

## LAMPIRAN

<b>LEMBAR REVISI dan TUGAS UJIAN SARJANA</b>	
<p>Adapun Rapat Tim Penguji Ujian Sarjana</p> <p>Hari : Rabu  Tanggal : 19 September 2018  Tempat : R. 202</p> <p>Ditentukan bahwa mahasiswa :</p> <p>Nama : Nunung Muhajiroh  NIM : 30601501688  Judul TA : Perhitungan Potensi Pembangkit Energi dengan Fuel Cell pada PLTU Tanjung Jati B Jepara</p> <p>melakukan perbaikan dan membuat tugas seperti tercantum dibawah ini:</p>	
REVISI	BATAS REVISI
<p style="font-size: 1.2em; font-family: cursive;">revisi materi</p>	<p style="font-size: 1.2em; font-family: cursive;">revisi materi</p> <p style="font-size: 1.2em; font-family: cursive;">26/09/2018</p>
<b>TUGAS</b>	



**UNIVERSITAS PENDIDIKAN INDONESIA**
  
Jalan Setiabudi No. 221, Satelekom, Bandung 40132

---

**LEMBAR REVISI DAN TANDA TANGAN SARJANA**

Deskripsi: Hasil dari Pengujian Sistem
   
 Nama :       
  
 Tanggal :       
  
 Nomor :       

Mengetahui dan menyetujui:
   
 Nama :       
  
 NIM :       
  
 Alamat :       

Mengetahui dan menyetujui:
   
 Nama :       
  
 NIM :       
  
 Alamat :       

Tanggal Pengujian:       
  
 pada PC/DT dengan hasil:       

No	Revisi	Status Revisi
1.	<u>      </u>	<u>      </u>
2.	<u>      </u>	<u>      </u>
3.	<u>      </u>	<u>      </u>
4.	<u>      </u>	<u>      </u>
5.	<u>      </u>	<u>      </u>
6.	<u>      </u>	<u>      </u>

Mengetahui dan menyetujui:
   
 Nama :       
  
 NIM :       

Mengetahui dan menyetujui:
   
 Nama :       
  
 NIM :       

Tanggal Pengujian:       
  
 pada PC/DT dengan hasil:       

Mengetahui dan menyetujui:
   
 Nama :       
  
 NIM :       

Mengetahui dan menyetujui:
   
 Nama :       
  
 NIM :

nama part di melakukan	9b
Ata Sauer-	9b

291 °C
2.150/h
331 °C
182bar/g
NWL
419 °C
415 °C
464 °C
454 °C
541 °C

Number of Air Preheaters	Two (2) sets/unit
Equipment Number	3A4-501A/B
Type	Ljungstrom Rotary Regenerative Tri-sector Air Preheater
Motor rotation speed	Approx. 1.1rpm
Inlet gas flow	1,585,849kg/hrwt (BMCR)
Primary air entering / leaving temperature	41°C/320°C
Secondary air entering / leaving temperature	30°C /332°C
Air gas inlet temperature	385°C
Air gas outlet temperature	137°C (Uncorrected)
Cool end metal temperature	84.4°C
Pressure differential (hot side): Primary air to Secondary air Secondary air to Gas Primary air to Gas	881mmHg (88mbarg) 304mmHg (30mbarg) 1185mmHg (118mbarg)
Pressure drop: Primary air side Secondary air side Gas side	50mmHg (4.9mbarg) 95mmHg (9.5mbarg) 120mmHg (11.8mbarg)
Air leakage	7.3% (max)
Heating surface	47,810m <sup>2</sup>
Heating Element: Hot end layer depth Inertio layer depth Cold end layer depth	875mm/ material ( mild steel) 900mm/ material ( mild steel) 300mm/ material ( CR15)
Electric Drive details: Speed reducer – gear ratio	15kW, AC:380V/3phase, 50Hz, 4P 1:123

27Vh	-	Monitoring and Control
469 °C	513 °C @100%ECCR	High alarm
556 °C	593 °C @100%ECCR	High alarm
384 °C	-	Monitoring
541 °C	549 °C	High alarm
570 °C	634 °C @100%ECCR	High alarm
35.0barg	-	Monitoring
354 °C	-	Monitoring
<349 °C	-	Monitoring and control
1.7barg	<1.049barg	Low alarm
	<0.525barg	Low-Low alarm
	<0.208barg	Low-Low-Low trip
38 °C	>60 °C	High alarm
	>65 °C	High =High trip
	NWML+1000mm	High alarm
NWML	NWML-1000mm	Low alarm

**Unit "D" and Expansion Shared Facilities  
Expansion Performance Tests Report (Final)  
Guaranteed Heat Rate and Guaranteed Output**

2 x 630 MW  
Coal-Fired Power Plant  
General Area - Indonesia

**6 PERFORMANCE TEST REPORT - CROSS REFERENCES**

Performance Test Report for of Boiler Thermal Efficiency (Unit 4 Boiler)	+ BCL-0-MH-0809, Rev 1
--	------------------------

Boiler Thermal Efficiency based on high heating value (%)	Test Report 4-BCL-0-MH-0809, Rev 1 Page 2-181
89.03 (%)	

Performance Guarantee Test Report (Net Power Output and Net Heat Rate) 1504-4	4-00-0-TS-9981, Rev 0
---	-----------------------

Gross output power at T-MCR [MW]	
713,182 MW	from Test Report 4-00-0-TS-9981, Rev 0 Sheet 1-6

Net Power Output at T-MCR [MW]	
700,825 MW	from Test Report 4-00-0-TS-9981, Rev 0 Sheet 1-6

Turbine gross heat rate at 100% ECR [MJ/kWh]	
7912.2 [MJ/kWh]	from Test Report 4-00-0-TS-9981, Rev 0 Sheet 1-6

Gross output power at 100% ECR [MW]	
8057.4 [MJ/kWh] €	from Test Report 4-00-0-TS-9981, Rev 0 Sheet 1-6

Gross output power at 100% ECR [MW] (coupled power at the generator terminal after deducting excitation power)	
694,763 MW	from Test Report 4-00-0-TS-9981, Rev 0 Sheet 1-6

Auxiliary Power Consumption Turbine Island and Containment Facilities including generator transformer loss at T-MCR [MW]	
12,357 MW	from Test Report 4-00-0-TS-9981, Rev 0 Sheet 1-6

Auxiliary Power Consumption Turbine Island and Containment Facilities including generator transformer loss at 100% ECR [MW]	
12,512 MW	from Test Report 4-00-0-TS-9981, Rev 0 Sheet 1-6

Superheater Metal Temperature

No	Tag No	Description	#3 boiler		#4 boiler	
			Metal Temp (°C) Left Side	Metal Temp (°C) Right Side	Metal Temp (°C) Left Side	Metal Temp (°C) Right Side
1	3/ABSS-TE511	28V SH OUTLET METAL TEMP (13P-NO2)	448.9	444.4		
2	3/ABSS-TE512	28V SH OUTLET METAL TEMP (13P-NO2)	451.6	449.0		
3	3/ABSS-TE513	28V SH OUTLET METAL TEMP (13P-NO2)	448.2	444.1		
4	3/ABSS-TE531	38V SH OUTLET METAL TEMP (2P-NO2)	529.5	531.6		
5	3/ABSS-TE532	38V SH OUTLET METAL TEMP (2P-NO2)	534.9	536.4		
6	3/ABSS-TE533	38V SH OUTLET METAL TEMP (13P-NO2)	528.9	531.6		
7	3/ABSS-TE534	38V SH OUTLET METAL TEMP (13P-NO2)	526.9	525.1		
8	3/ABSS-TE546	38V SH OUTLET HOR METAL TEMP (1N)	530.0	529.6		
9	3/ABSS-TE547	38V SH OUTLET HOR METAL TEMP (1N)	534.8	528.3		
10	3/ABSS-TE548	38V SH OUTLET HOR METAL TEMP (1OUT)	532.8	527.4		
11	3/ABSS-TE514	28V SH OUTLET METAL TEMP (13P-NO2)	446.1	452.7		
12	3/ABSS-TE515	28V SH OUTLET METAL TEMP (13P-NO2)	444.2	456.7		
13	3/ABSS-TE516	28V SH OUTLET METAL TEMP (13P-NO2)	445.9	457.4		
14	3/ABSS-TE535	38V SH OUTLET METAL TEMP (27P-NO2)	526.5	521.1		
15	3/ABSS-TE536	38V SH OUTLET METAL TEMP (33P-NO2)	536.3	531.0		

Reheater Metal Temperature

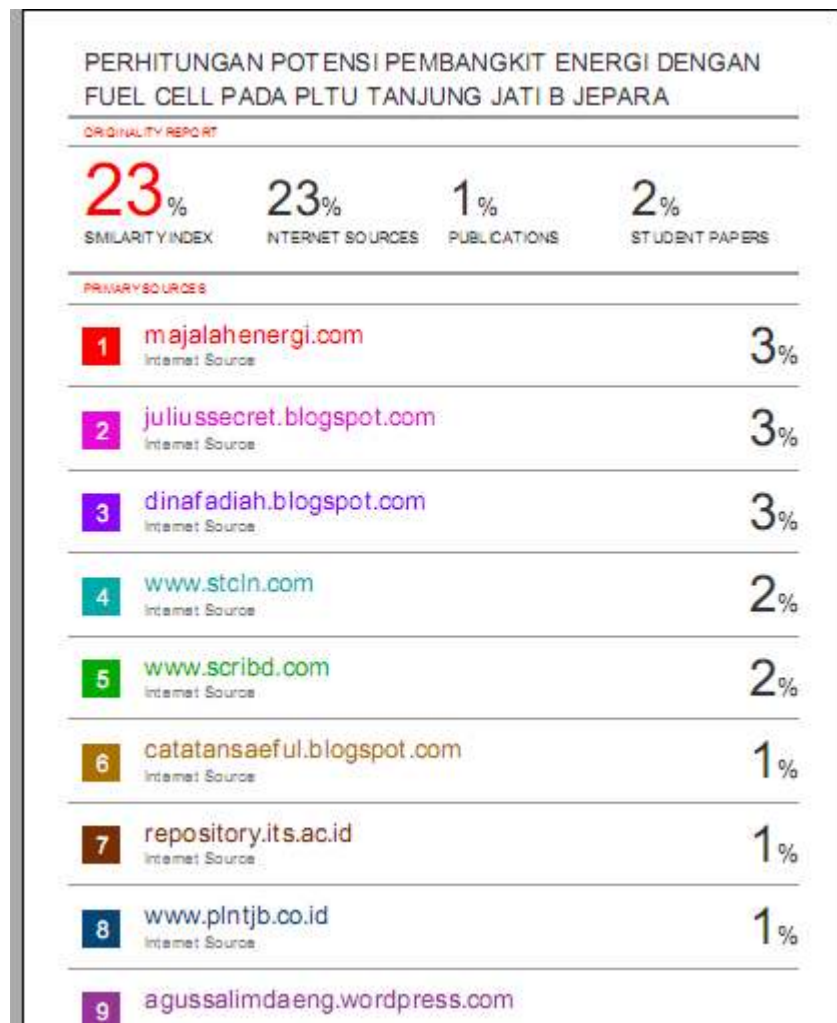
No	Tag No	Description	#3 Boiler		#4 Boiler	
			Metal Temp (°C) Left Side	Metal Temp (°C) Right Side	Metal Temp (°C) Left Side	Metal Temp (°C) Right Side
1	3/ABRS-TE511	38V RH OUTLET METAL TEMP (13P-NO1)	547.5	537.7		
2	3/ABRS-TE512	38V RH OUTLET METAL TEMP (13P-NO1)	525.9	523.3		
3	3/ABRS-TE513	38V RH OUTLET METAL TEMP (13P-NO1)	526.9	526.1		
4	3/ABRS-TE514	38V RH OUTLET METAL TEMP (13P-NO1)	528.7	531.3		
5	3/ABRS-TE515	38V RH OUTLET METAL TEMP (13P-NO1)	540.8	548.1		
6	3/ABRS-TE516	38V RH OUTLET METAL TEMP (13P-NO1)	550.8	556.0		
7	3/ABRS-TE517	38V RH OUTLET METAL TEMP (13P-NO1)	558.3	565.5		
8	3/ABRS-TE518	38V RH OUTLET METAL TEMP (13P-NO1)	547.8	550.8		

Note

Description	Unit 3	Unit 4
Date Taken	30 June 2014	
Generator Load	695 MW Gross	
Steamby Pass		
MCS Press. (bar)	166.1	166.1
MV Temp. (°C)	536.9	533.4
RH Press. (bar)	35.91	35.97
RH Temp. (°C)	542.3	543.0
	14.88	8.96
	14.13	6.77
	13.17	9.28
	12.89	7.80

Handwritten notes and a circled '0' are present in the margin.





	Internet Source	1%
10	lib.ui.ac.id Internet Source	1%
11	sigitbagussetiawan.blogspot.com Internet Source	1%
12	fiksikaagw.blogspot.com.au Internet Source	1%
13	aqbahru1.wordpress.com Internet Source	1%
14	tel.archives-ouvertes.fr Internet Source	1%
15	dunia-pltu.blogspot.com Internet Source	1%

Exclude quotes  Off      Exclude matches  < 1%

Exclude bibliography  Off