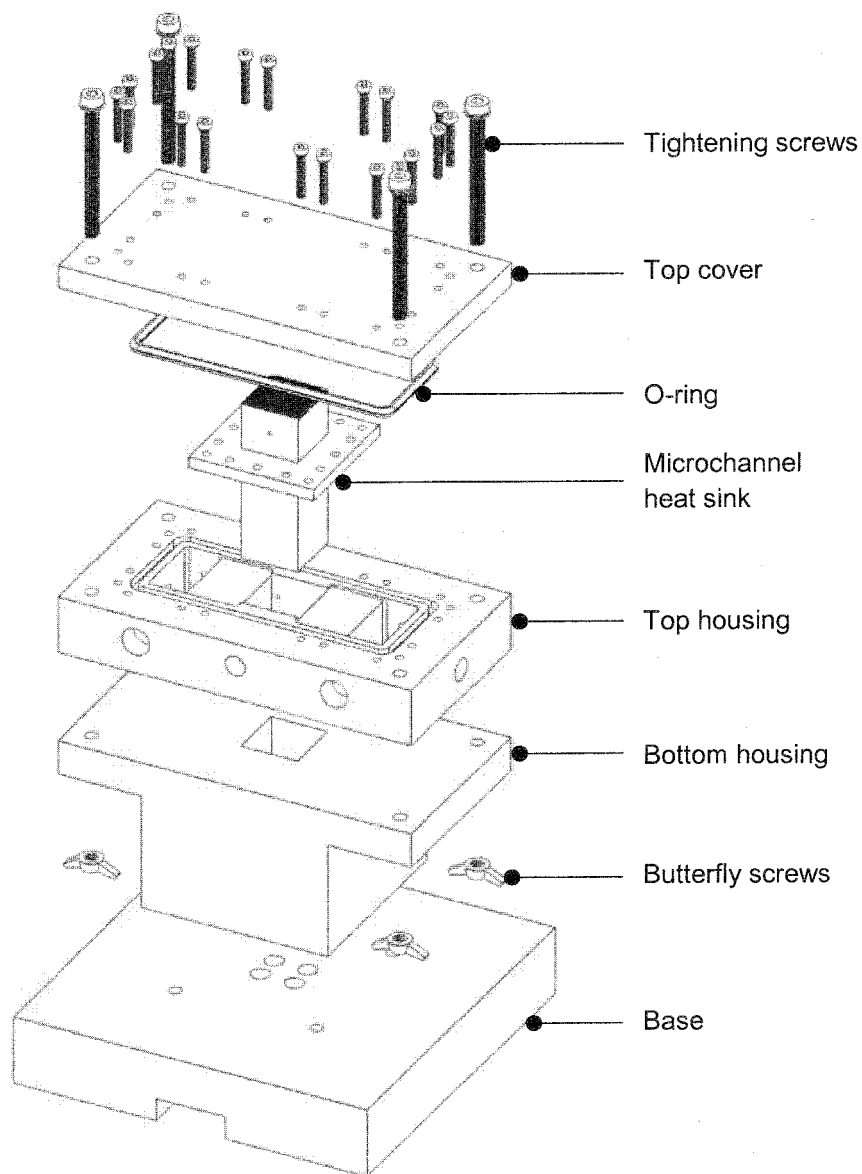
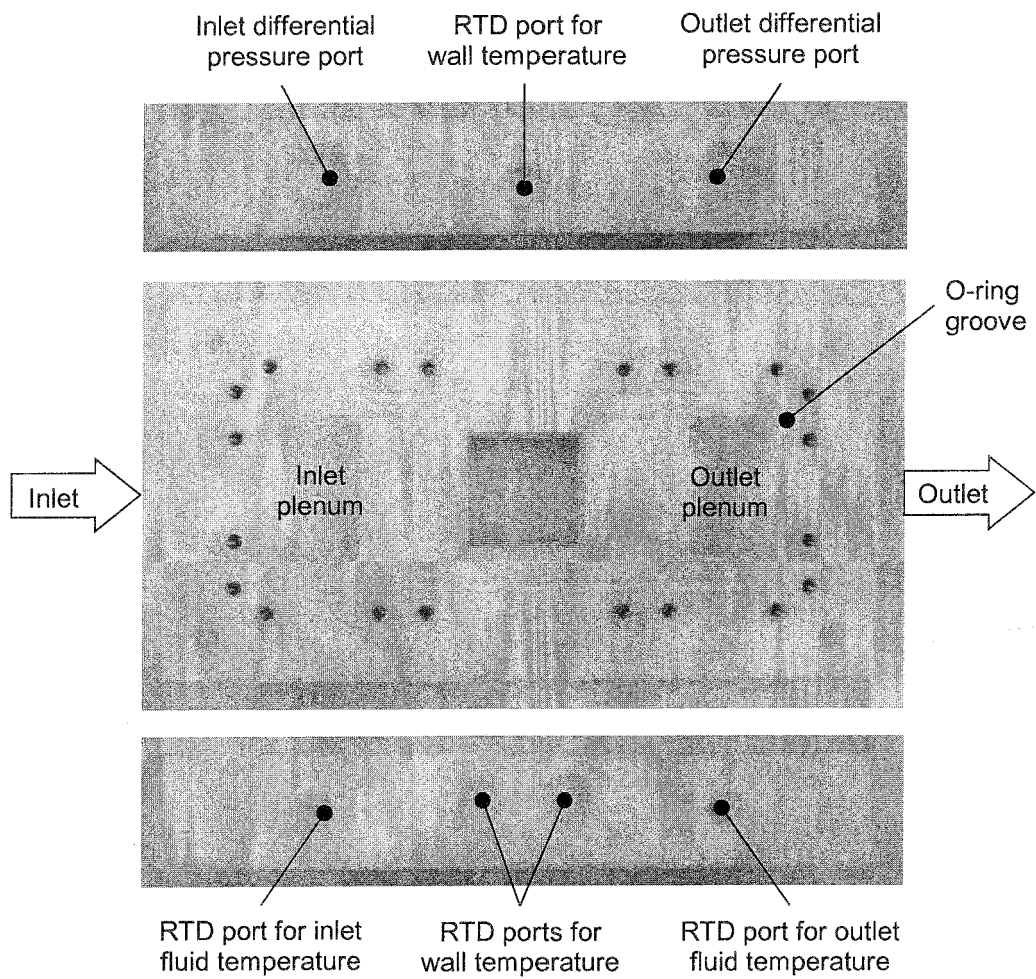


**Figure 1**

**Figure 2**

**Figure 3**

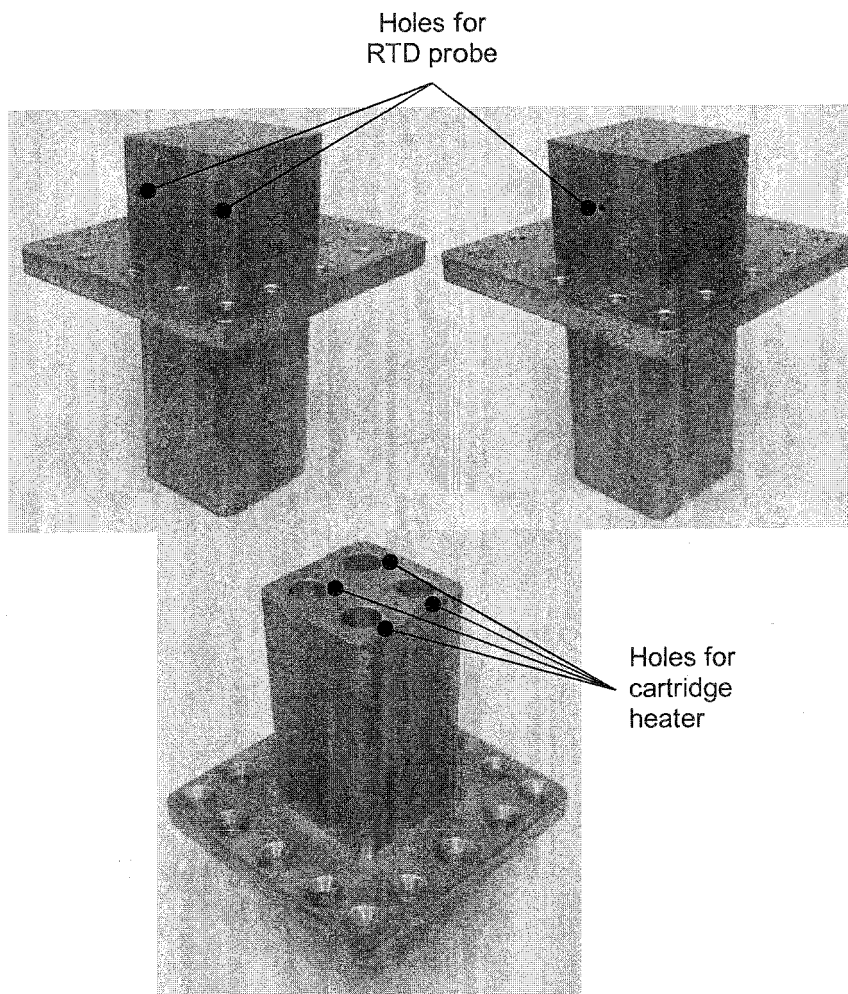


Figure 4

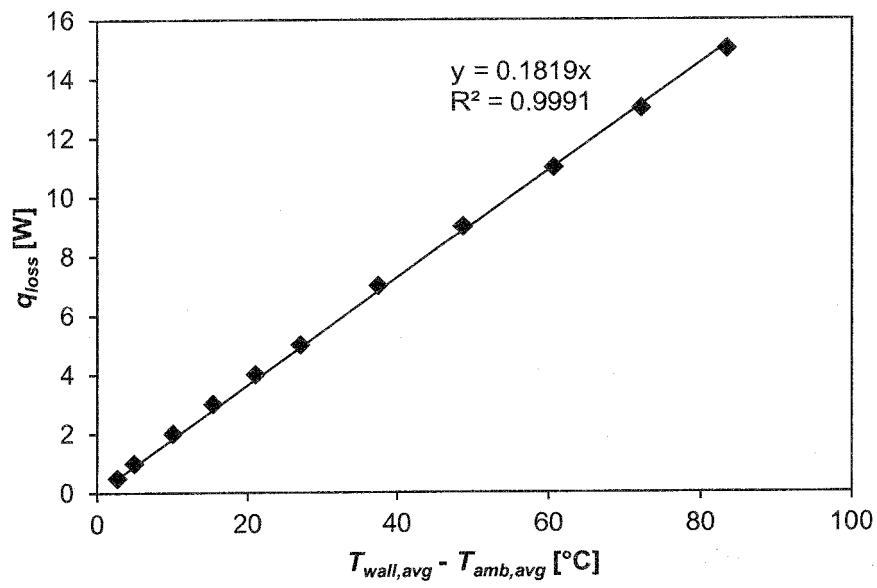


Figure 5

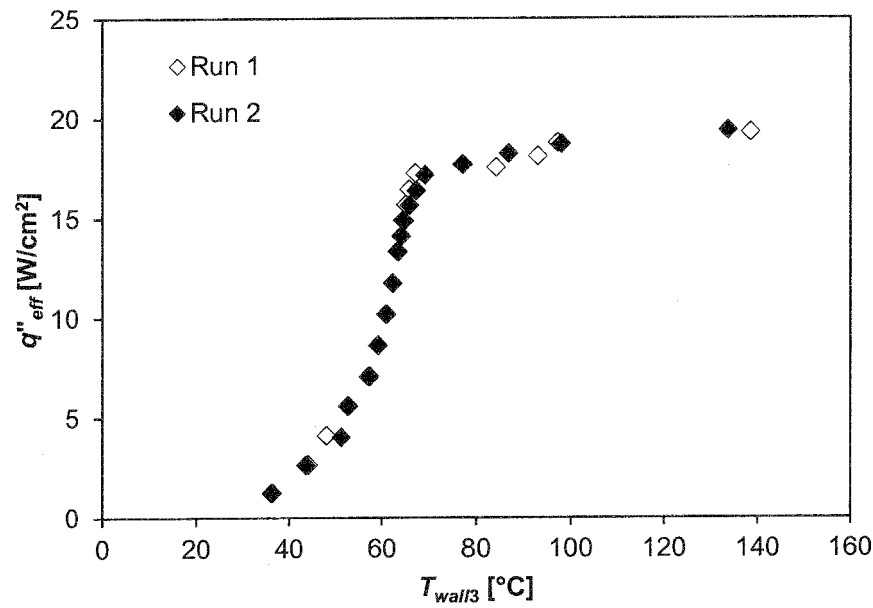


Figure 6

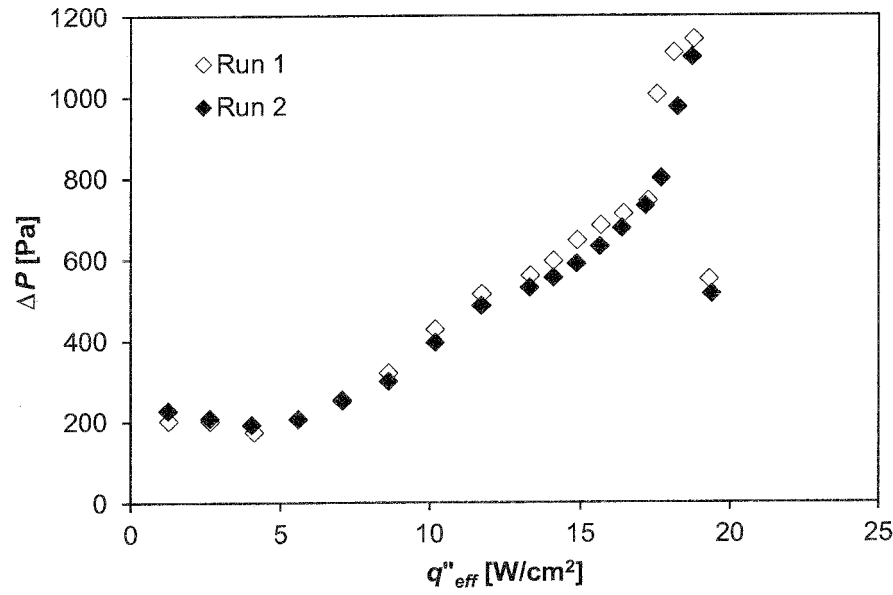


Figure 7

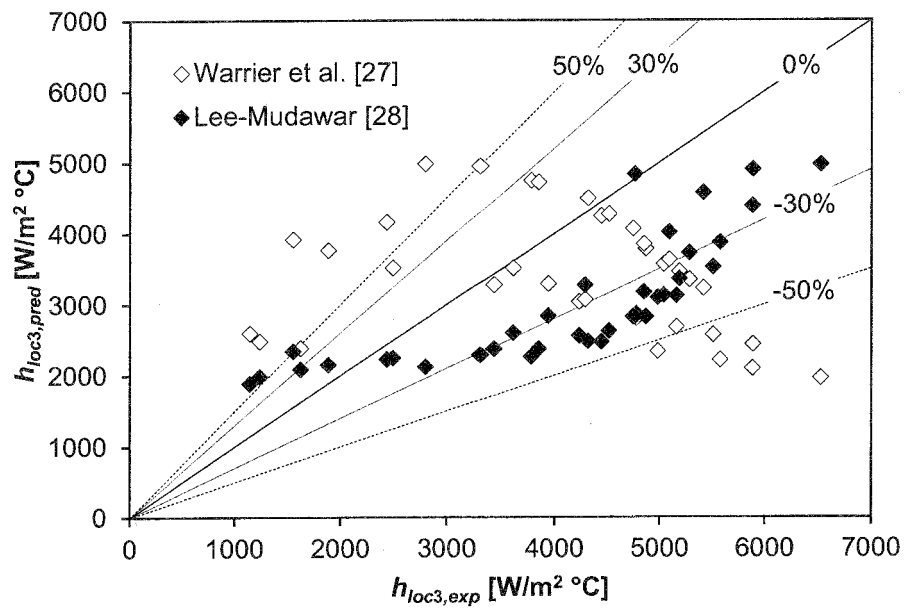


Figure 8

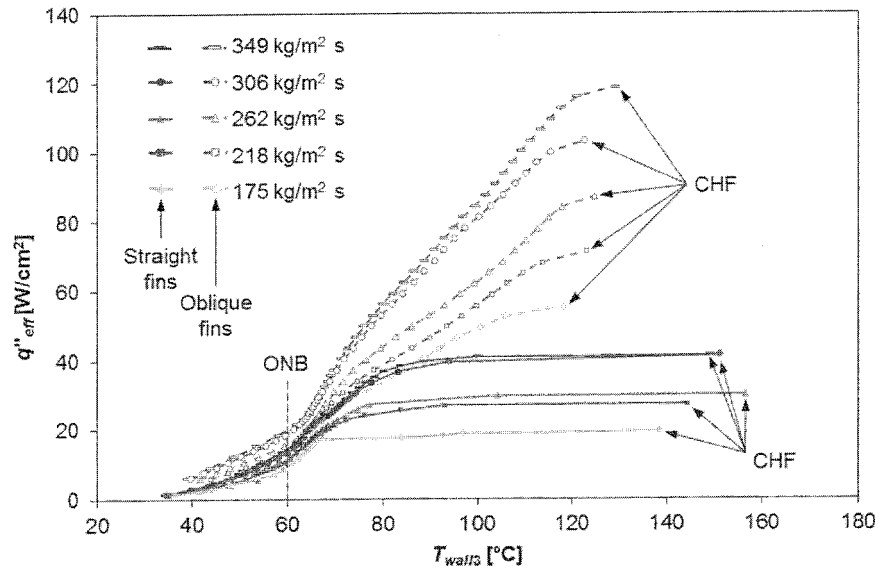


Figure 9

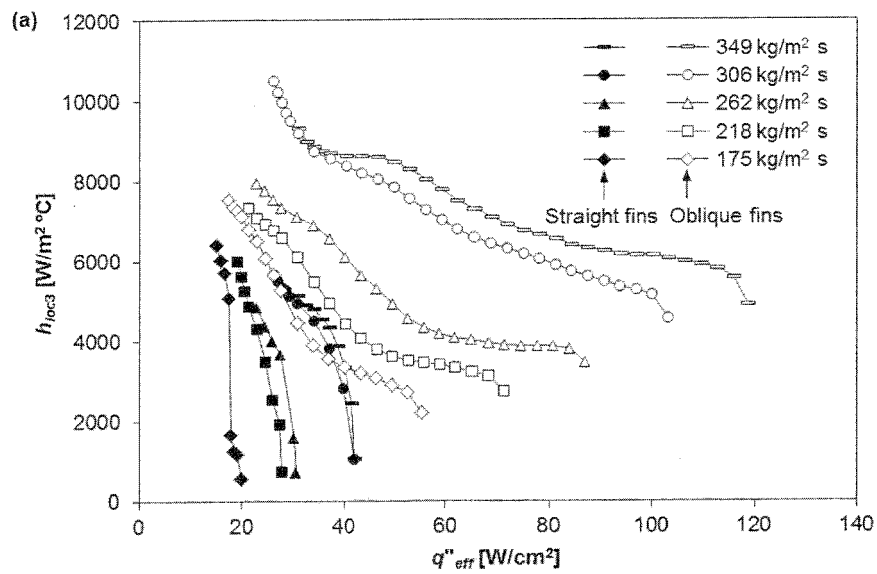


Figure 10 (a)

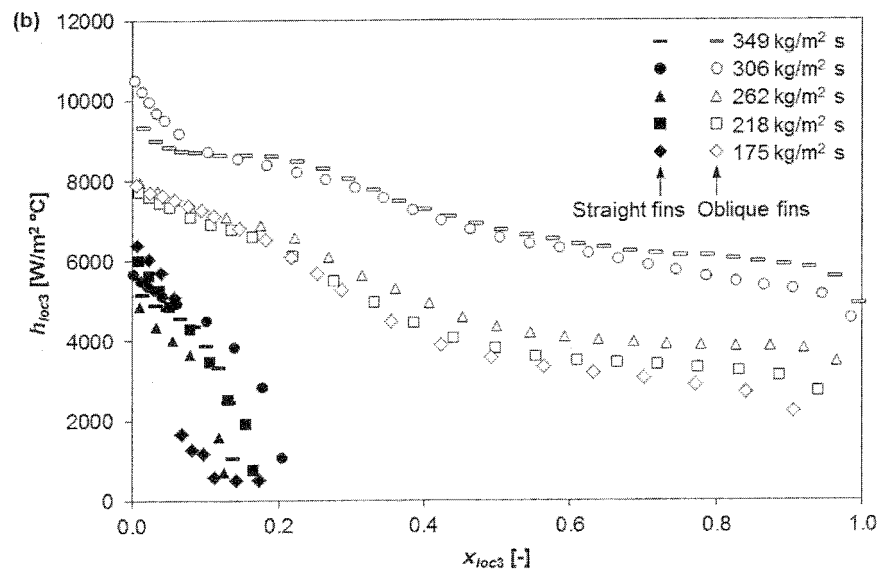


Figure 10 (b)

$G = 306 \text{ kg/m}^2 \text{ s}$, $q''_{eff} = 26.20 \text{ W/cm}^2$
 → Flow direction

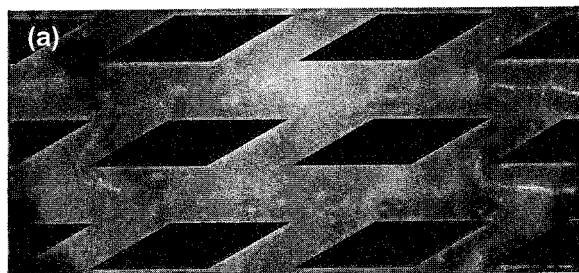


Figure 11 (a)

$G = 306 \text{ kg/m}^2 \text{ s}$, $q''_{eff} = 23.80 \text{ W/cm}^2$
 → Flow direction

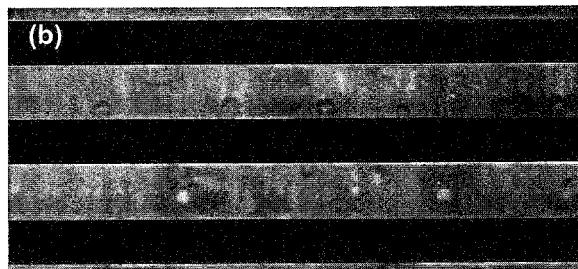
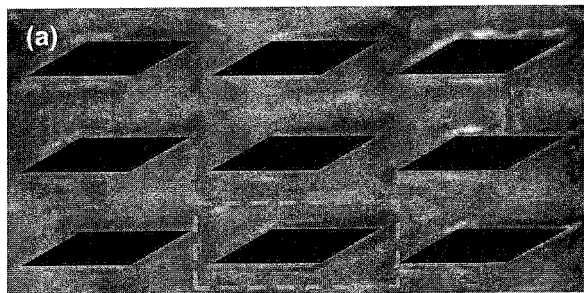


Figure 11 (b)

$G = 175 \text{ kg/m}^2 \text{ s}$, $q''_{eff} = 55.40 \text{ W/cm}^2$
 → Flow direction



$G = 175 \text{ kg/m}^2 \text{ s}$, $q''_{eff} = 19.30 \text{ W/cm}^2$
 → Flow direction

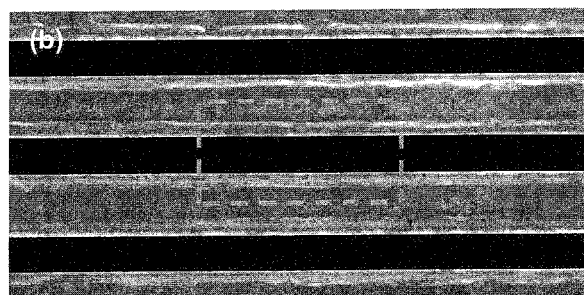
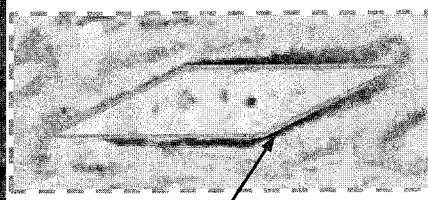
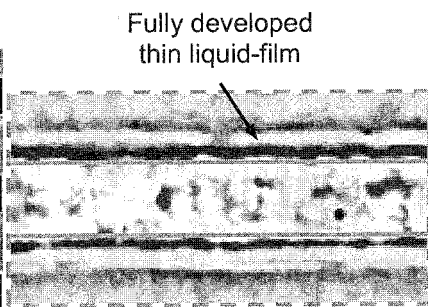


Figure 12 (a)



Developing thin
liquid-film



Fully developed
thin liquid-film

Figure 12 (b)

11/20

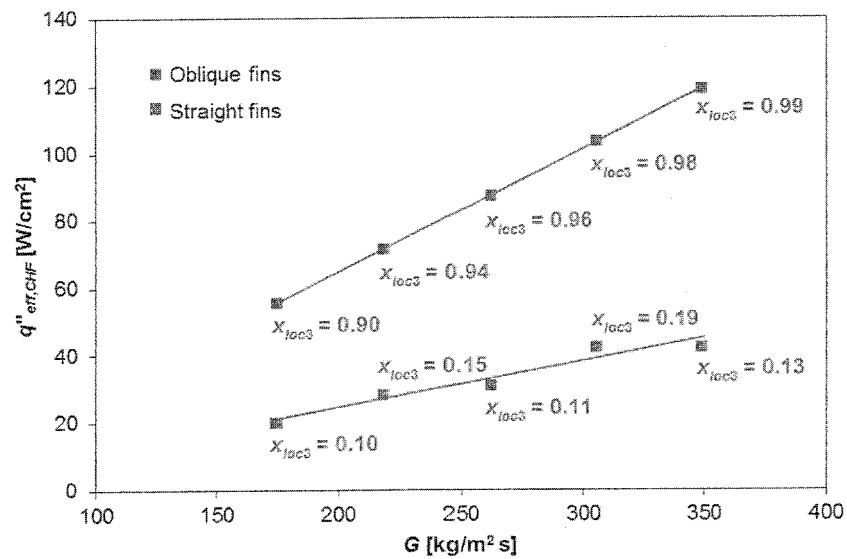


Figure 13

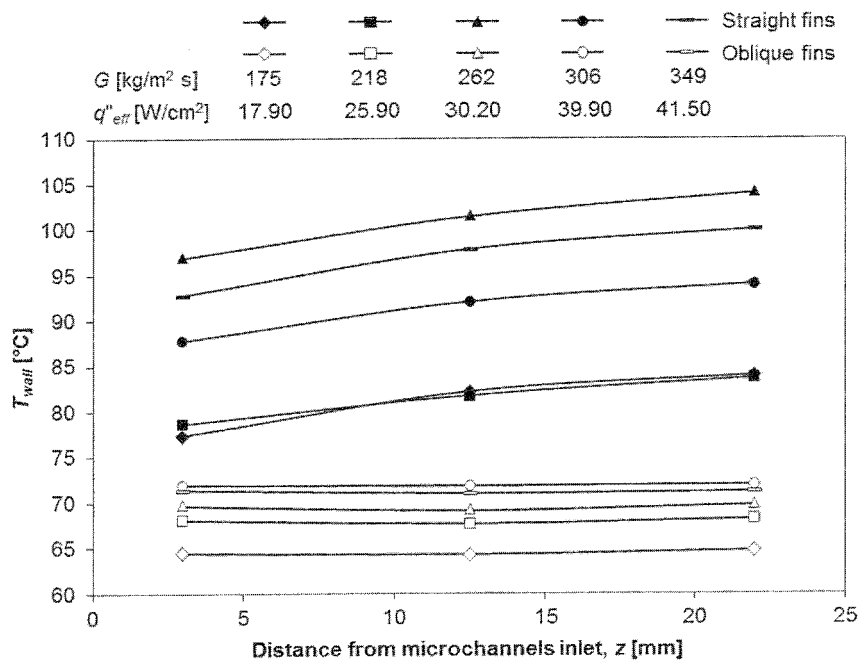


Figure 14

12/20

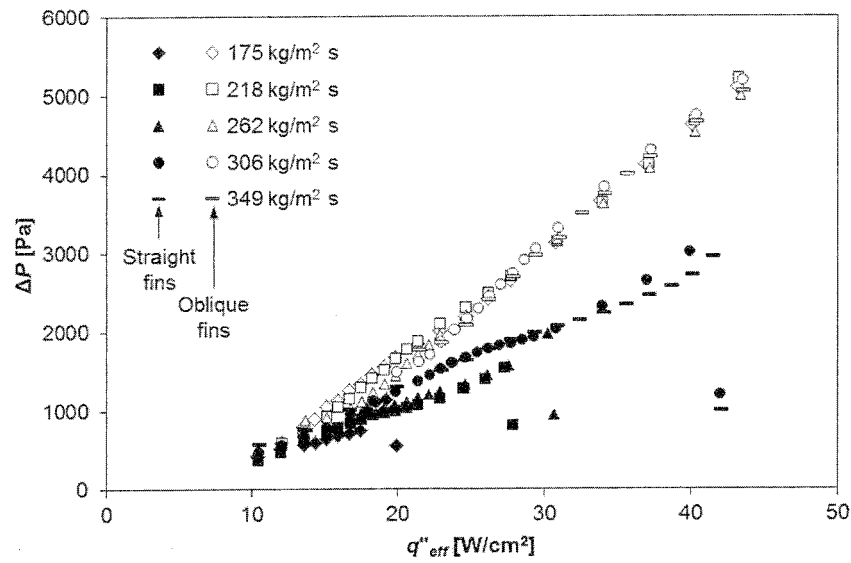


Figure 15

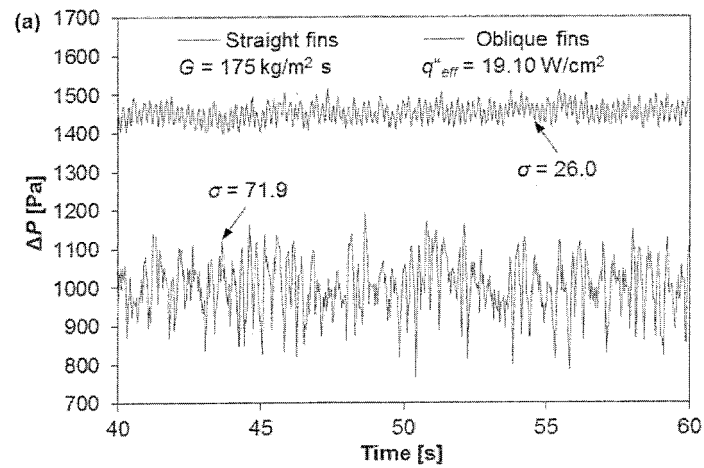


Figure 16 (a)

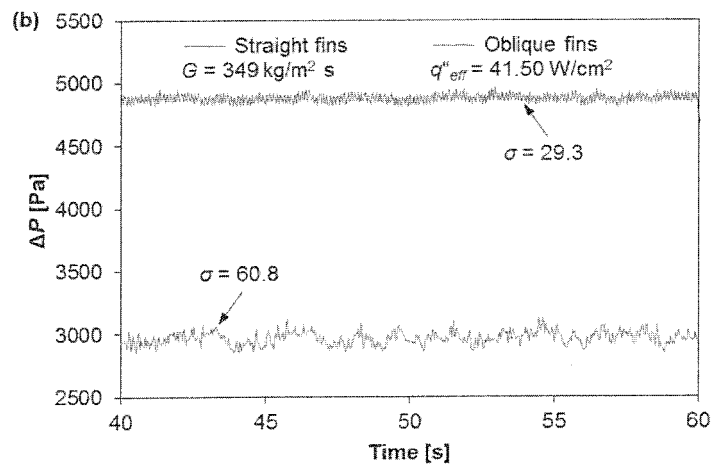


Figure 16 (b)

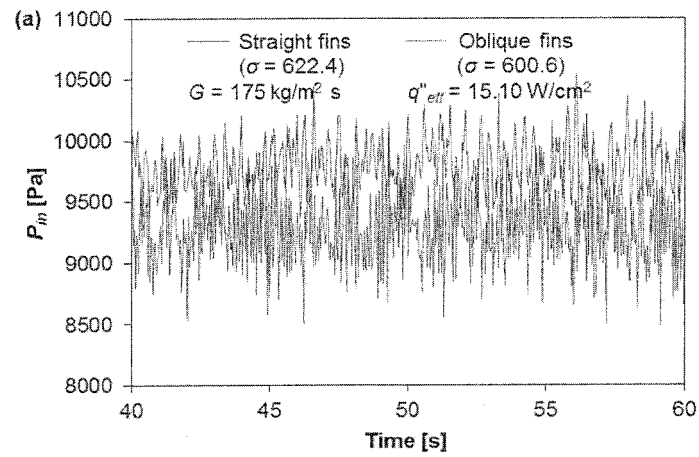


Figure 17 (a)

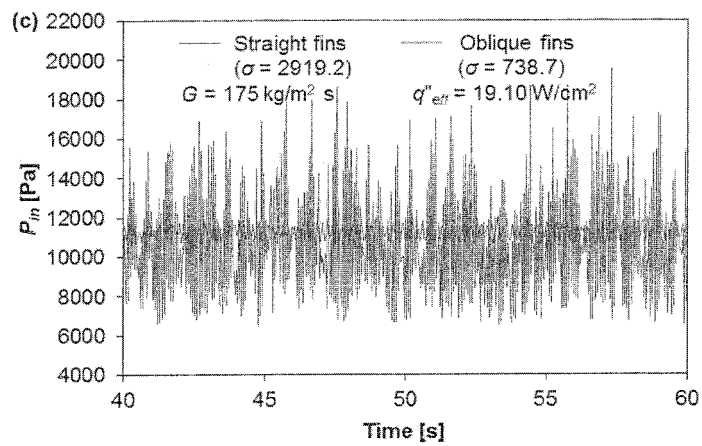


Figure 17 (b)

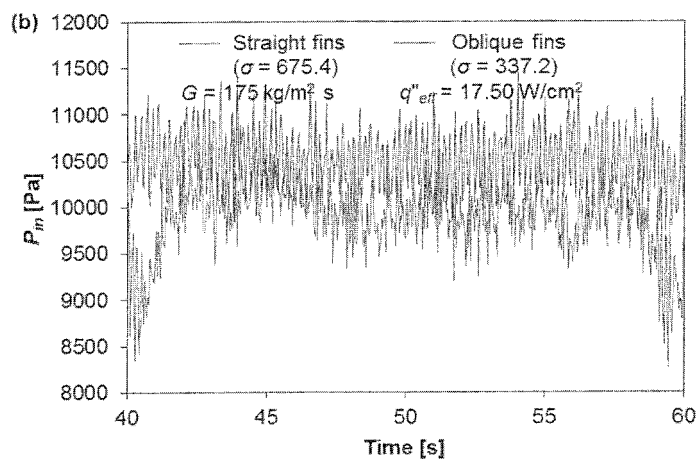


Figure 17 (c)

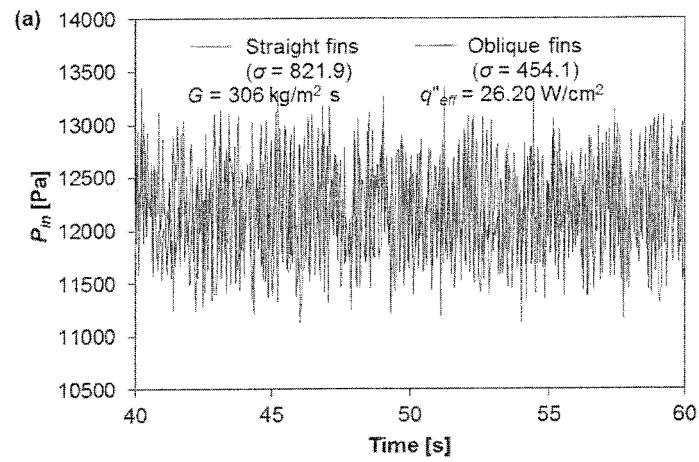


Figure 18 (a)

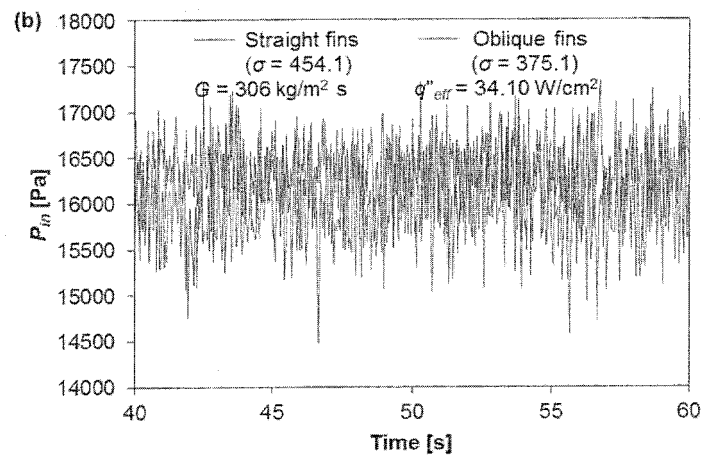


Figure 18 (b)

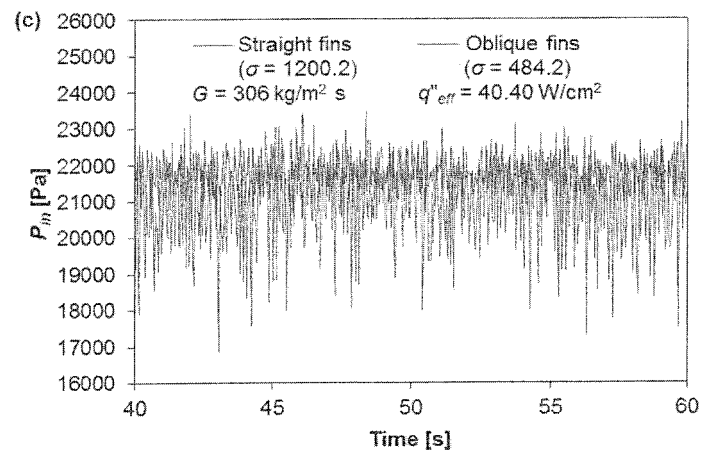


Figure 18 (c)

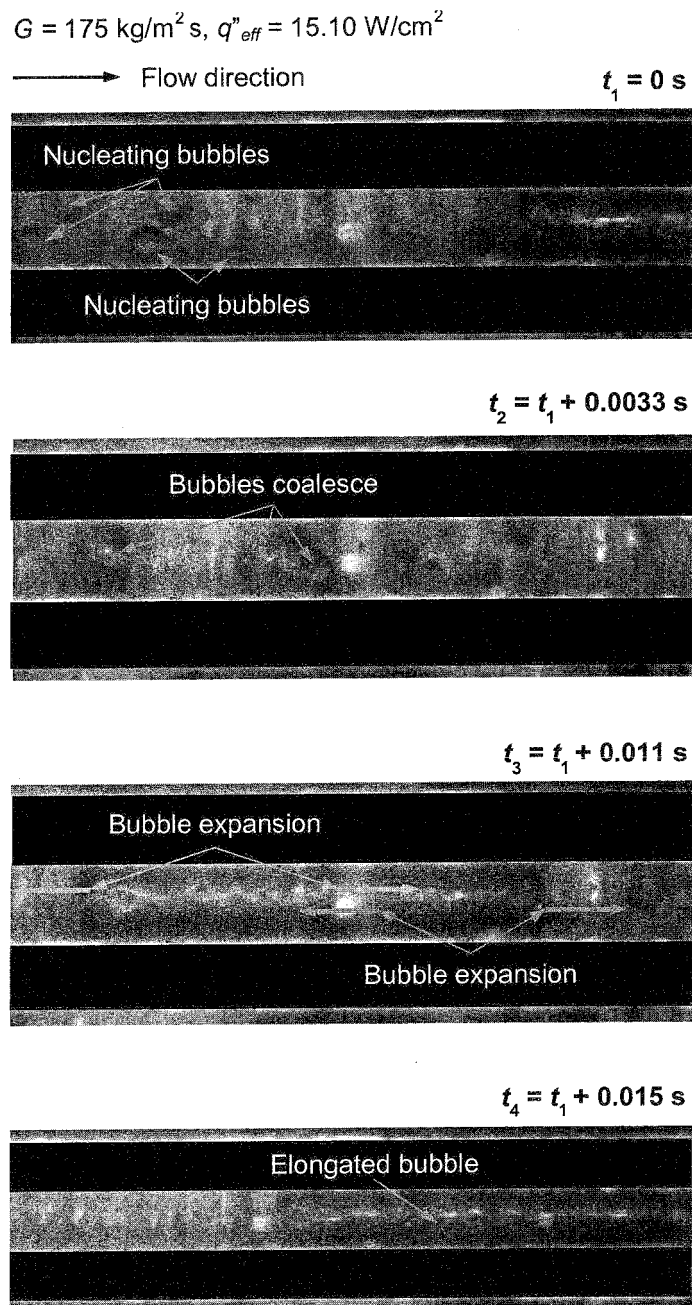
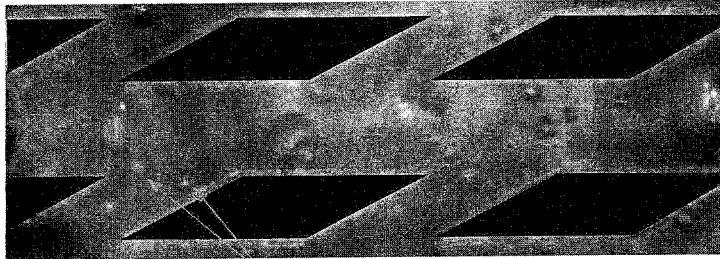


Figure 19

$$G = 306 \text{ kg/m}^2 \text{ s}, q''_{\text{eff}} = 26.20 \text{ W/cm}^2$$

→ Flow direction

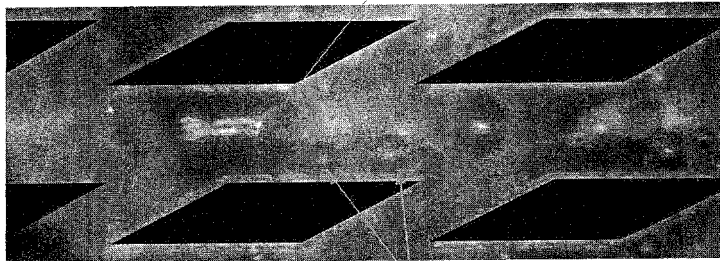
$t_1 = 0 \text{ s}$



Nucleating bubbles

Incoming bubble

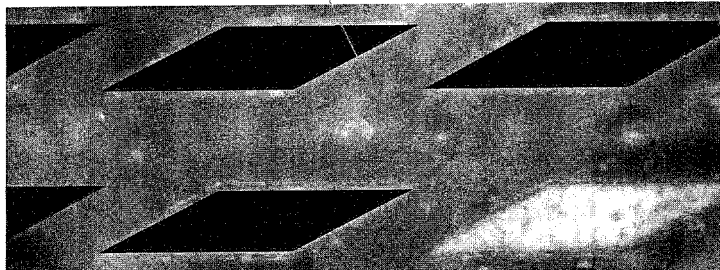
$t_2 = t_1 + 0.0002 \text{ s}$



Bubbles growing

Bubbles coalesce

$t_3 = t_1 + 0.0048 \text{ s}$



Bubbles breaking

$t_4 = t_1 + 0.0061 \text{ s}$

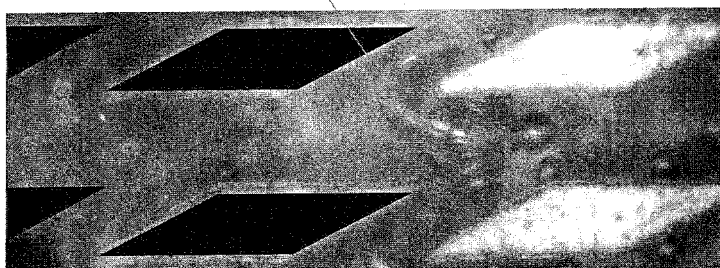


Figure 20

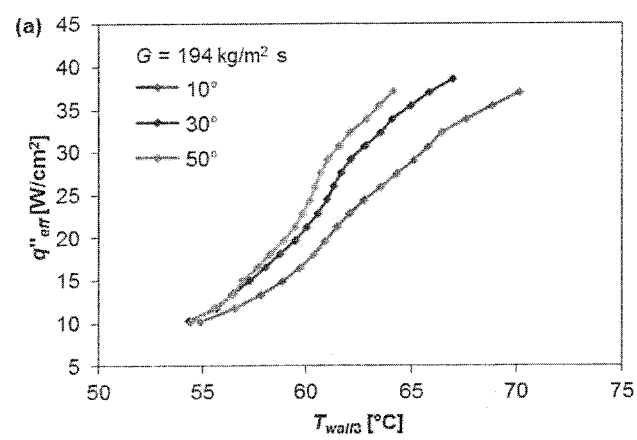


Figure 21 (a)

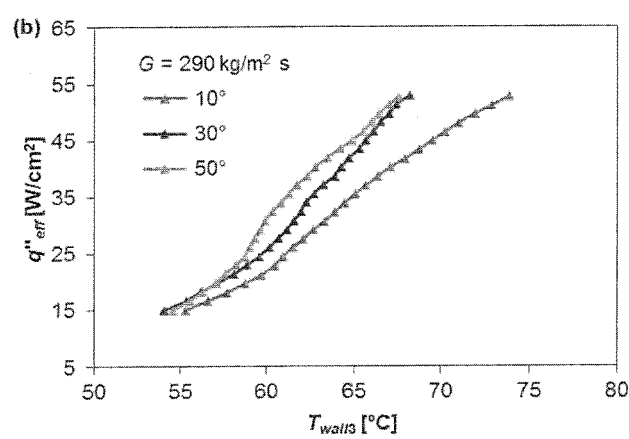


Figure 21 (b)

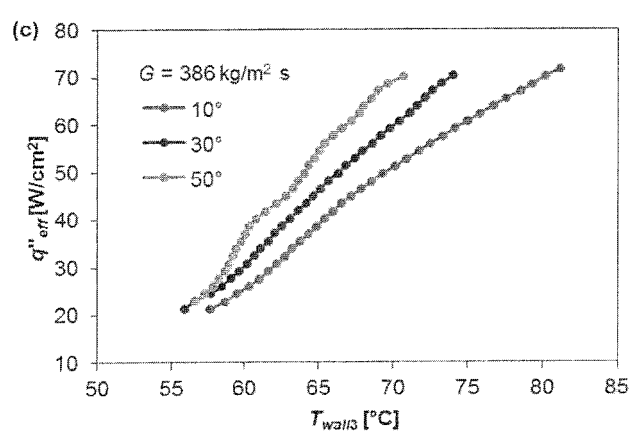


Figure 21 (c)

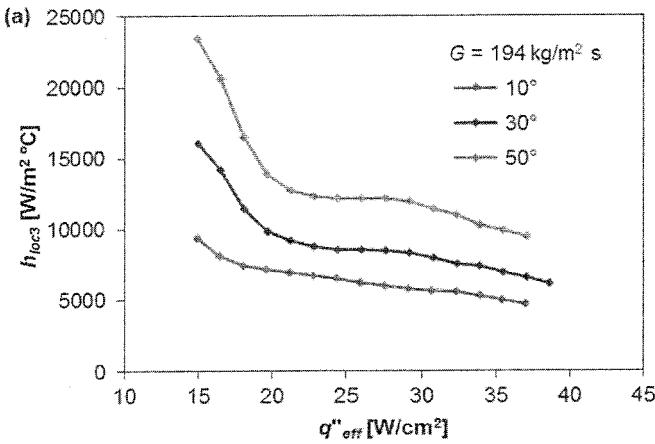


Figure 22 (a)

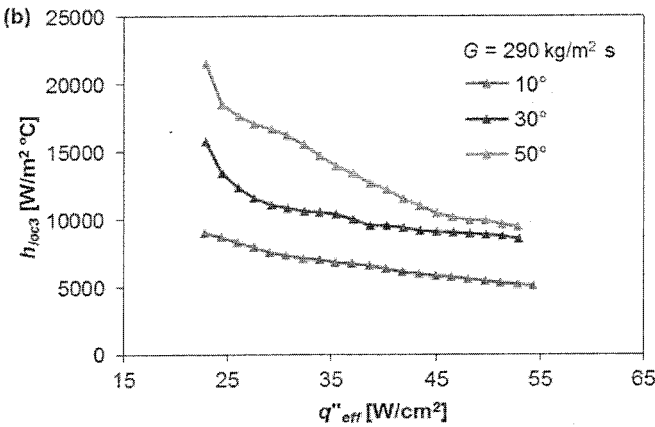


Figure 22 (b)

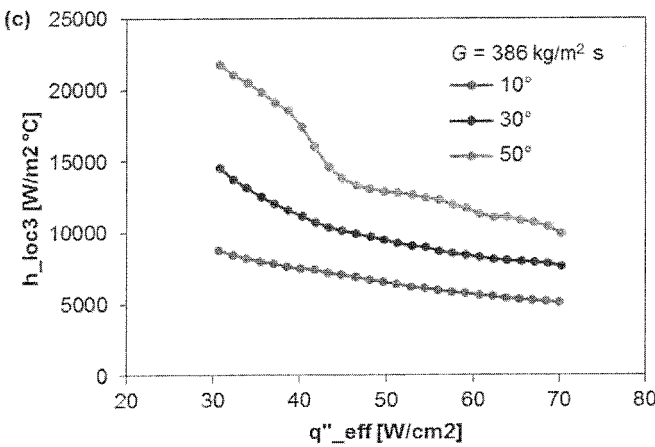


Figure 22 (c)

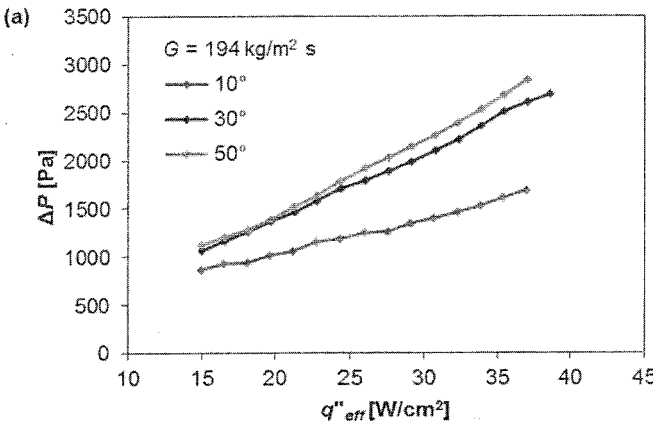


Figure 23 (a)

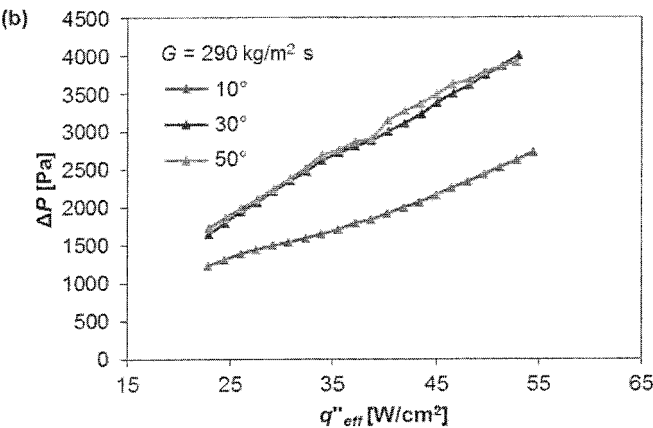


Figure 23 (b)

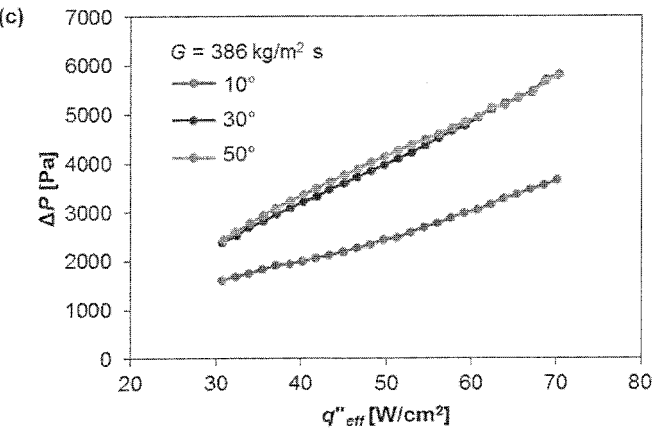


Figure 23 (c)

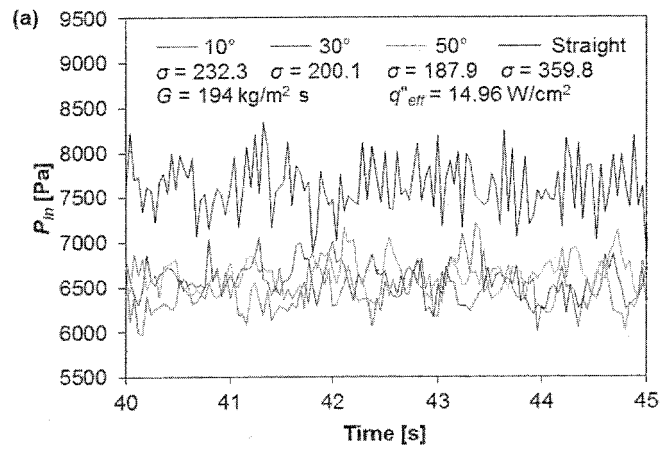


Figure 24 (a)

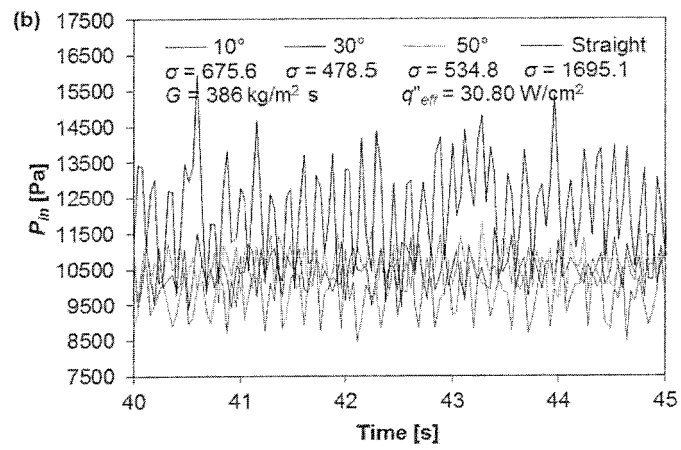


Figure 24 (b)