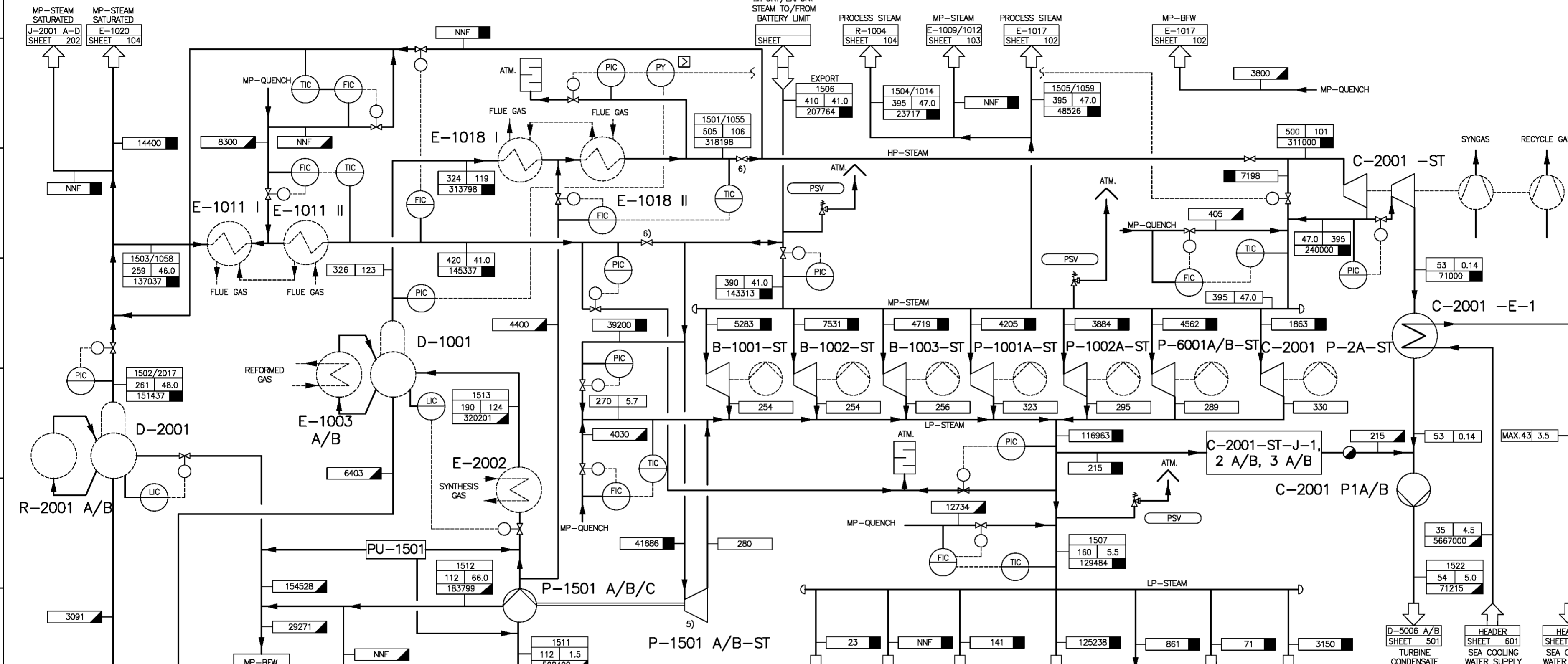


R-2001 A/B WATER COOLED METHANOL REACTOR
 D-2001 STEAM DRUM
 E-1011 I/II MP-STEAM SUPERHEATER 65.3 GJ/H
 E-1003 A/B PREHEATER GAS BOILER 591.5 GJ/H
 D-1001 HP-STEAM DRUM
 PU-1501 DOSING PACKAGE BFW CHEMICAL
 E-2002 PREHEATER HP-BFW 109.0 GJ/H
 E-1018 I/II HP-STEAM SUPERHEATER 228.8 GJ/H
 B-1001-ST STEAM TURBINE FOR COMBUSTION AIR FAN 503 KW 8)
 B-1002-ST STEAM TURBINE FOR FLUE GAS FAN 848 KW 8)
 B-1003-ST STEAM TURBINE FOR FAN FIRED HEATER 400 KW 8)
 P-1001 A-ST STEAM TURBINE FOR SATURATOR CIRCULATION PUMP 94.3 KW 8)
 P-6001 A/B-ST STEAM TURBINE FOR SWEET COOLING WATER PUMP 105 KW 8)
 C-2001-ST TURBINE FOR SYNGAS COMPRESSOR 34922 KW 8)
 C-2001-E-1 CONDENSER FOR C-2001 ST 145.0 GJ/H
 P-1501 A/B/C HP/MP-BFW PUMP 1401KW 8)
 P-1501 A/B-ST STEAM TURBINE FOR HP/MP-BFW PUMP 1550 KW 8)
 P-1002 A-ST STEAM TURBINE FOR PROCESS CONDENSATE PUMP 150 KW 8)
 C-2001 P-2A-ST STEAM TURBINE FOR LUBE OIL PUMP 48 KW 8)
 C-2001-ST-J-1, 2 A/B, 3A/B STEAM EJECTOR
 C-2001 P1A/B TURBINE CONDENSATE PUMP 48 KW 8)

- NOTES:
 1) PRESSURES ARE ABSOLUTE UNLESS OTHERWISE INDICATED.
 2) STANDARD VAPOR CONDITIONS: 15°C, 1.01325 BAR (23.6449 SM3/KMOL)
 3) NNF : NORMALLY NO FLOW:
 4) IN SPECIAL CASES THIS LINE IS USED AS STEAM IMPORT LINE.
 5) P-1501A/B: STEAM TURBINE DRIVERS P-1501A/B-ST
 6) NORMALLY OPEN
 7) DELETED
 8) RATED POWER



LEGEND:

LIQUIDS	
STREAM NO.	°C BAR
KG/H	KG/H
KG/H	SM3/H
SM3/H	°C BAR
GASES	
STREAM NO.	°C BAR
°C BAR	SM3/H
SM3/H	°C BAR
STEAM	
°C BAR	KG/H
KG/H	KG/H
TEMPERATURE	
°C	°C BAR
°C	°C BAR

Stream No.	1501/1055	1502/2017	1503/1058	1504/1014	1505/1059	1506	1507	1511	1512	1513	1522
Process Stream	Superheated HP- Steam	Sat-MP- Steam	Sat-MP- Steam	Process Steam to R-1004	Process Steam to E-1017	Export Steam to B.L.	LP- Steam Header	BFW	MP-BFW	HP-BFW	Turbine Condensate
Comp.	Vapor		Vapor		Vapor		Vapor		Liquid		Liquid
	kmol/h	mol %	kmol/h	mol %	kmol/h	mol %	kmol/h	mol %	kmol/h	mol %	kmol/h
CO2	44.010										
CO	28.010										
H2	2.016										
CH4	18.043										
N2	28.016										
O2	32.000										
H2O	18.015	17662.0	8406.2	100.00	7806.8	100.00	1316.5	100.00	2893.7	100.00	11532.8
C43CH	32.042										
C2H6	30.068										
C3H8	44.098										
C4H10	58.123										
C5H12	72.151										
Argon	39.948										
Low Boilers											
High Boilers											
Total Flow	kmol/h	17662.0	8406.2	7806.8	1316.5	2893.7	11532.8	7187.8	28203.4	10202.5	3953.0
Total Flow	kg/h	318198	151437	137037	23717	48528	207764	129484	508400	183799	320201
Total Flow	Sm ³ /h										
Molecular Weight	kg/kmol	18.015	18.015	18.015	18.015	18.015	18.015	18.015	18.015	18.015	18.015
Stand. Dens.	kg/Sm ³	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Eff. Density	kg/m ³	32.56	24.29	23.22	18.33	13.73	2.86	949.75	952.58	883.32	986.33
Specific Heat	kJ/kg°C	2.62	4.13	4.04	2.44	2.36	2.32	4.23	4.22	4.40	4.19
Viscosity	cP	0.029	0.019	0.019	0.024	0.025	0.015	0.249	0.248	0.141	0.509
Enthalpy	GJ/h	1070.13	423.44	383.41	75.63	163.67	629.58	357.99	230.20	80.08	280.94
Temperature	°C	505	261	259	395	410	112	112	190	190	54
Pressure	bar abs	107.0	48.0	48.0	47.0	47.0	5.5	1.5	68.0	124.0	5.0
Liquid Molar Fraction							1.00	1.00	1.00	1.00	1.00

4	GRELAK	12.01.04	ZMM	LAE	12.01.04	AFD	ZAGROS COMMENTS 25-IF/A-032 INCLUDED
3	GRELAK	15.04.03	ZMM	LAE	17.04.03	AFD	REVISION ACC. DETAIL DESIGN
2	DRHJ	27.11.01	ZMM	HERRL	27.11.01	AFD	REVISION ZAGROS COMMENTS INCLUDED
1	DRHJ	23.10.01	ZMM	HERRL	23.10.01	AFD	REVISION ZAGROS COMMENTS INCLUDED
0	DRHJ	13.07.01	ZMM	HERRL	13.07.01	FI	FIRST ISSUE

REV. / P/S NAME DATE NAME NAME DATE STATUS

PREPARED/CHANGED CHECKED APPROVED

KIND OF REVISION

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ZPC PROJ. NO. 40404277 DWG. NO. 1175

SCALE: ORIGINAL SIZE: A1

NOMINATION: STEAM SYSTEM UNIT 150

BASIC DOCUMENT: PROCESS FLOW DIAGRAM SHEET 151

DCC DG DL-NO. 011430

JOB NAME: LURGI JOB NO: MEGA METHANOL IRAN LURGI DOCUMENT NO: 169666-01 02041

EDV-IDNET-NO.: IGS7 E:\PIPE\696660\PFDR\ D-02038.PID 010 12.01.04 RP IGW60