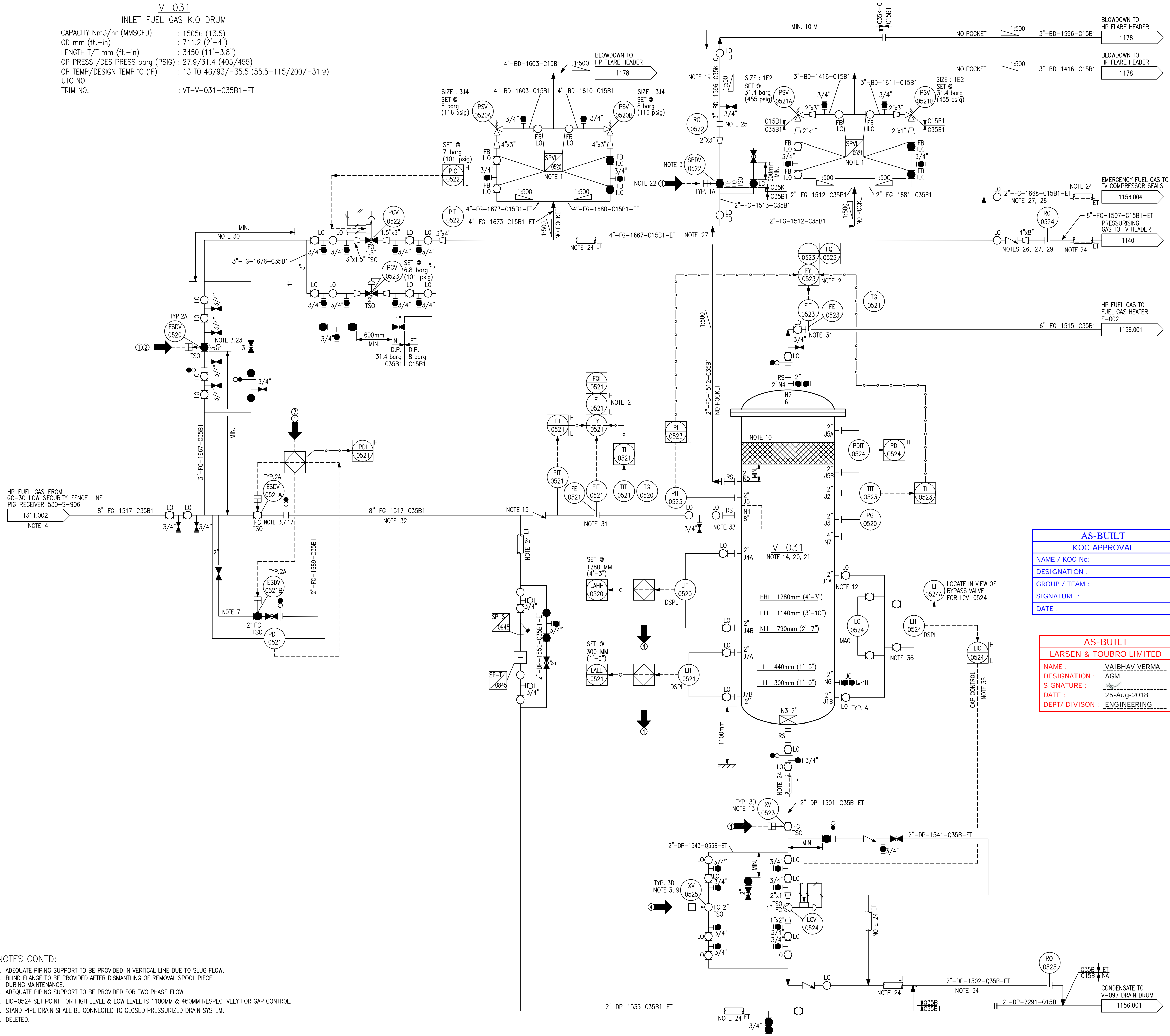


V-031

INLET FUEL GAS K.O DRUM

CAPACITY Nm³/hr (MMSCFD) : 15056 (13.5)
OD mm (ft.-in) : 711.2 (2'-4")
LENGTH T/T mm (ft.-in) : 3450 (11'-3.8")
OP PRESS /DES PRESS barg (PSIG) : 27.9/31.4 (405/455)
OP TEMP/DESIGN TEMP °C (°F) : 13 TO 46/93/-35.5 (55.5-115/200/-31.9)
UTC NO. :
TRIM NO. : VT-V-031-C35B1-ET



NOTES CONTD:

32. ADEQUATE PIPING SUPPORT TO BE PROVIDED IN VERTICAL LINE DUE TO SLUG FLOW.
33. BLIND FLANGE TO BE PROVIDED AFTER DISMANTLING OF REMOVAL SPOOL PIECE DURING MAINTENANCE.
34. ADEQUATE PIPING SUPPORT TO BE PROVIDED FOR TWO PHASE FLOW.
35. LIC-0524 SET POINT FOR HIGH LEVEL & LOW LEVEL IS 1100MM & 460MM RESPECTIVELY FOR GAP CONTROL.
36. STAND PIPE DRAIN SHALL BE CONNECTED TO CLOSED PRESSURIZED DRAIN SYSTEM.
37. DELETED.

GENERAL NOTES:

- A. FOR STANDARD SYMBOLS AND NOMENCLATURE SEE DRAWINGS 50489-530-020-PID-1104.001 & .002.
B. ALL EQUIPMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 530-..
C. ALL INSTRUMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 030-..
D. FOR TYPICAL INSTRUMENT CONNECTION, SBDV, XV, MOV & ESDV DETAILS SEE DRAWINGS 50489-530-020-PID-1106.001, .002, .003, .004, .005, .006 & .007.
E. FOR MISCELLANEOUS PIPING TYPICAL VALVING, DRAINAGE & GENERAL ARRANGEMENT OF LEVEL INSTRUMENTS, PUMPS, STRAINERS & CONTROL VALVES SEE DRAWINGS 50489-530-020-PID-1108.001 TO 1108.010.
F. DRAWING NUMBERS SHOWN IN P&ID CONTINUATION BOXES ARE ABBREVIATED SHOWING DRAWING SEQUENTIAL NUMBERS ONLY. THE FULL FORM OF THE DRAWING NUMBER IS 50489-530-020-PID-XXXX.SHT.NO.
G. FOR MATERIAL SELECTION DIAGRAM SEE DRAWINGS 50489-530-020-MSD-1001.001 TO 1023.
H. DETAIL NUMBERING FOR CI, SC, CC & CP SEE DRAWING 50489-530-020-PID-1108.003.
I. PAINTING & COATING ARE IN ACCORDANCE WITH KOC-P-001.
J. LOW POINT DRAIN & HIGH POINT VENT ARE INDICATED IN P&ID.
K. FOR CAUSE & EFFECT REFER DOC. NO. 50489-530-020-PHL-1009.
L. FOR ALARM VALUES REFER DOC. NO. 50489-530-020-SUM-1006.
NOTES:
1. RELIEF VALVE INLET AND OUTLET ISOLATION VALVES ARE KEY INTERLOCKED IN THE FOLLOWING POSITIONS:
- ON-LINE RELIEF VALVES: INLET AND OUTLET VALVES ARE OPEN.
- SPARE RELIEF VALVE: INLET VALVES ARE CLOSED, OUTLET VALVES ARE OPEN.
2. FY PROVIDES PRESSURE AND TEMPERATURE COMPENSATION FOR FQI.
3. ALL BLOW DOWN VALVES, XV WITH LEVEL 4 TRIP & ESDV'S ARE SUPPLIED WITH A DEDICATED INSTRUMENT AIR ACCUMULATOR.
4. FUEL GAS IS LEAN GAS OR RICH DOWNPONED GAS FROM MAA OR BACK-UP GAS FROM BS-131/132. ALL FUEL GAS IS SUPPLIED TO GC-30 VIA A COMMON PIPELINE FROM BS-131/132.
5,6. DELETED.
7. ESDV-0521B IS A PRESSURE EQUALISING VALVE. AFTER SYSTEM DEPRESSURISATION, ESDV-0521A IS INHIBITED FROM OPENING UNTIL PRESSURE IS EQUALISED ACROSS IT. ESDV-0521B IS ALLOWED TO OPEN IN ORDER TO EQUALISE THE PRESSURE ACROSS ESDV-0521A. PDI-0521 WILL GIVE PERMISSIVE TO ESDV-0521A TO OPEN.
8. DELETED.
9. XV-0525 OPENS ON HLL AND CLOSSES ON NLL REFER CAUSE AND EFFECT DIAGRAM (50489-530-020-PHL-1009).
10. DEMISTER PAD TO REMOVE DROPLETS GREATER OR EQUAL TO 10 MICRONS.
11. DELETED.
12. ALL VENTS AND DRAINS OF LEVEL INSTRUMENT & CONTROL VALVES ARE TO BE HARD PIPED TO NEAREST FLARE AND DRAIN LINES REFER TO PID-1108.008 & 1108.10.
13. XV-0523 CLOSSES ON LLLL AND OPENS ON HLL REFER CAUSE AND EFFECT DIAGRAM. (50489-530-020-PHL-1009).
14. V-031 IS LOCATED CLOSE TO PIG L/R AREA DUE TO POSSIBILITY OF 2 PHASE FLOW IN WINTER (BS-131/132 GAS).
15. LOW POINT DRAIN.
16. FUEL GAS PRESSURE INSTRUMENT TAPPINGS ARE AS PER LEGEND P&ID 1106.001.
17. VALVES ARE LOCATED ACCESSIBLE AND AWAY FROM VESSELS.
18. H2S DETECTION ARE ENABLED BEFORE COMMISSIONING STARTS.
19. INSULATION REQUIRED BETWEEN BLOWDOWN VALVE AND BLOCK VALVE TO PROTECT PERSONNEL FROM COLD SURFACE -35.5°C (-31.9°F) DURING BLOWDOWN.
20. V-031, V-032 & E-002 ARE LOCATED AWAY FROM THE FIRE ZONE OF ANY OTHER EQUIPMENT.
21. VESSEL IS PROTECTED AGAINST FIRE.
22. VESSEL PRESSURE WILL BE BLOWN DOWN AUTOMATICALLY ON ESD LEVEL 1.
23. EMERGENCY PRESSURISATION GAS VALVE ESDV-0520 IS OPENED ON LEVEL 1 & 2 PLANT SHUTDOWN.
24. ELECTRICAL TRACING TO BE POWERED FROM EMERGENCY GENERATOR ALSO.
25. RO-0522 METALLURGY IS SUITABLE TO WITHSTAND PRESSURE DROP OF 30 BAR (435.1 PSI) AND TEMPERATURE DOWN TO -35.5°C (-31.9°F).
26. RO-0524 IS LOCATED CLOSE TO CONNECTION INTO TV HEADER.
27. LINE IS FIREPROOFED.
28. FUEL GAS FROM PIPELINE IS AVAILABLE TO TV COMPRESSOR SEALS DURING SHUTDOWN.
29. RO-0524 ARE SIZED TO PRESSURISE TV HEADER BUT NOT TO PASS A FLOW GREATER THAN THE TANK PVTVs CAN RELIEVE 4000 Nm³/HR.
30. ADEQUATE PIPING SUPPORT ARE PROVIDED UPSTREAM & DOWN STREAM OF THE PCV-0522 TO AVOID OR MINIMIZE VIBRATION.
31. STRAIGHT LENGTH REQUIREMENT FOR ORIFICE FLOW METER ARE 20D UPSTREAM & 5D DOWNSTREAM.

AS-BUILT

KOC APPROVAL

NAME / KOC NO:

DESIGNATION :

GROUP / TEAM :

SIGNATURE :

DATE :

AS-BUILT

LARSEN & TOUBRO LIMITED

NAME : VAIBHAV VERMA

DESIGNATION : AGM

SIGNATURE :

DATE : 25-Aug-2018

DEPT/ DIVISION : ENGINEERING

Z0	ISSUED FOR AS-BUILT	PAK/CHS	AKG	SRA	RAK	25.08.18
04	ISSUED FOR CONSTRUCTION	PAK/CHS	AKG	SRA	RAK	13.05.17
03	ISSUED FOR CONSTRUCTION	HSR/CHS	AKG	SRA	RAK	14.03.17
02	ISSUED FOR CONSTRUCTION	HSR/VSA	AKG	SRA	RAK	19.10.16
01	ISSUED FOR CONSTRUCTION	HSR/VSA	AKG	SRA	RAK	20.09.16
0	ISSUED FOR CONSTRUCTION	PAK/PRS	AKG	SRA	RAK	14.06.16
E	ISSUED INCORPORATED CLIENT COMMENTS	PAK/CHS	AKG	SRA	RAK	13.04.16
D	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	31.12.15
C	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	19.10.15
OC	ISSUED INCORPORATED CLIENT COMMENTS	JSI/VSA	AKG	SRA	RAK	02.06.15
B	ISSUED INCORPORATED CLIENT COMMENTS	JSI/VSA	AKG	SRA	RAK	18.02.15
A	ISSUED FOR APPROVAL	JSI/ABY	AKG	SRA	RAK	12.12.14
REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE

CONTRACTOR REVISION

KUWAIT OIL CO.
K. S. C.
شركة نفط الكويت
ش.م.ك.
A Subsidiary of Kuwait Petroleum Corporation

CONTRACTOR DETAILS:-
LARSEN & TOUBRO LIMITED
FARIDABAD

PROJECT TITLE:-
NEW GATHERING CENTRE GC-30
IN NORTH KUWAIT

DOCUMENT TITLE:-
PIPING & INSTRUMENTATION DIAGRAM
INLET FUEL GAS KO DRUM (V-031)

PROJECT NO.	DRAWING NO.	REV.	KOC DRG. NO.	REV.
EF1902	50489-530-020-PID-1155	Z0	50489-530-020-PID-1155	Z0
	SHEET NO. 1 OF 1			
	COMPANY DRG. NO.	REV.		
	EF1902-530-DCO-PID-0155.001			
	SHEET NO.			