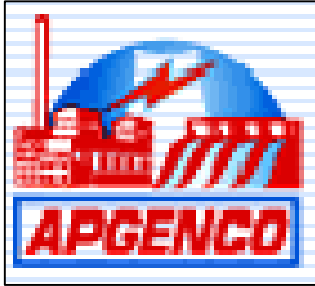


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it must not be used directly or indirectly in any way detrimental to the interest of the company

REV	DATE	ALTERED	REV	DATE	ALTERED	
		CHECKED			CHECKED	
						JOB NO. 245



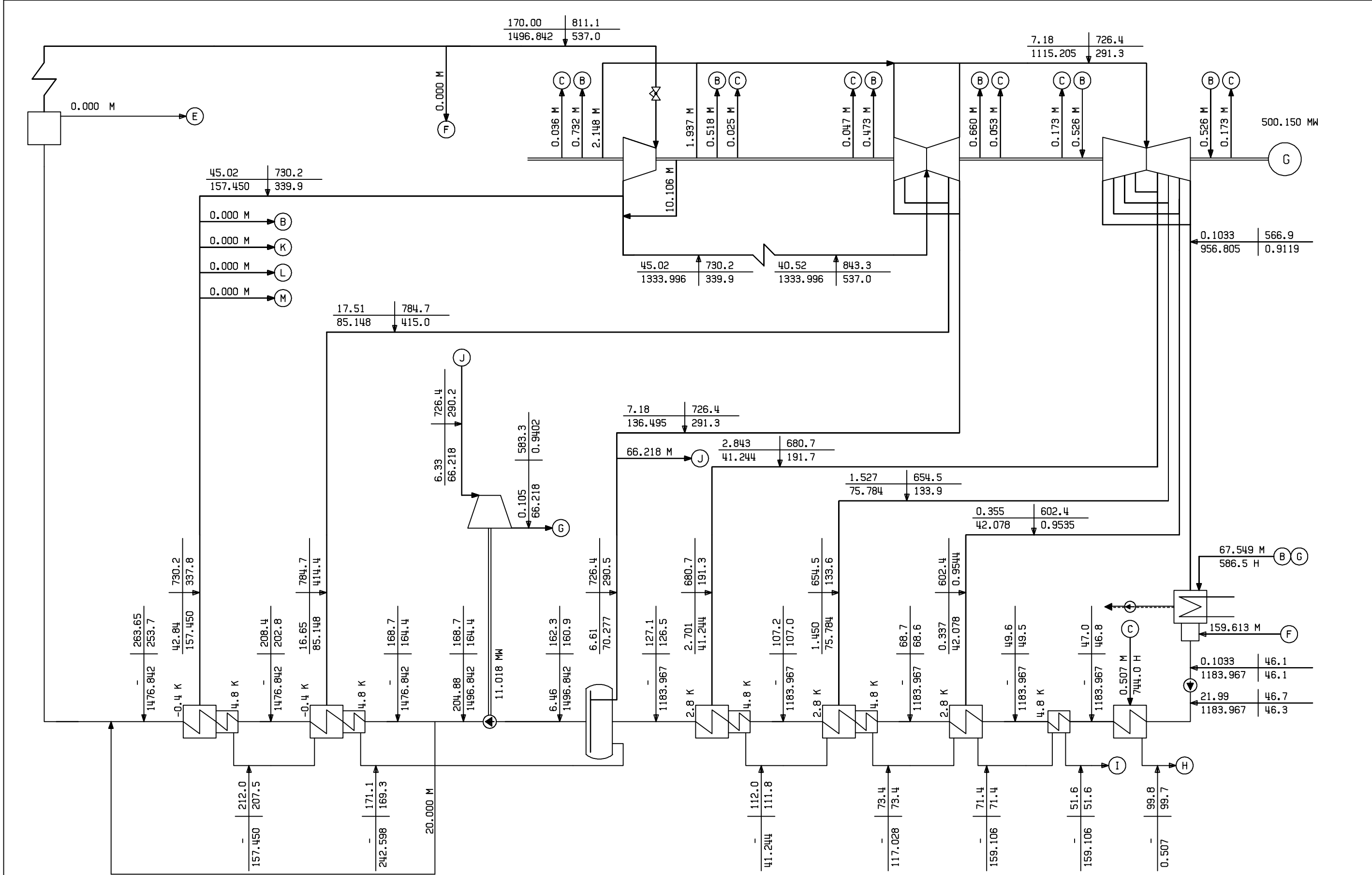
ANDHRA PRADESH POWER GENERATION COMPANY LTD.  
BHOOPALAPALLI THERMAL POWER PROJECT  
(1X500 MW)

CONSULTANT: DESEIN PRIVATE LIMITED. NEW DELHI.

REF.DRG. NO.			BHARAT HEAVY ELECTRICALS LIMITED PROJECTS ENGINEERING MANAGEMENT,NEW DELHI						
	DEPT. M	CODE 20		SCALE NTS	WEIGHT(KG) -	REF TO ASSY DRG. -		ITEM -	
	HEAT BALANCE DIAGRAMS						NAME	SIGN	DATE
						PREP.	AVS		
						CHECKED	AKR		
CDV500						APPD.	IJS		
	DEPT.					DRAWING NOS.			REV
	SIGN			N.A.		PE-DC-245-100-N151 TO PE-DC-245-100-N165			00
	DATE					NO. OF SHEETS 15			

## LIST OF HEAT BALANCE DIAGRAMS

SL No.	DOCUMENT TITLE	DRAWING No.
1	500 MW 0%MU 33 °C COOLING WATER TEMP.	PE-DC-245-100-N151
2	400 MW 0%MU 33 °C COOLING WATER TEMP.	PE-DC-245-100-N152
3	400 MW 0%MU 33 °C COOLING WATER TEMP. SLIDING PRESSURE OPERATION	PE-DC-245-100-N153
4	300 MW 0%MU 33 °C COOLING WATER TEMP.	PE-DC-245-100-N154
5	300 MW 0%MU 33 °C COOLING WATER TEMP. SLIDING PRESSURE OPERATION	PE-DC-245-100-N155
6	200 MW 0%MU 33 °C COOLING WATER TEMP.	PE-DC-245-100-N156
7	200 MW 0%MU 33 °C COOLING WATER TEMP. SLIDING PRESSURE OPERATION	PE-DC-245-100-N157
8	500 MW 3%MU 33 °C COOLING WATER TEMP.	PE-DC-245-100-N158
9	500 MW 3%MU 35 °C COOLING WATER TEMP.	PE-DC-245-100-N159
10	VWO 3%MU 33 °C COOLING WATER TEMP.	PE-DC-245-100-N160
11	VWO 0%MU 33 °C COOLING WATER TEMP.	PE-DC-245-100-N161
12	500 MW 3%MU 33 °C COOLING WATER TEMP. BOTH HP HEATERS OUT OF SERVICE	PE-DC-245-100-N162
13	500 MW 0%MU 33 °C COOLING WATER TEMP. BOTH HP HEATERS OUT OF SERVICE	PE-DC-245-100-N163
14	500 MW 3%MU 33 °C COOLING WATER TEMP. ONE STRING OF HP HEATERS OUT OF SERVICE	PE-DC-245-100-N164
15	500 MW 0%MU 33 °C COOLING WATER TEMP. ONE STRING OF HP HEATERS OUT OF SERVICE	PE-DC-245-100-N165



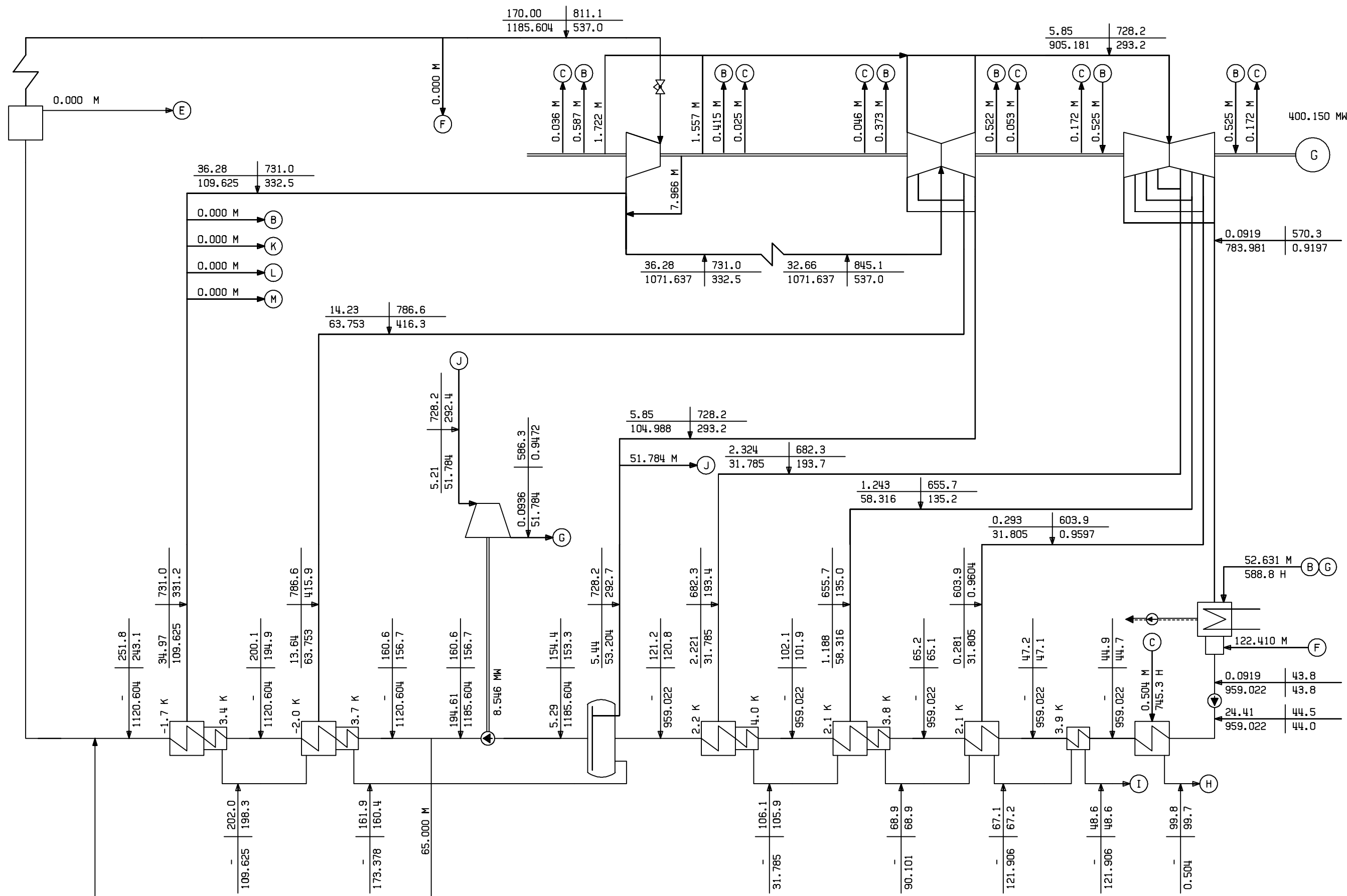
AT	KCAL/KG
T/H	°C (X)

M . . . MASS FLOW . . . T/H  
H . . . ENTHALPY . . . . . KCAL/KG



PREP	
CHKD	
APPD	
DATE	21/11/05

ANDHRA PRADESH POWER GENERATION COMPANY LTD. BHOOPALAPALLI THERMAL POWER PROJECT (1X500 MW)	
BHARAT HEAVY ELECTRICALS LTD PROJECT ENGINEERING MANAGEMENT NEW DELHI	
500MW 0%MU 33 DEG C CW TEMP.	
JOB NO	245
DRG NO	PE - DC - 245 - 100-N151
REV	00



AT      KCAL/KG  
T/H      °C (X)

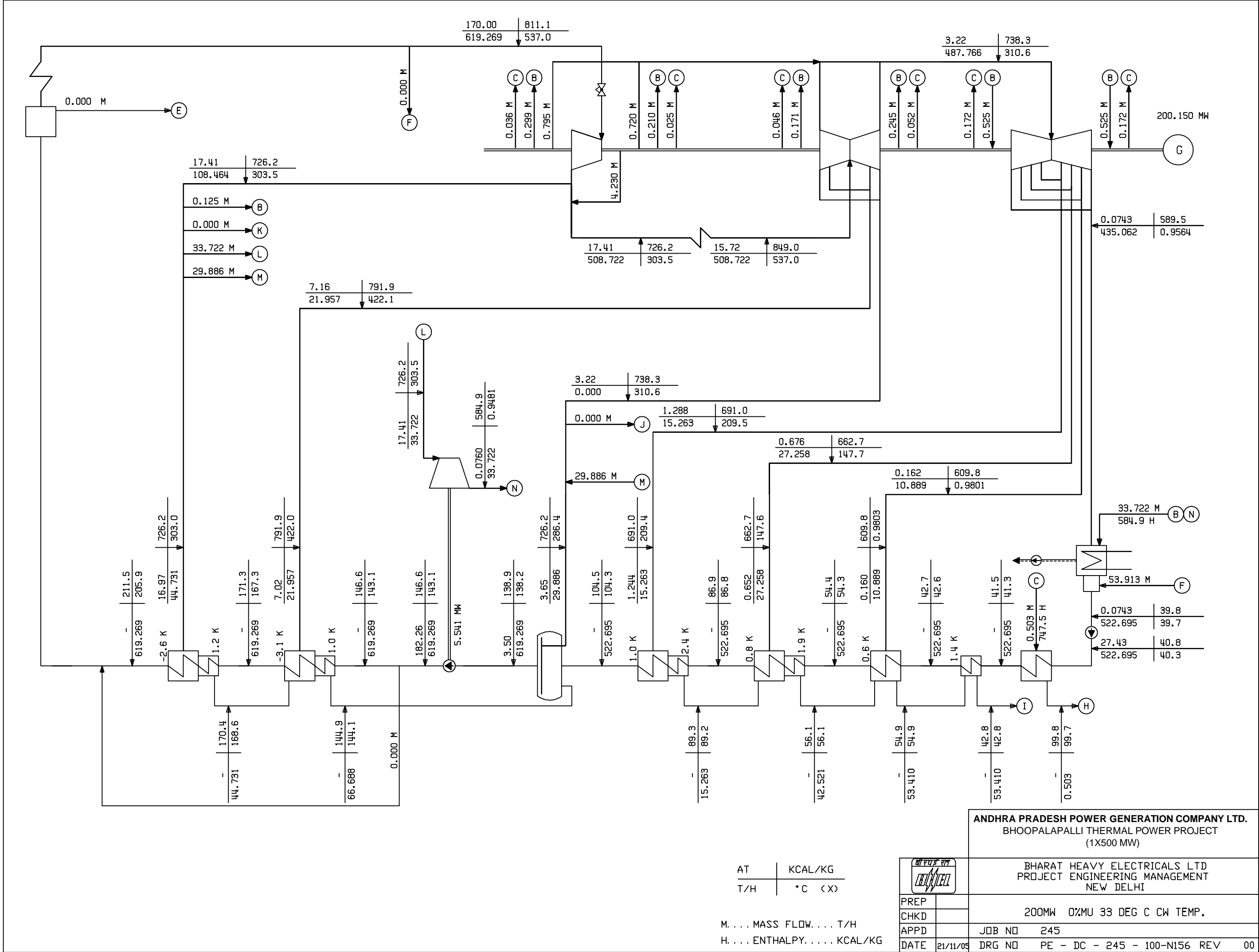
M. . . . MASS FLOW. . . . T/H  
H. . . . ENTHALPY. . . . KCAL/KG

ANDHRA PRADESH POWER GENERATION COMPANY LTD. BHOOPALAPALLI THERMAL POWER PROJECT (1X500 MW)	
BHARAT HEAVY ELECTRICALS LTD PROJECT ENGINEERING MANAGEMENT NEW DELHI	
PREP	400MW 0%MU 33 DEG C CW TEMP.
CHKD	
APPD	JOB NO 245
DATE 21/11/05	DRG NO PE - DC - 245 - 100-N152 REV 00









AT	KCAL/KG
T/H	°C (X)

M. . . . MASS FLOW. . . . T/H  
H. . . . ENTHALPY. . . . KCAL/KG

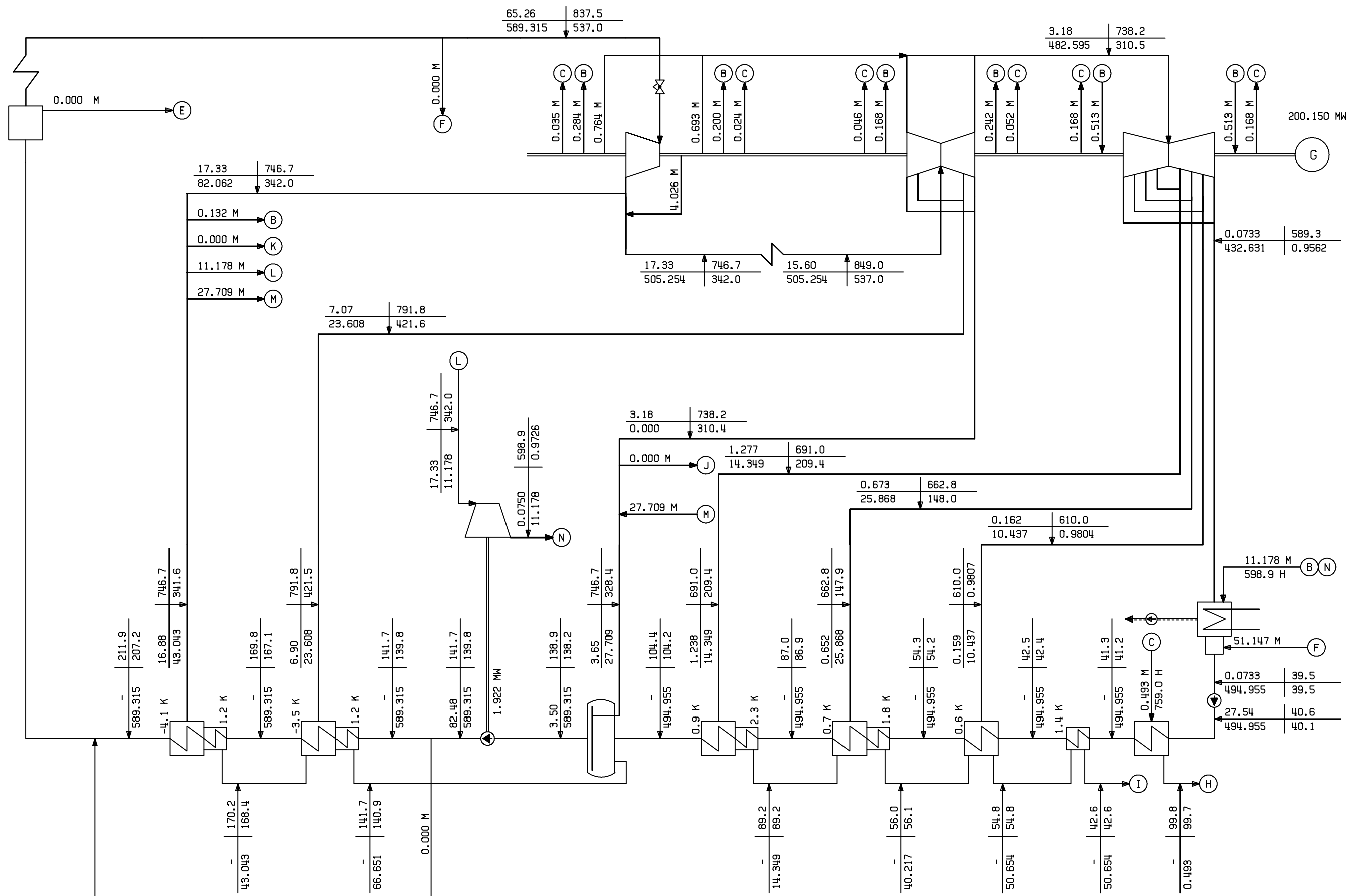


PREP		200MW 0%MU 33 DEG C CW TEMP.
CHKD		
APPD	JOB NO 245	
DATE 21/11/05	DRG NO PE - DC - 245 - 100-N156 REV 00	

ANDHRA PRADESH POWER GENERATION COMPANY LTD.  
BHOOPALAPALLI THERMAL POWER PROJECT  
(1X500 MW)

BHARAT HEAVY ELECTRICALS LTD  
PROJECT ENGINEERING MANAGEMENT  
NEW DELHI





AT	KCAL/KG
T/H	°C (X)

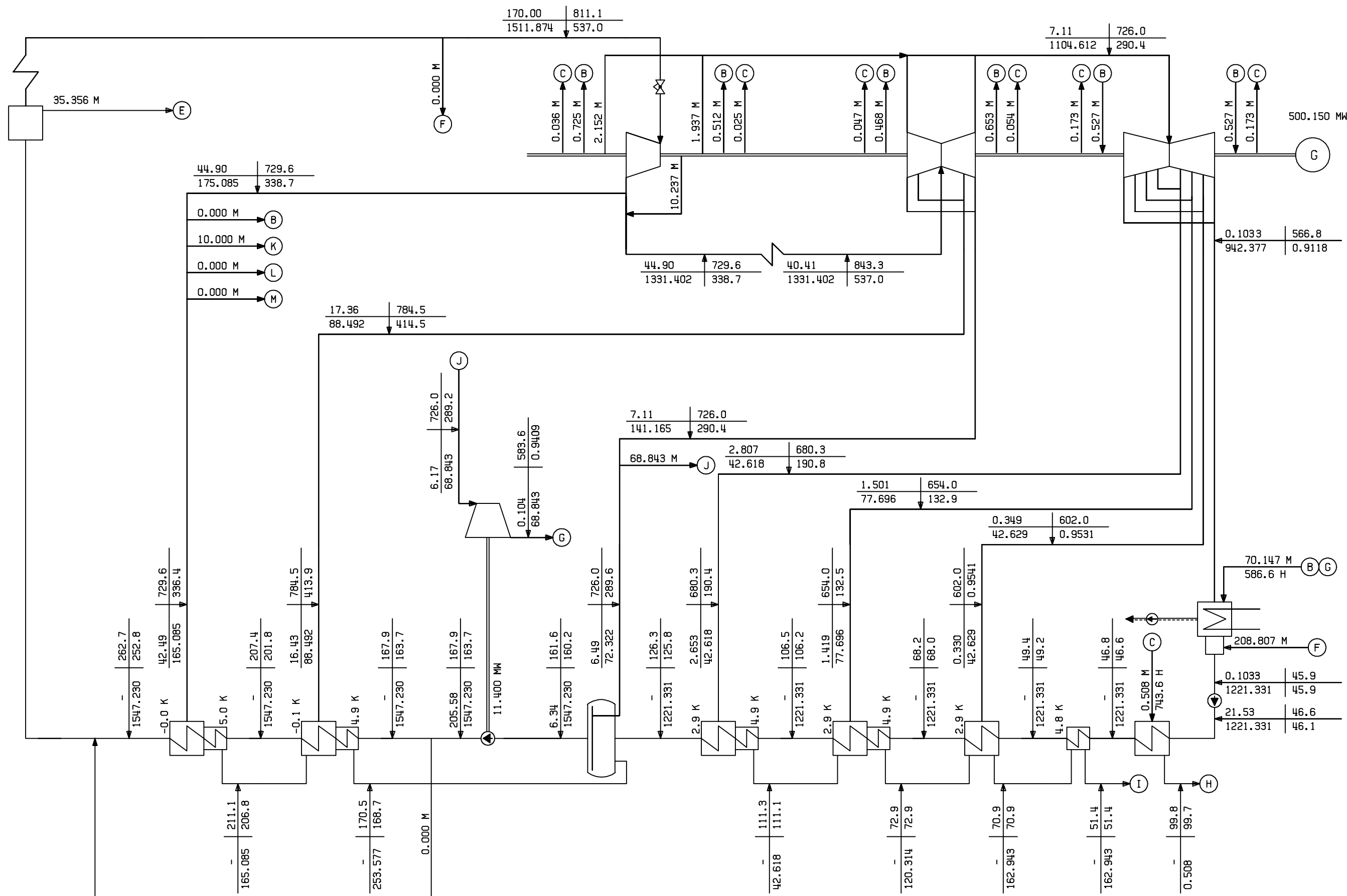
M. . . . MASS FLOW. . . . T/H  
H. . . . ENTHALPY. . . . . KCAL/KG



PREP		200MW 0%MU 33 DEG C CW TEMP.R.
CHKD		SLIDING PRESSURE 0PERATION
APPD	JOB NO	245
DATE	DRG NO	PE - DC - 245 - 100-N157 REV 00

ANDHRA PRADESH POWER GENERATION COMPANY LTD.  
BHOOPALAPALLI THERMAL POWER PROJECT  
(1X500 MW)

BHARAT HEAVY ELECTRICALS LTD  
PROJECT ENGINEERING MANAGEMENT  
NEW DELHI



ANDHRA PRADESH POWER GENERATION COMPANY LTD.  
BHOOPALAPALLI THERMAL POWER PROJECT  
(1X500 MW)

BHARAT HEAVY ELECTRICALS LTD  
PROJECT ENGINEERING MANAGEMENT  
NEW DELHI

500MW 3%MU 33 DEG C CW TEMP.

JOB NO 245

DRG NO PE - DC - 245 - 100-N158 REV 00

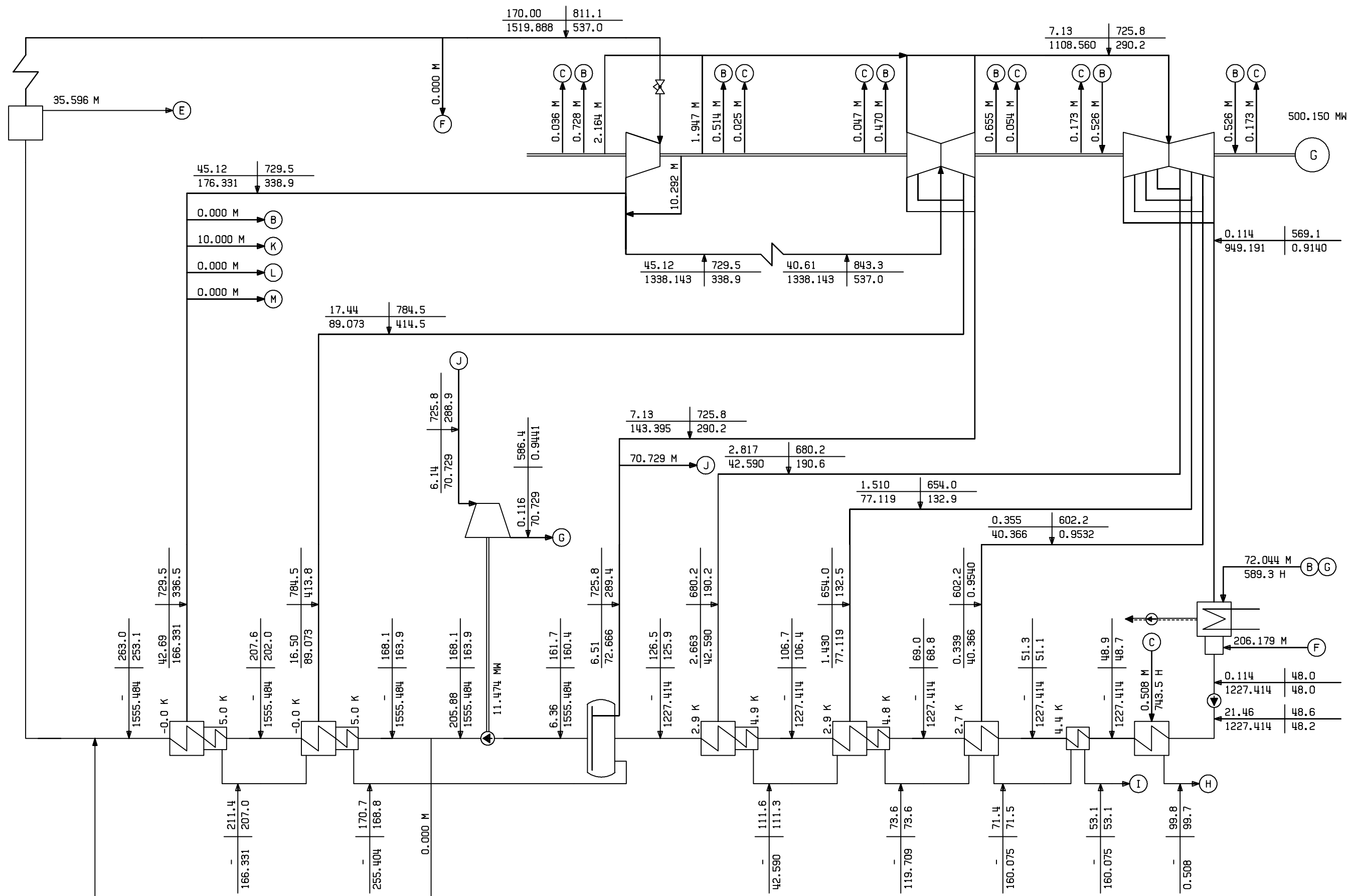
AT	KCAL/KG
T/H	°C (X)

M. . . . MASS FLOW. . . . T/H

H. . . . ENTHALPY. . . . KCAL/KG



PREP	
CHKD	
APPD	
DATE	21/11/05



ANDHRA PRADESH POWER GENERATION COMPANY LTD.  
BHOOPALAPALLI THERMAL POWER PROJECT  
(1X500 MW)

BHARAT HEAVY ELECTRICALS LTD  
PROJECT ENGINEERING MANAGEMENT  
NEW DELHI

500MW 3%MU 35 DEG C CW TEMP.

JOB NO 245

DRG NO PE - DC - 245 - 100-N159 REV 00

AT	KCAL/KG
T/H	°C (X)

M. . . . MASS FLOW. . . . T/H

H. . . . ENTHALPY. . . . KCAL/KG



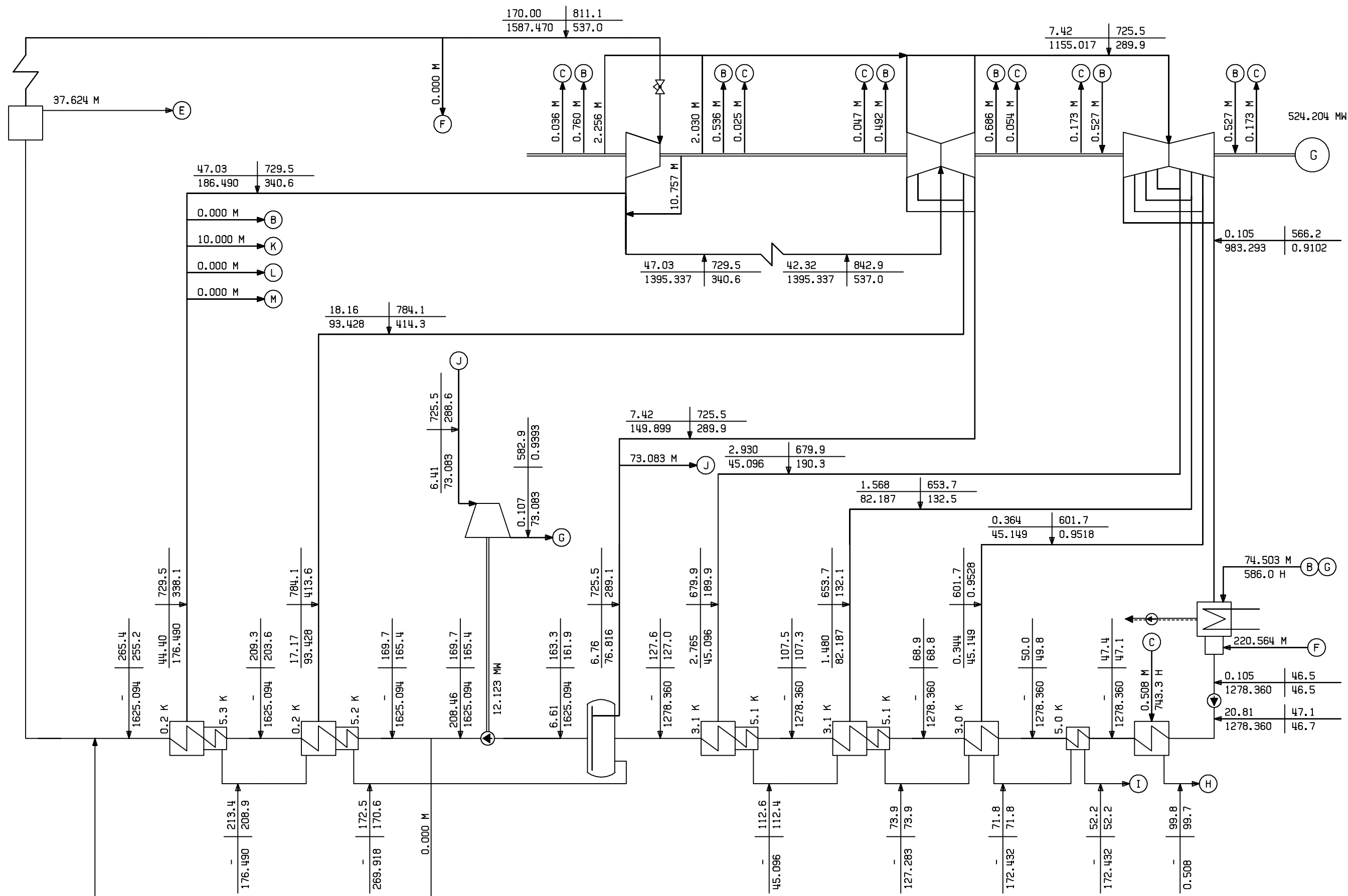
PREP

CHKD

APPD

DATE

21/11/05



AT	KCAL/KG
T/H	°C (X)

M. . . . MASS FLOW. . . . T/H  
H. . . . ENTHALPY. . . . KCAL/KG

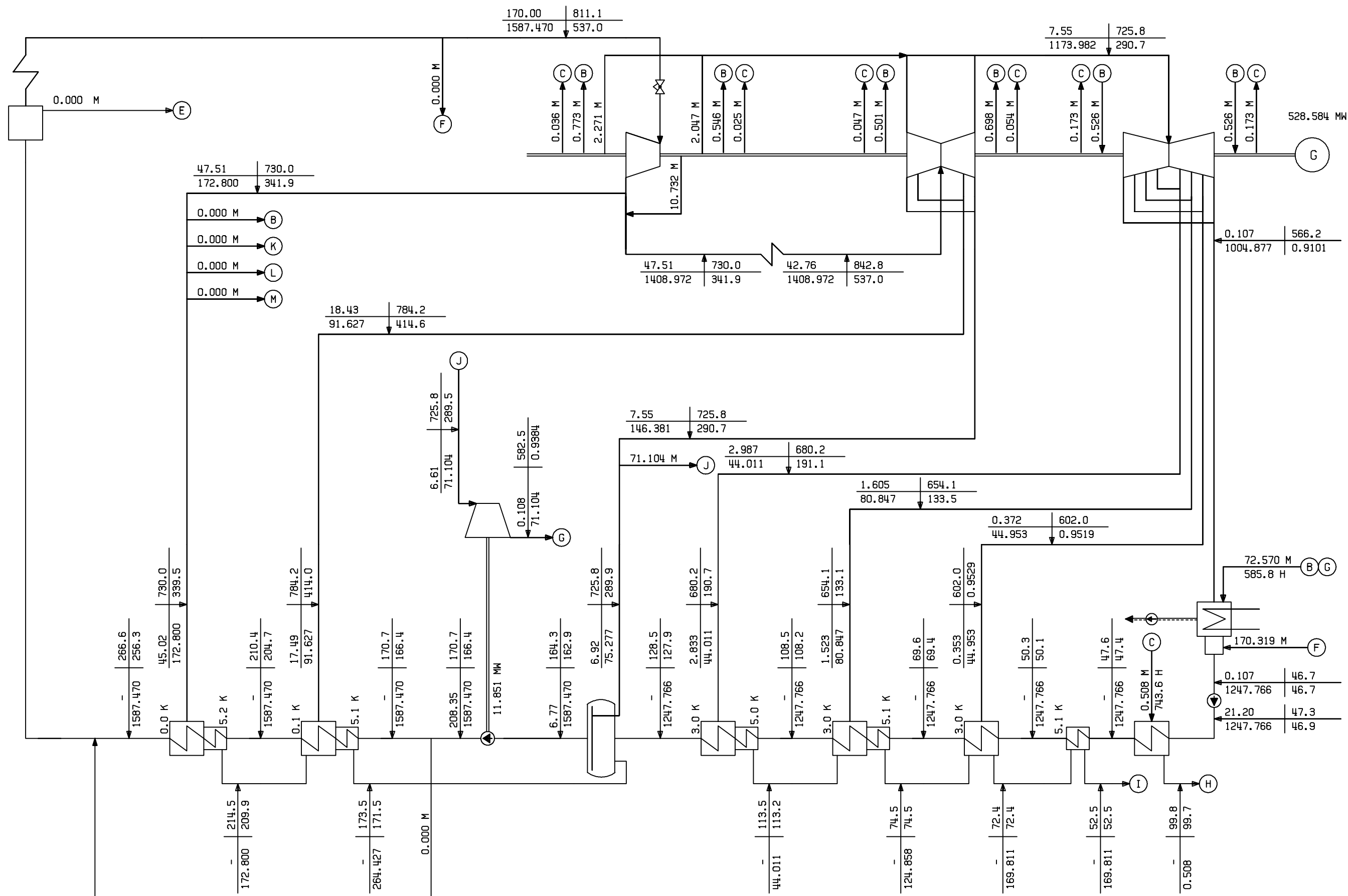


PREP	
CHKD	
APPD	
DATE	21/11/05

ANDHRA PRADESH POWER GENERATION COMPANY LTD.  
BHOOPALAPALLI THERMAL POWER PROJECT  
(1X500 MW)

BHARAT HEAVY ELECTRICALS LTD  
PROJECT ENGINEERING MANAGEMENT  
NEW DELHI

JOB NO	245
DRG NO	PE - DC - 245 - 100-N160
REV	00



ANDHRA PRADESH POWER GENERATION COMPANY LTD.  
BHOOPALAPALLI THERMAL POWER PROJECT  
(1X500 MW)

BHARAT HEAVY ELECTRICALS LTD  
PROJECT ENGINEERING MANAGEMENT  
NEW DELHI

VW0 0%MU 33 DEG C CW TEMP.

JOB NO 245

DRG NO PE - DC - 245 - 100-N161 REV 00

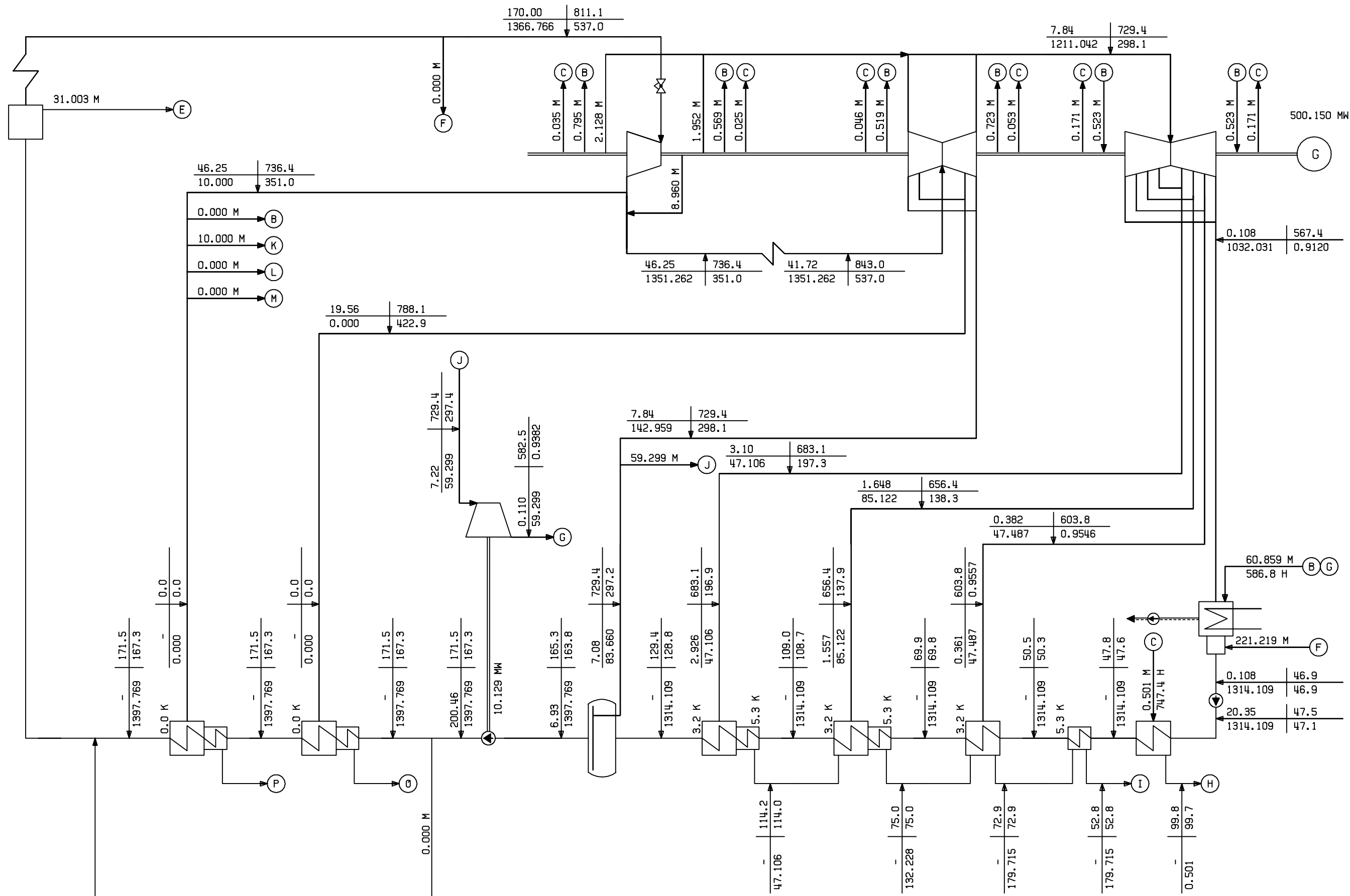
AT	KCAL/KG
T/H	°C (X)

M . . . MASS FLOW . . . T/H

H . . . ENTHALPY . . . . . KCAL/KG

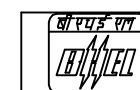


PREP	
CHKD	
APPD	
DATE	21/11/05



ANDHRA PRADESH POWER GENERATION COMPANY LTD.  
BHOOPALAPALLI THERMAL POWER PROJECT  
(1X500 MW)

BHARAT HEAVY ELECTRICALS LTD  
PROJECT ENGINEERING MANAGEMENT  
NEW DELHI

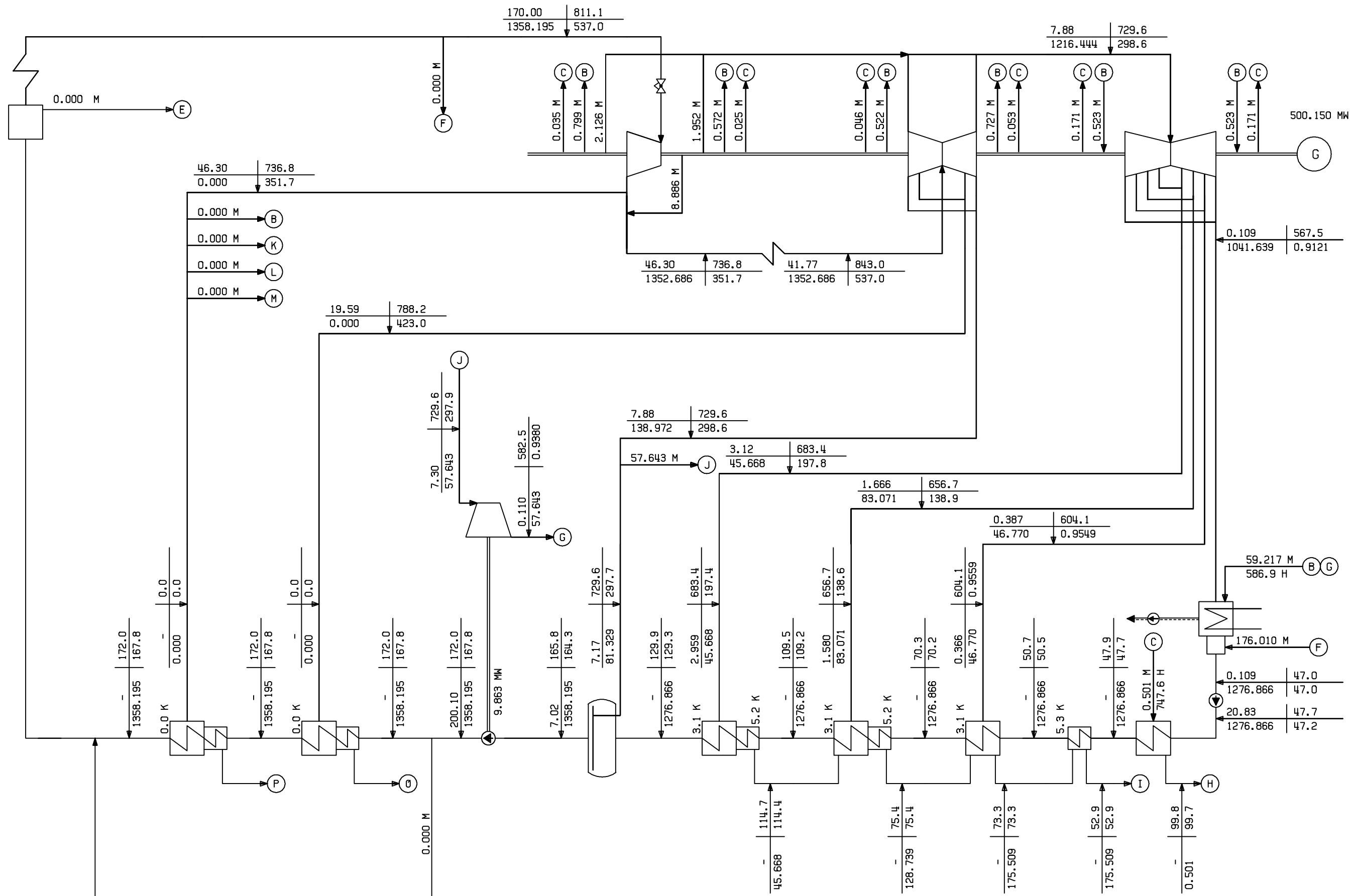


PREP		500MW 3%MU 33 DEG C CW TEMP
CHKD		BOTH HP HEATERS OUT OF SERVICE
APPD	JOB NO	245
DATE	DRG NO	PE - DC - 245 - 100-N162 REV 00

AT	KCAL/KG
T/H	°C (X)

M. . . . MASS FLOW. . . . T/H

H. . . . ENTHALPY. . . . KCAL/KG



AT	KCAL/KG
T/H	°C (X)

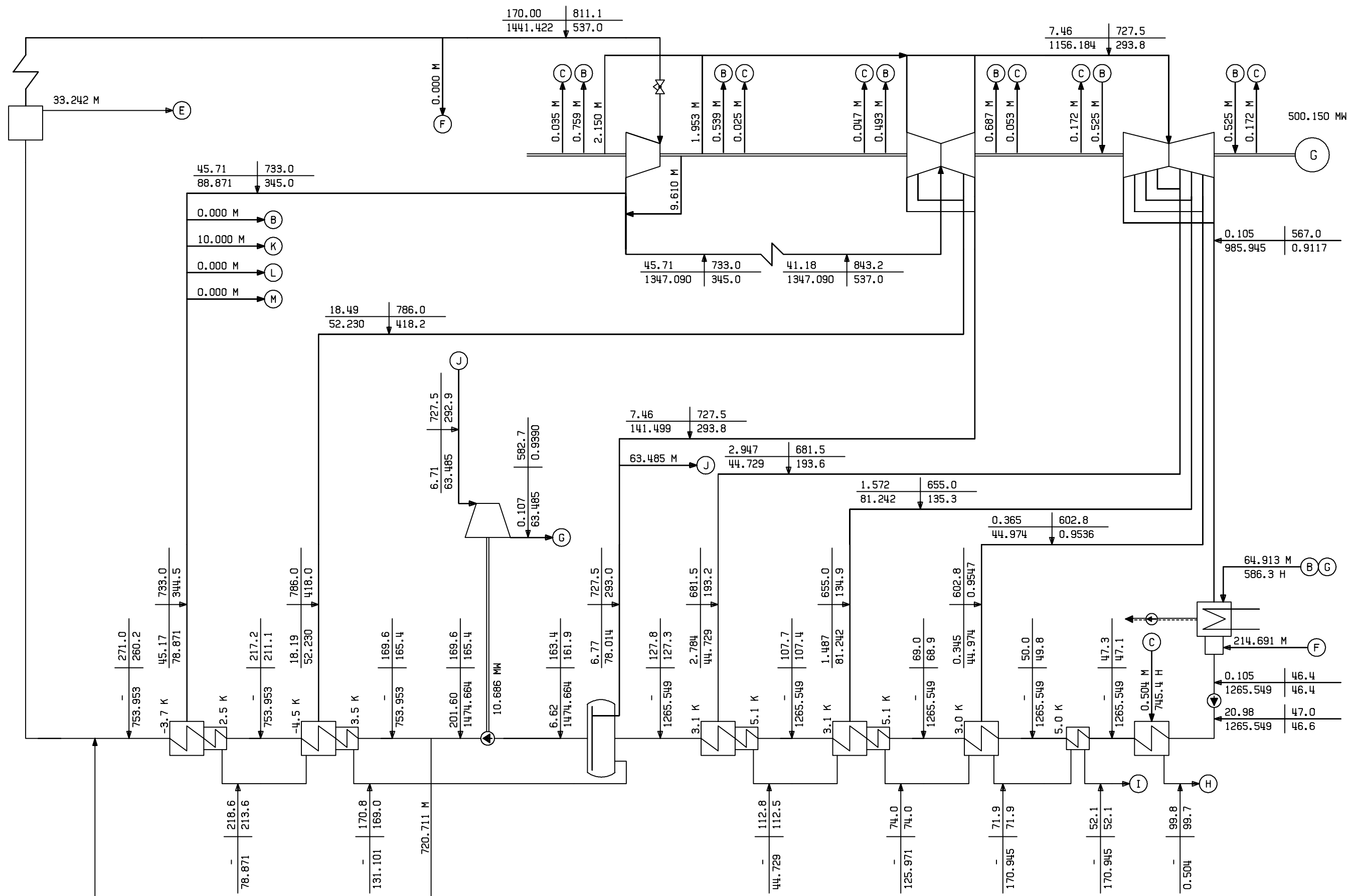
M. . . . MASS FLOW. . . . T/H  
H. . . . ENTHALPY. . . . KCAL/KG



PREP		500MW 0%MU 33 DEG C CW TEMP
CHKD		BOTH HP HEATERS OUT OF SERVICE
APPD	JOB NO	245
DATE	DRG NO	PE - DC - 245 - 100-N163 REV 00

ANDHRA PRADESH POWER GENERATION COMPANY LTD.  
BHOOPALAPALLI THERMAL POWER PROJECT  
(1X500 MW)

BHARAT HEAVY ELECTRICALS LTD  
PROJECT ENGINEERING MANAGEMENT  
NEW DELHI



ANDHRA PRADESH POWER GENERATION COMPANY LTD.  
BHOOPALAPALLI THERMAL POWER PROJECT  
(1X500 MW)

BHARAT HEAVY ELECTRICALS LTD  
PROJECT ENGINEERING MANAGEMENT  
NEW DELHI



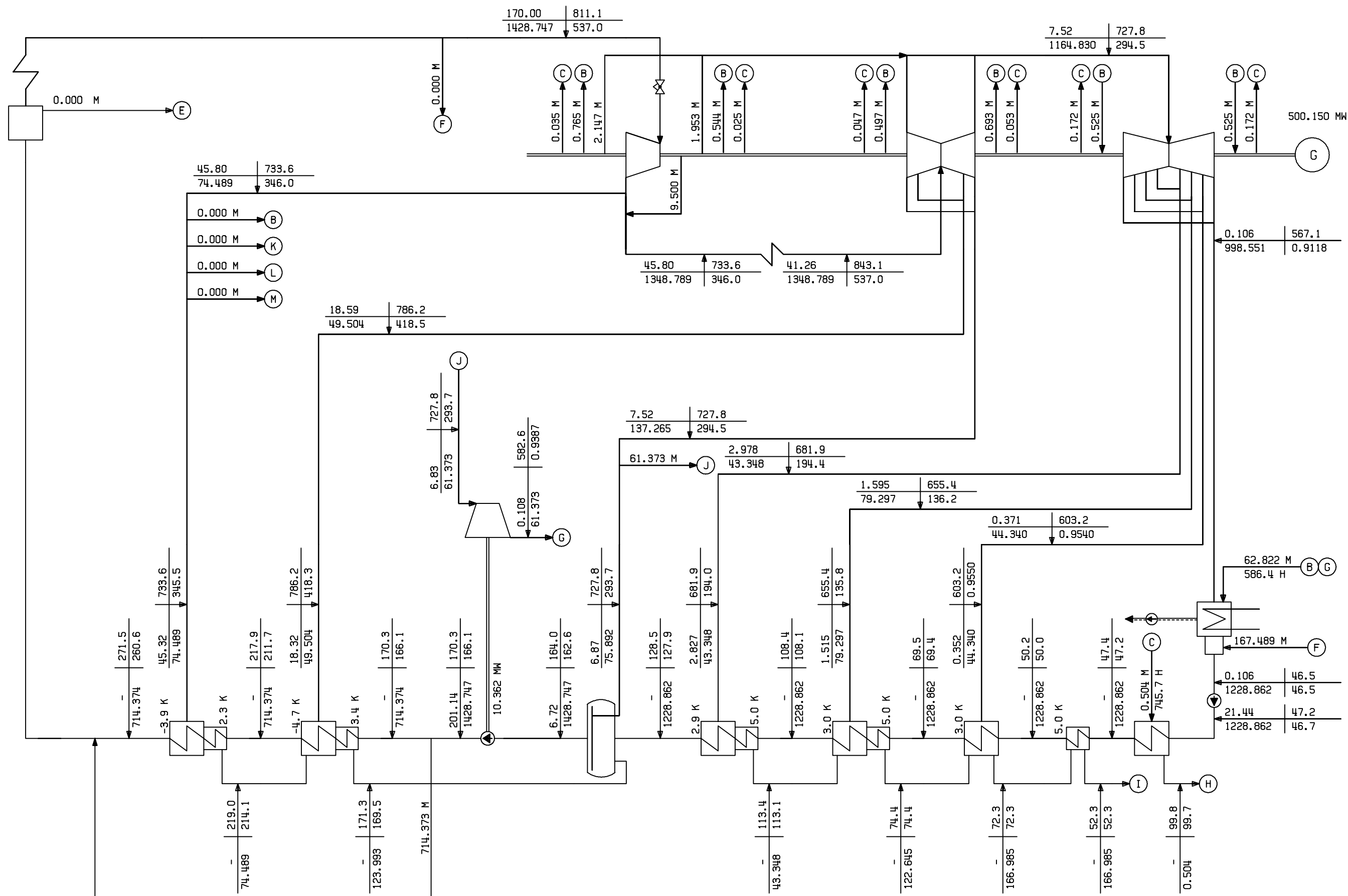
PREP		500MM 3%MU 33 DEG C CW TEMP
CHKD		ONE STRING OF HP HEATERS OUT
APPD	JOB NO	245
DATE	DRG NO	PE - DC - 245 - 100-N164 REV 00

AT	KCAL/KG
T/H	°C (X)

M. . . . MASS FLOW. . . . T/H

H. . . . ENTHALPY. . . . KCAL/KG





ANDHRA PRADESH POWER GENERATION COMPANY LTD.  
BHOOPALAPALLI THERMAL POWER PROJECT  
(1X500 MW)

BHARAT HEAVY ELECTRICALS LTD  
PROJECT ENGINEERING MANAGEMENT  
NEW DELHI



PREP		500MW 0%MU 33 DEG C CW TEMP
CHKD		ONE STRING OF HP HEATERS OUT
APPD	JOB NO	245
DATE	DRG NO	PE - DC - 245 - 100-N165 REV 00

AT      KCAL/KG  
T/H      °C (X)  
  
M. . . . MASS FLOW. . . . T/H  
H. . . . ENTHALPY. . . . KCAL/KG