

P 301 A/B
LIGHT OIL PUMPS

CT 301
TURBINE OF
CRACKED GAS
COMPRESSOR

E 301
FIRST STAGE
DISCHARGE COOLER

D 302
SECOND STAGE
SUCTION DRUM

C 301
CRACKED GAS
COMPRESSOR

E 302
SECOND STAGE
DISCHARGE COOLER

D 303
THIRD STAGE
SUCTION DRUM

E 303
THIRD STAGE
DISCHARGE COOLER

D 304
4TH STAGE
SUCTION DRUM

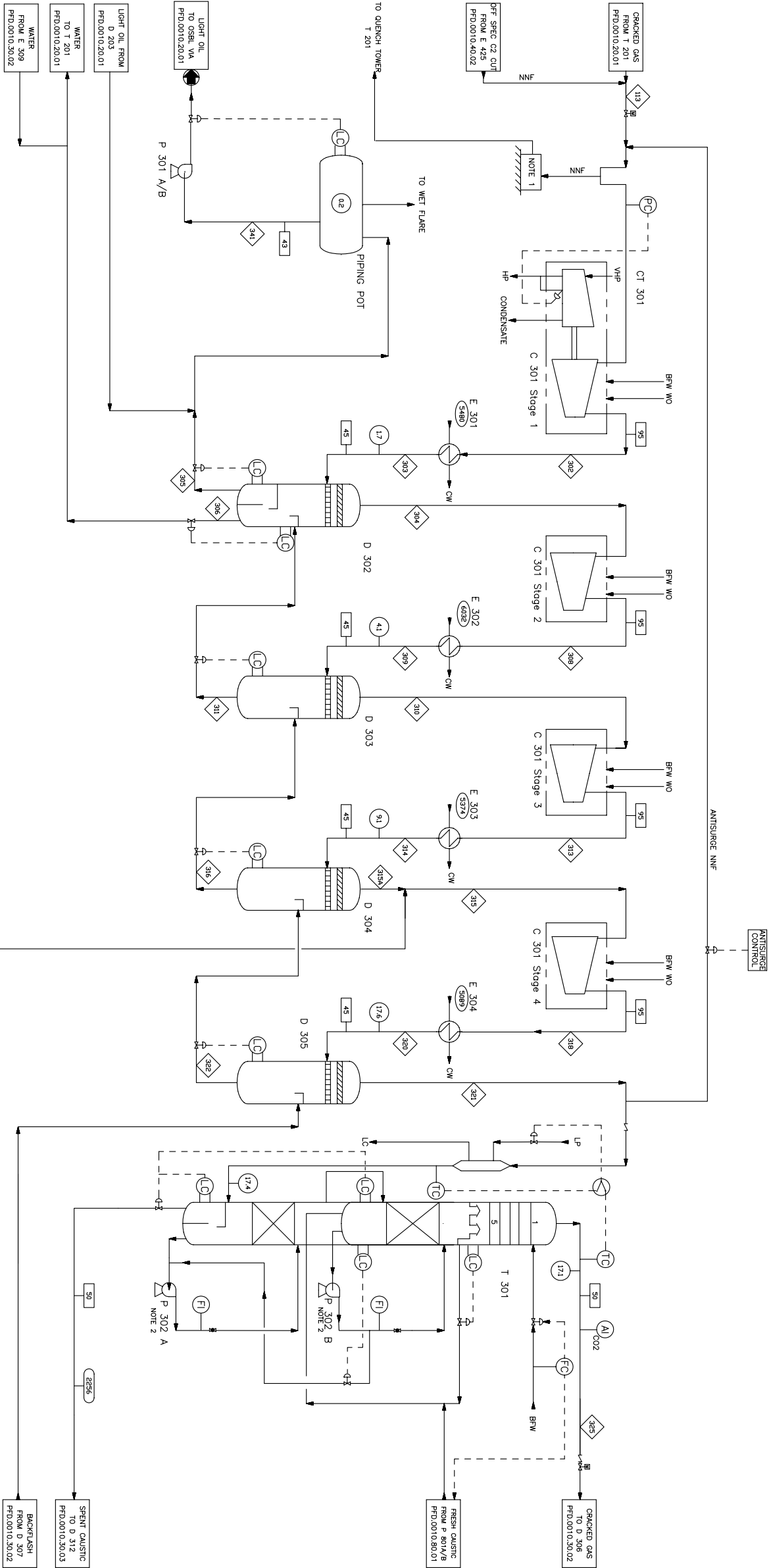
E 304
4TH STAGE
DISCHARGE COOLER

D 305
4TH STAGE
DISCHARGE DRUM

T 301
CAUSTIC WASH
TOWER

P 302 A/B/C
CAUSTIC 300A
CIRCULATION
PUMPS
NOTE 2

- 1 - PUMPING TRAP
- NOTES
- 2 - PUMP P 302 C IS THE COMMON SPARE FOR P 302 A
& P 302 B



Stream number	113	304	305	306	310	311	315	316	321	322	325	341	447
Description	CG from T 201	CG from D 302	Light oil from D 302	Water from D 303	Liquid from D 303	Liquid from 8th section	Liquid from D 304	CG from D 305	Liquid from D 306	CG from D 306	Light oil to P 301	CG from D 307	CG from D 307
Phase	Vapor	Vapor	Liquid	Liquid	Vapor	Liquid	Liquid	Vapor	Liquid	Vapor	Vapor	Vapor	Vapor
Vapor fraction	100.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
Operating temperature	°C	40.0	44.5	37.9	39.2	44.9	40.8	44.2	45.0	25.5	48.9	42.7	42.0
Operating pressure	bar g	0.50	1.63	1.63	4.08	4.08	9.01	9.01	17.52	17.09	17.09	0.20	9.40
Mass flow	kg/h	128916	127184	304	9407	125087	7708	141486	4802	141053	2864	141228	399
Molar flow	kmol/h	6840	6844	3	522	6729	414	7541	254	7517	147	7529	874
Actual volume flow	m ³ /h	120019	68316	0.3	9	34624	8	19422	5	10294	3	10752	0.4
Water	MMW = 18.0	wt%	3.46	0.01	100.00	1.84	96.12	0.84	93.96	0.54	88.74	0.70	0.01
Hydrogen	MMW = 2.0	wt%	3.80	0.00	0.00	3.57	0.00	3.57	0.00	3.59	0.00	3.58	0.00
Methane	MMW = 16	wt%	4.99	5.06	0.00	5.15	0.00	9.32	0.00	9.34	0.01	9.33	0.00
CO	MMW = 28.0	wt%	0.10	0.10	0.00	0.00	0.11	0.00	0.11	0.00	0.11	0.00	0.00
CO2	MMW = 44.0	wt%	0.04	0.04	0.00	0.00	0.04	0.00	0.03	0.00	0.03	0.00	0.00
H2S	MMW = 34.1	wt%	0.01	0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00
Acetylene	MMW = 26.0	wt%	0.36	0.37	0.01	0.00	0.37	0.00	0.36	0.01	0.36	0.00	0.22
Ethylene	MMW = 28.0	wt%	48.25	48.92	0.30	0.00	50.76	0.03	50.64	0.12	50.80	0.07	46.50
Propylene	MMW = 42.1	wt%	32.15	32.59	0.56	0.00	33.14	0.04	30.99	0.15	31.09	0.48	31.05
MAPO	MMW = 40.1	wt%	0.02	0.02	0.00	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.00
Propane	MMW = 44.1	wt%	1.10	1.11	0.26	0.00	1.13	0.01	1.01	0.03	1.01	0.06	0.13
C4s	MMW = 54	wt%	1.45	1.46	96.04	0.00	1.47	3.68	1.29	8.53	1.29	97.75	0.00
Density	kg/m ³	1.07	1.86	917	997	3.61	994	7.28	992	13.70	986	13.14	988
Viscosity	cP	0.012	0.012	0.614	0.662	0.012	0.730	0.624	0.013	1.040	0.013	0.932	0.012
Specific heat	KJ/kg °C	2.196	2.220	1.641	4.180	2.240	4.082	2.243	4.082	2.284	3.935	2.303	1.416
Thermal conductivity	W/m °C	0.053	0.054	0.136	0.630	0.055	0.584	0.053	0.567	0.054	0.516	0.055	0.144
Enthalpy	KJ	-21351	-20505	30	-41262	-12866	-32476	-16121	-19179	-13716	-11272	-14010	-27

DEWATERING OVRH
FROM E 407
PFD.0010.040.01

SPENT CAUSTIC
TO D 312
PFD.0010.30.03

BACKFLUSH
FROM D 307
PFD.0010.30.02

BOL-OFF FROM
TK 702
PFD.0010.70.01

LEGEND:

- ◇ STREAM NUMBER
- PRESSURE (barg)
- TEMPERATURE (°C)
- DUTY (kW)
- FLOWRATE (kg/h)

GENERAL NOTE:

ALL STREAM NUMBERS REFER TO HEAT AND MATERIAL BALANCES

7273F-000-CN-0001-3001.

OWNERS:

NATIONAL PETROCHEMICAL INDUSTRIES

DEVELOPMENT MANAGEMENT COMPANY

PROJECT: **KHARG ETHYLENE PLANT - KHARG OLEFIN COMPLEX - IRAN**

CONTRACTOR: **Technip**

DRAWING TITLE: **SECTION 30**

CONTRACTOR: **LP COMPRESSION AND CAUSTIC WASH**

DWG. N°: **7273F-000-PFD-0010-30-01**

DWG. N°:

Rev. 1

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