

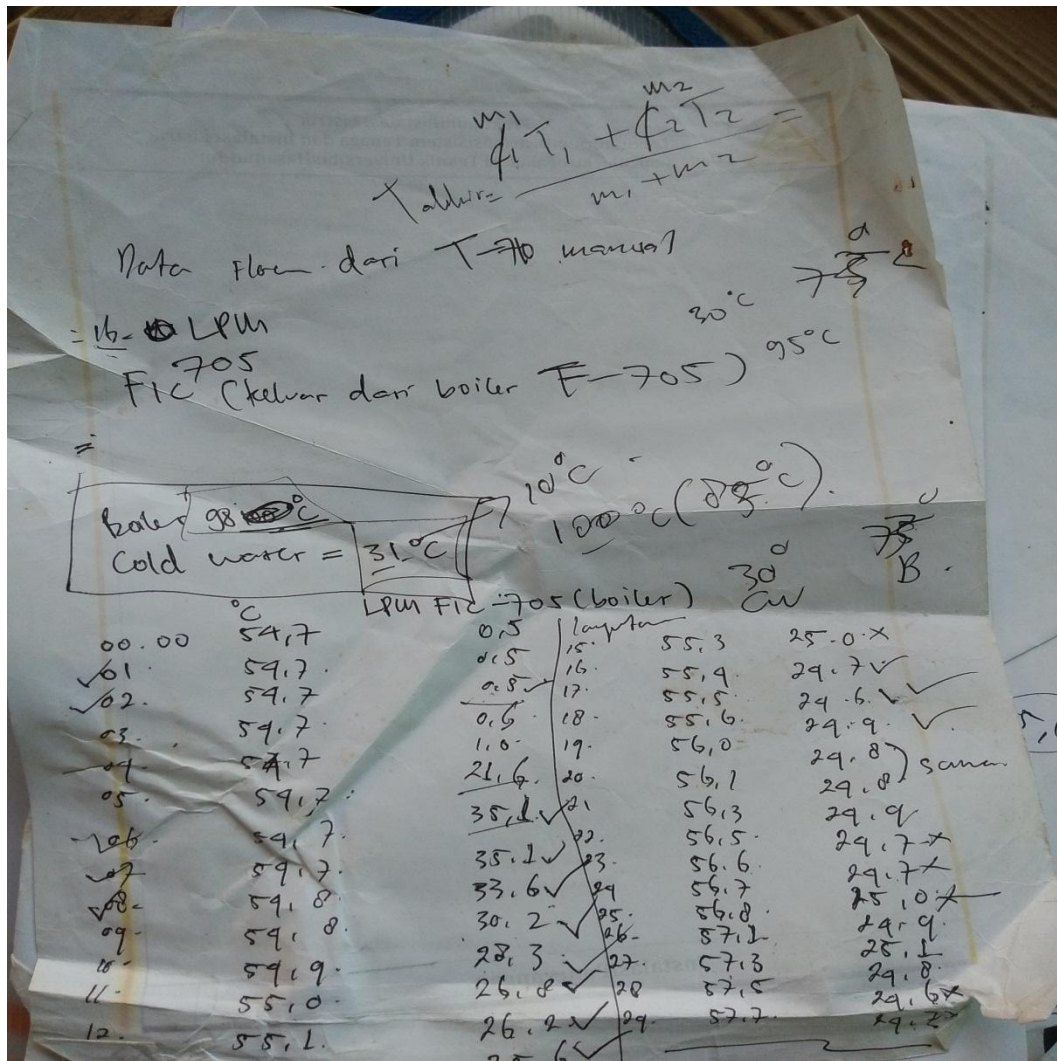
## DAFTAR PUSTAKA

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# LAMPIRAN

Lampiran 1 : Data Dari Alat



Lampiran 2 : Perhitungan Matematis

$m_1 + m_2$

$$m_1 = 0,5/60 =$$

$$m_2 = \frac{16}{60} = 0,2667$$

LPM

$$T_{akhir} = \frac{m_1 T_1 + m_2 T_2}{m_1 + m_2}$$

$$= \frac{0,833 + 0,2667 \times 31}{0,833 + 0,2667}$$

$0,5 = 0,008331$

$$= \frac{0,833 + 8,2668}{0,275}$$

$31 \uparrow$

$0,0166$   
 $0,5333$   
 $0,2667$

$$= 0,833 + 0,2667 \times 159$$

$$= 0,833 + 19,9018$$

$$19,135 = \frac{19,9681}{0,275} = 59,4299$$

$$0,00833 \times 75 + 0,2667 \times 159$$

$$= 0,7055 + 12,5549$$

$$= 19,6237 = 19,7010$$

$$= 0,7885 + 13,8684$$

Tabel 2.

$$\frac{98,4 \times 28 + 22 \times 20}{70,4} = 25,15$$

$$\frac{46,2 \times 28 + 22 \times 20}{68,1} = 25,37$$

$$\frac{45,2 \times 32 + 22 \times 20}{57,2} = 28,06 \quad \checkmark$$

$$\frac{43,6 \times 34 + 22 \times 20}{65,6} = 30,30$$

$$\frac{42,8 \times 36 + 22 \times 20}{64,8} = 31,88$$

$$\frac{42,9 \times 38 + 22 \times 20}{64,9} = 32,50$$

$$\frac{42,9 \times 39 + 22 \times 20}{63,9} = 32,45$$

$$\frac{41,8 \times 39 + 22 \times 20}{63,8} = 32,49$$

$$\frac{41,6 \times 40 + 22 \times 20}{63,6} = 33,08$$

$$\frac{41,5 \times 41 + 22 \times 20}{63,5} = 33,72$$

$$= 34,37$$

$$T_{\text{all}} = \frac{m_1 T_1 + m_2 T_2}{m_1 + m_2}$$

$$= \frac{37.7 + 71.5 + 22 \cdot 29}{57.7 + 22}$$

$$= \frac{2,695 + 638}{59.7} = \frac{3,333}{59.7}$$

$$f. \frac{37.7 \times 22 + 22 \times 38}{59.7}$$

$$= 27.84$$

2.

$$\frac{41.6 + 22 + 22 + 38}{63.6}$$

$$\frac{915.2 + 660}{63.6} =$$

$$\begin{aligned}
 & \Rightarrow \cdot 26,2/60 = 0,436 \quad \left. \vphantom{\cdot 26,2/60} \right\} 0,702 \\
 & \quad \quad \quad m_2 = 0,266 \\
 & = 37,06 + 2,66 = \frac{39,72}{0,702} = 56,581 \\
 \\ 
 & 73) 25,6/60 = 0,426 \quad \left. \vphantom{25,6/60} \right\} 0,692 \\
 & \quad \quad \quad m_2 = 0,266 \\
 & = 36,21 + 2,66 = \frac{38,87}{0,692} = 56,17 \\
 \\ 
 & 14) 25,3/60 = 0,421 \quad \left. \vphantom{25,3/60} \right\} 0,687 \\
 & \quad \quad \quad m_2 = 0,266 \\
 & = 35,785 + 2,66 = \frac{38,445}{0,687} = 55,960 \\
 \\ 
 & 15) \cdot 25,0/60 = 0,416 \quad \left. \vphantom{\cdot 25,0/60} \right\} 0,682 \\
 & \quad \quad \quad m_2 = 0,266 \\
 & = \frac{35,36}{79,22} + 2,66 = \frac{41,88}{1,198 \cdot 0,682} = 58,02 \\
 & \quad \quad \quad = \frac{35,36}{79,22} + 2,66 = \frac{41,88}{1,198 \cdot 0,682} = 55,777 \\
 \\ 
 & 16) \cdot 29,7/60 = 0,495 \quad \left. \vphantom{\cdot 29,7/60} \right\} 0,677 \\
 & \quad \quad \quad m_2 = 0,266 \\
 & = 37,095 + 2,66 = \frac{39,755}{0,677} = 58,721
 \end{aligned}$$

bolot

Berni

$$m_1 \cdot 29,6 / 60 = 0,1911 \Rightarrow 0,675$$

$$m_2 = 39,03 \cdot 2,86$$

$$= 36,8 \text{ g}$$

$$= 59,27$$

$$1) \frac{4,905}{60} = 0,08175 \Rightarrow 0,275$$

$$2) \frac{1,705}{60} + 2,66 = 0,275 \Rightarrow \frac{5,36}{0,275} = 19,49$$

$$3) \frac{0,6}{60} = 0,01 \Rightarrow 0,275$$

$$= 0,85 \cdot 2,66 \Rightarrow \frac{5,151}{0,275} = 18,73$$

$$4) \frac{1,0}{60} = 0,0166 \Rightarrow 0,275$$

$$= 1,38 \cdot 2,66 = 3,67 \Rightarrow \frac{4,102}{0,275} = 14,92$$

$$5) \frac{2,1}{60} = 0,035 \Rightarrow 0,626$$

$$= 3,016 + 2,66 = \frac{5,326}{0,626} = 8,51$$

$$= 3,016 + 2,66 = 5,676$$



Sample 16

$$\begin{aligned} & 35,1 / 60 = 0,585 \\ & m_2 = 0,266 \end{aligned} \quad \left. \vphantom{\begin{aligned} & 35,1 / 60 = 0,585 \\ & m_2 = 0,266 \end{aligned}} \right) = 0,851$$

$$\Rightarrow 49,725 + 2,66 = \frac{52,385}{0,851} = 61,55 \text{ RM}$$

$$\begin{aligned} & 33,6 / 60 = 0,56 \\ & m_2 = 0,266 \end{aligned} \quad \left. \vphantom{\begin{aligned} & 33,6 / 60 = 0,56 \\ & m_2 = 0,266 \end{aligned}} \right) = 0,826$$

$$= 47,6 + 2,66 = \frac{50,26}{0,826} = 60,842$$

$$7) \quad 30,2 / 60 = 0,5033 \quad \left. \vphantom{30,2 / 60 = 0,5033} \right) 0,7691$$

$$m_2 = 0,266$$

$$= 42,755 + 2,66 = \frac{45,415}{0,769} = 59,052$$

$$10) \quad 28,3 / 60 = 0,471 \quad \left. \vphantom{28,3 / 60 = 0,471} \right) 0,732$$

$$m_2 = 0,266$$

$$= 40,035 + 2,66 = \frac{42,695}{0,732} = 58,3250$$

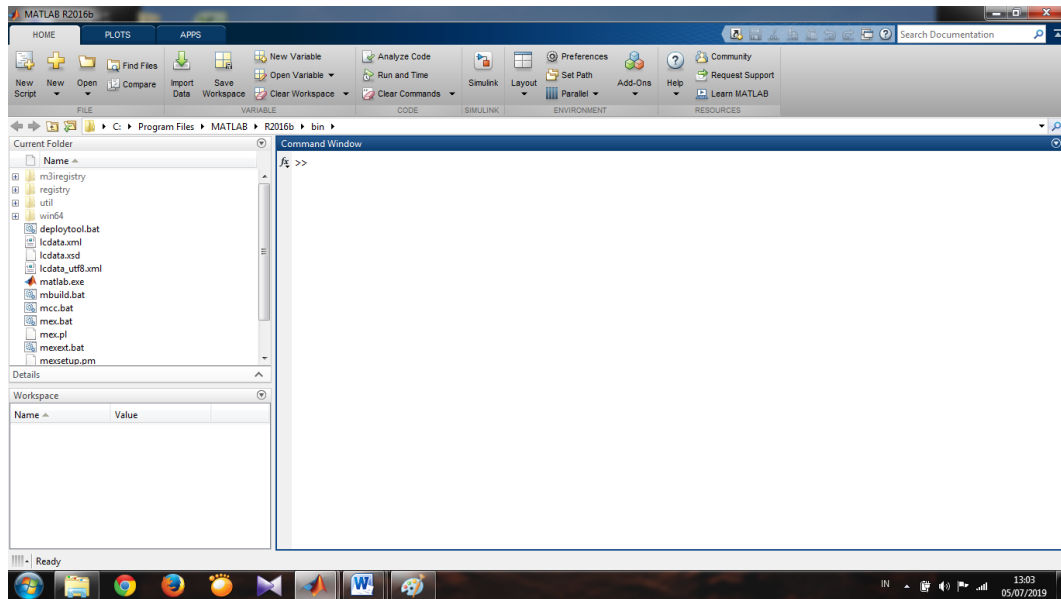
$$11) \quad 26,8 / 60 = 0,446 \quad \left. \vphantom{26,8 / 60 = 0,446} \right) 0,712$$

$$m_2 = 0,266$$

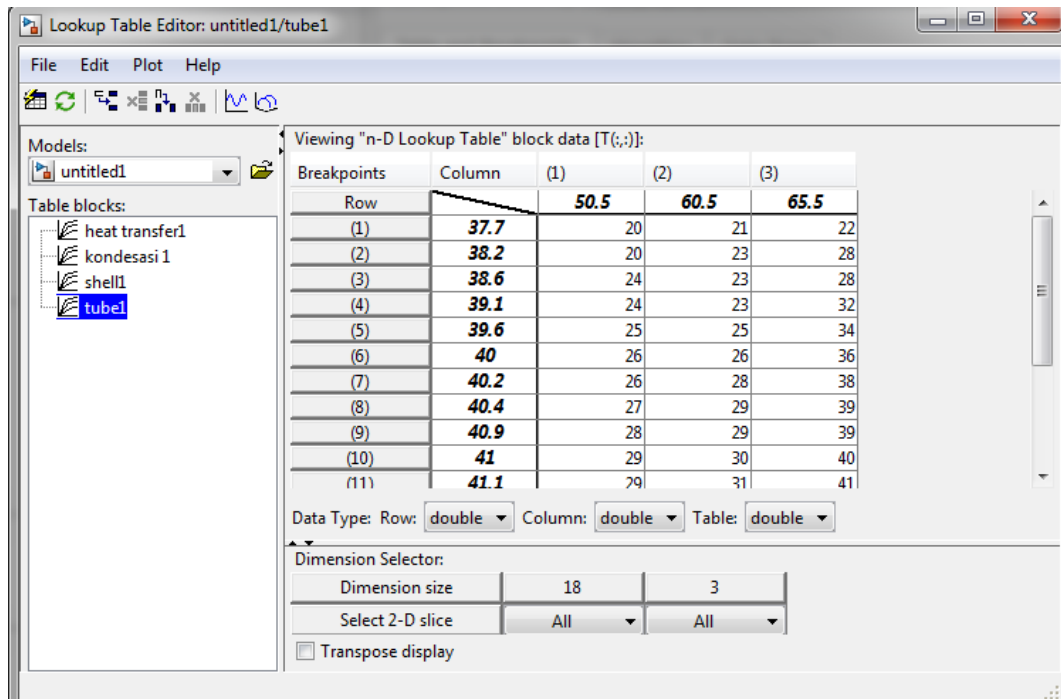
$$= 37,191 + 2,66 = \frac{39,851}{0,712} = 56,980$$

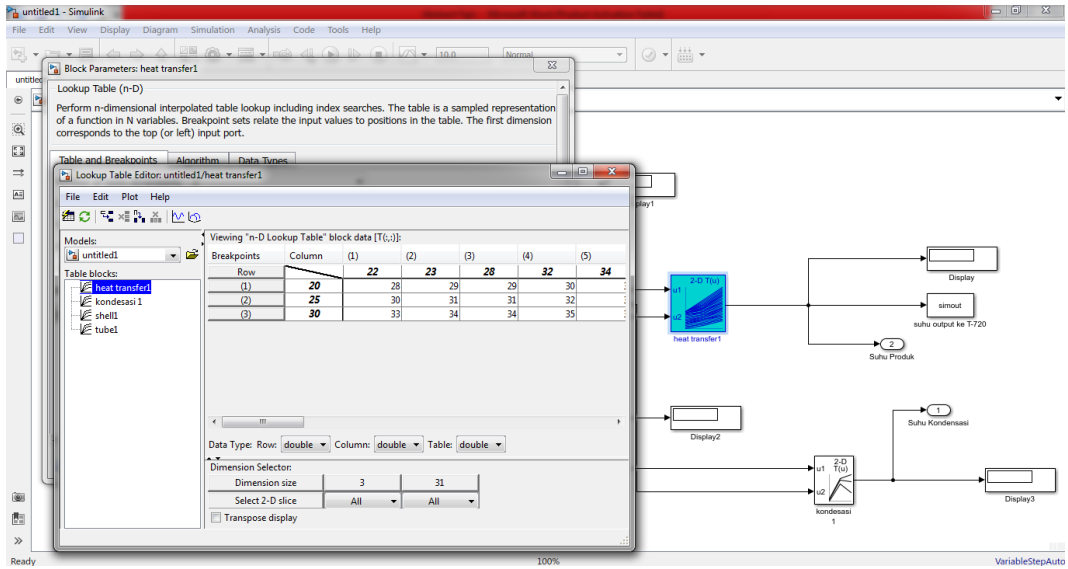
Water

### Lampiran3 :Tampilan awal Matlab

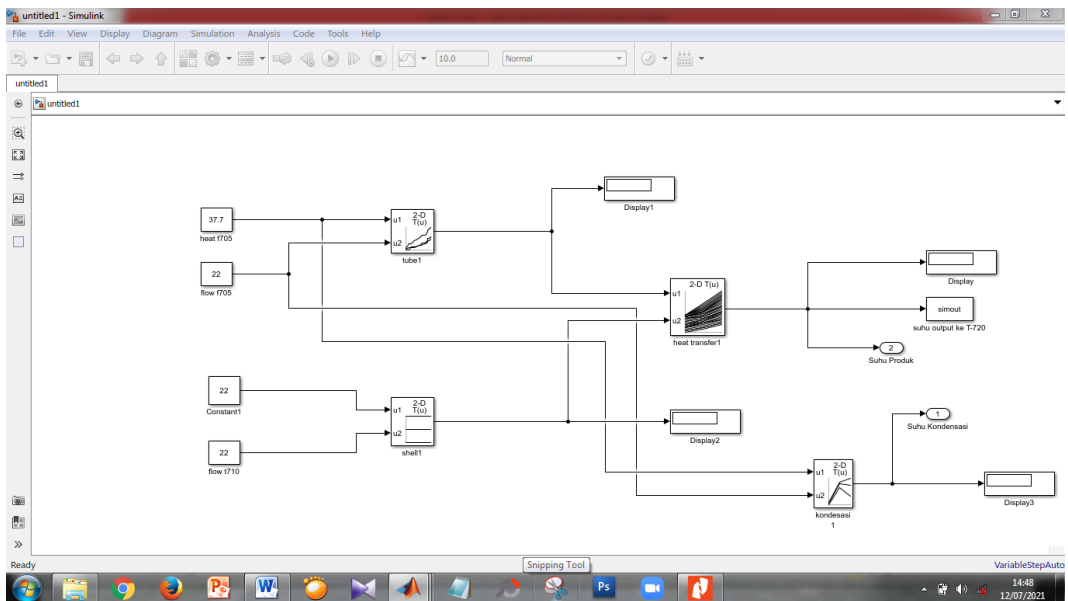


### Lampiran 4 :Tampilan data lokup tabel





Lmpiran 5 : Tampilan sistem Heat Excenger



Lampiran 6 : penentuan flow Pada Tangki



Lampiran 7 : Tampilan Kenaikan suhu pada T 720



Lampiran 8 : Kenaikan Suhu Pada Heat Excenger

