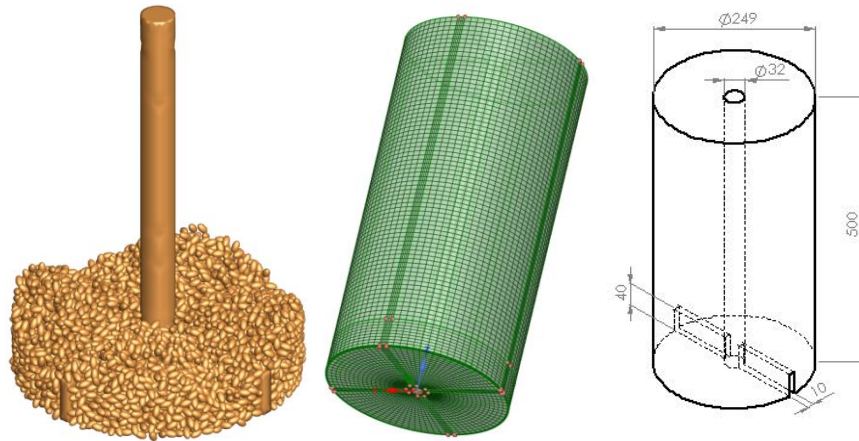


## **LAMPIRAN**

## Lampiran A. Input dan Hasil Simulasi CFD-DEM



Tampak asli simulasi, *Meshing*, dan Desain Alat Pengering

ANSYS RESPONSE SURFACE										
VARIASI 0,5					VARIASI 0,3					
Time	HTC	MTC	Temperature	Moisture Content	Time	MTC	HTC	MC	Temp	
0	37,928713	0,049456	300,00001	24,999994	0	0,049456	37,928713	24,999994	300,00001	
1,01521	36,6839	0,049389	300,22074	24,943198	1,0152055	0,049719	37,116435	24,94248	300,22261	
2,03041	35,768969	0,048763	300,42171	24,893335	2,0304110	0,049264	36,557004	24,88892	300,43632	
3,04562	38,999657	0,045390	300,65268	24,802063	3,0456165	0,048872	35,863169	24,839257	300,63512	
4,06082	39,104097	0,045385	300,98352	24,593332	4,0608220	0,049542	36,289447	24,789197	300,82874	
5,00835	38,736033	0,045232	301,28894	24,405528	5,0083471	0,049752	36,236108	24,738481	301,01904	
6,02355	39,100874	0,045329	301,61403	24,211257	6,0235526	0,049806	36,905797	24,682071	301,22715	
7,03876	39,275684	0,045529	301,9419	24,022137	7,0387581	0,049177	36,050028	24,627591	301,42980	
8,05396	38,883126	0,045358	302,26583	23,838993	8,0539636	0,048786	35,554184	24,576027	301,62224	
9,00149	39,047309	0,045365	302,56504	23,673394	9,0014888	0,045253	39,077354	24,469979	301,84775	
10,0167	39,49437	0,045648	302,88855	23,499897	10,016694	0,045403	39,431689	24,266292	302,16883	
VARIASI 0,1										
Time	Temperature	Moisture content	HTC	MTC						
0	300,00001	24,999994	37,928713	0,049455788						
1	300,22339	24,942597	36,982137	0,049619129						
2	300,44358	24,886211	37,454305	0,049877563						
3	300,66391	24,828937	37,369427	0,049824989						
4	300,87909	24,773712	37,220931	0,049702246						
5	301,07505	24,723018	36,891995	0,049656512						
6	301,27979	24,669878	36,555212	0,049355602						
7	301,47423	24,619475	35,957096	0,048943815						
8	301,66345	24,569998	36,200263	0,049161907						
9	301,83881	24,522928	35,87489	0,049137872						
10	302,02701	24,471001	36,479321	0,049589633						

Nilai Rata-Rata Hasil Simulasi

```
ControlParent x heatmass hopp3d
File Edit View

ipackingandcontinue
1 0
controlheat&radiation&mass
0 1 0
initialcoupling
0 12600
timestop
5000000
ratioitercfddem
20
lsave
2000
NCOUPLING
0
```

Input ControlParent Pada simulasi CFD-DEM

```
ControlParent heatmass x hopp3d jou timesteps vie
File Edit View

Tinitpar
300.
emissivityscattering
0.8 0.001
TFbottomRH
333.16 0.0326
CONDPCPP
0.12748 1110.
Tdencondcapofwall
1000. 2500000000000. 1100000000. 830.
PrandlNumber
0.72
Initialmoisturecontent
0.25
constantainREAmode1
1.058 -6.1099 2.286 -3.405 0.
```

Input Heatmass pada Simulasi CFD-DEM

```

ControlParent  heatmass  hopp3d  x  jou  timesteps  view  ha
File  Edit  View
DiamA,B,C
0.011234  0.0065  0.0065
Blockiness
2  2
DENP
1500.
Particlenumber
6500
Forcemode
1 5 1
onoffshovel  rotation reference point  angular velocity (rad/s)
0 0.125 0.125 0.03 0. 0. 0.3
Fluidinletvelocity
3.5
Timestep
0.001
EMOD, VPOIS, EMODWALL
10000000.0 0.3D0 18000000000.0
Initial velocity NRINGS NRINGY
0.01D0 12 26
P-P friction P-W friction
0.30D0 0.30D0
PP N&T damping P-W N&T damping Global damping for rotation
0.30D0 0.300D0 0.30D0 0.30D0 0.30D0
Stiffness Damping Normal Damping Tangential
5000.D0 100.D0 100.D0
P-P Rolling P-W Rolling
0.00050D0 0.00050D0

```

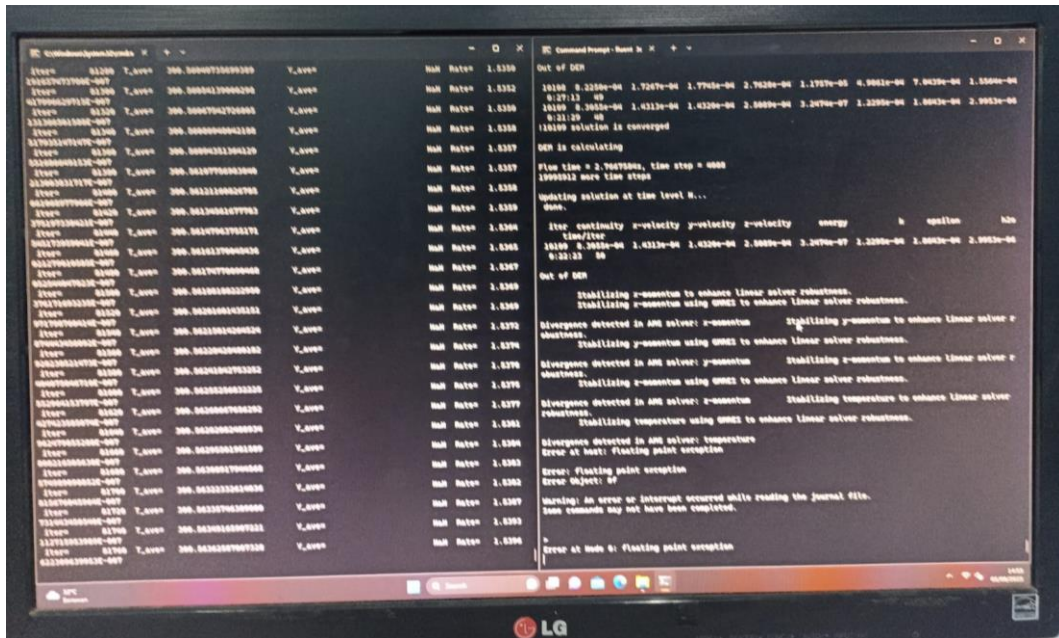
## Input Hopped Pada Simulasi CFD-DEM

```

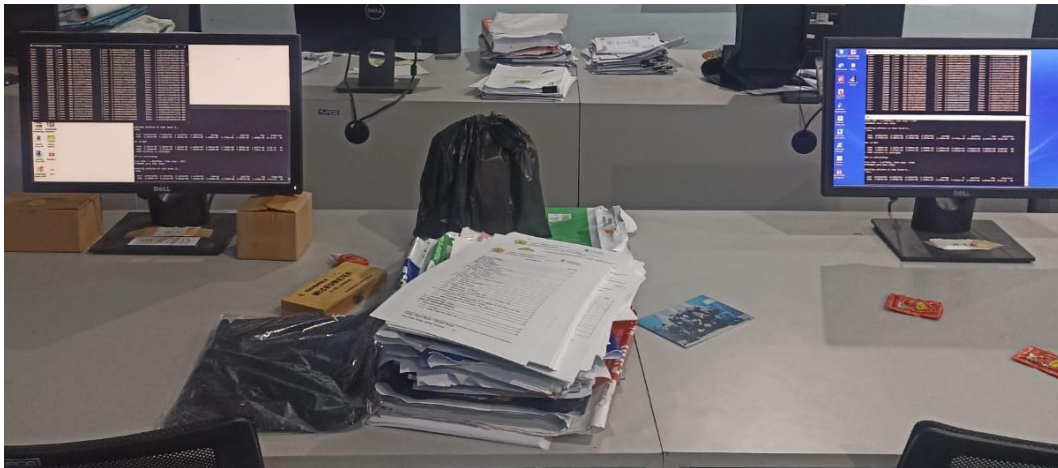
ControlParent  heatmass  hopp3d  jou  timesteps  view  x  +
File  Edit  View
*****
PROGRAM DEM-MATTER
BASED ON DISCRETE ELEMENT METHOD
CREATED BY
HADI WAHYUDI
*****
=====
Particle Size  1.1233999999999999E-002  6.4999999999999997E-003  6.4999999999999997E-003
Density, Time step  1500.0000000000000  3.38401842E-05
Initial Temp, Moist  300.000000  0.25000000000000000
Inlet Temp, Inlet Humidity  333.160004  3.2599999999999997E-002
=====
SIMULATION TYPE: SIMULATION
-----
252020 T_ave= 301.70836959050530 Y_ave= 0.97984767984257559 6500
252040 T_ave= 301.70850882286271 Y_ave= 0.97984565590318984 6500
252060 T_ave= 301.70893817963389 Y_ave= 0.97984055122364033 6500
252080 T_ave= 301.70903490158844 Y_ave= 0.97983932684691888 6500
252100 T_ave= 301.70914197852358 Y_ave= 0.97983785185643302 6500
252120 T_ave= 301.70924968955717 Y_ave= 0.97983635657283863 6500
252140 T_ave= 301.70935802134107 Y_ave= 0.97983484169251178 6500
Ln 1, Col 1 230% Windows (CRLF) UTF-8

```

## Tampilan Program DEM-MATTER



Tampilan Simulasi CFD-DEM



Proses Simulasi CFD-DEM