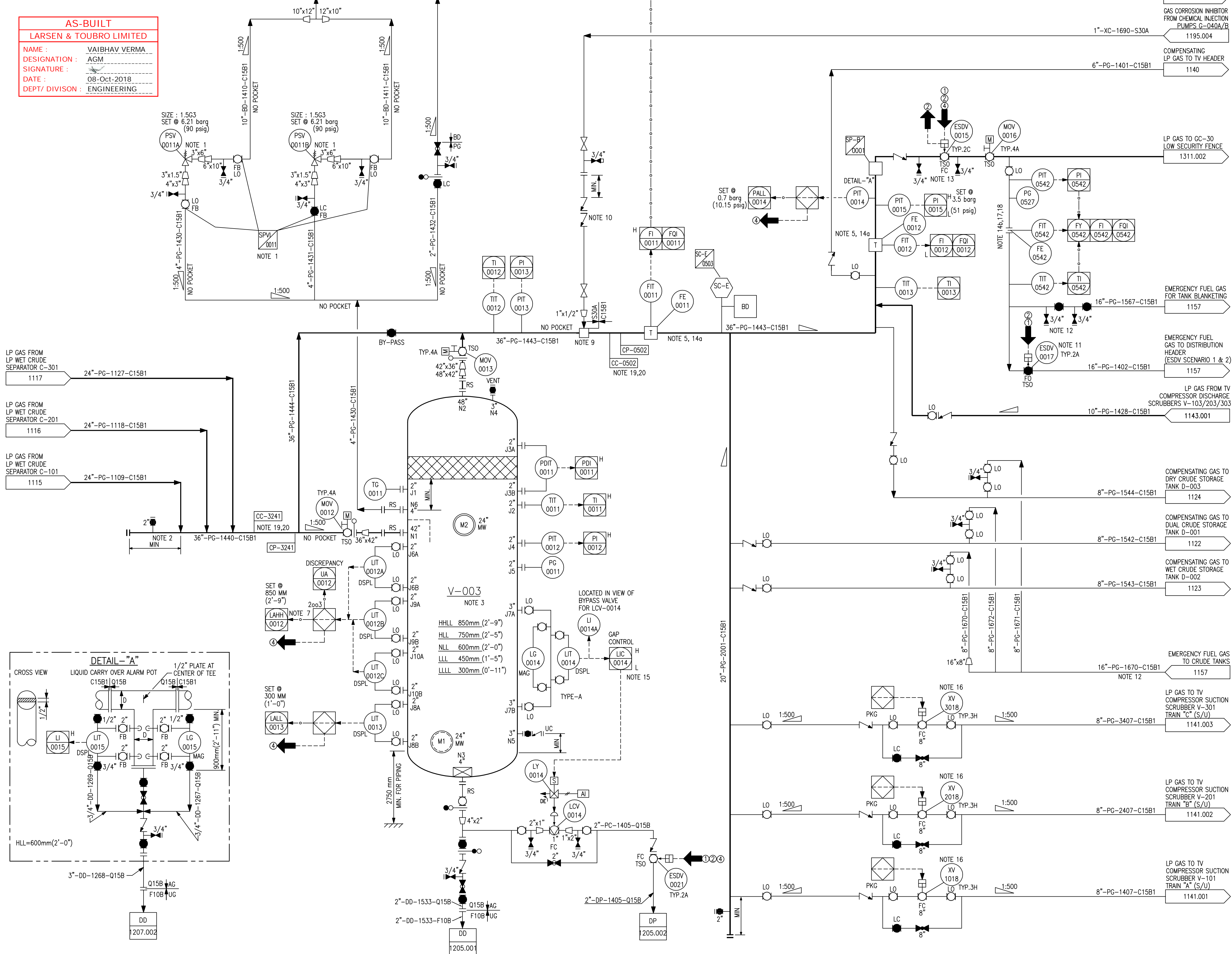


AS-BUILT	
KOC APPROVAL	
NAME / KOC No:	
DESIGNATION :	
GROUP / TEAM :	
SIGNATURE :	
DATE :	

AS-BUILT	
LARSEN & TOUBRO LIMITED	
NAME :	VAIBHAV VERMA
DESIGNATION :	AGM
SIGNATURE :	
DATE :	08-Oct-2018
DEPT/ DIVISION :	ENGINEERING

V-003
LP SEPARATOR GAS CRUDE OIL ACCUMULATOR
DUTY: VAPOUR - Nm³/hr (MMSCFD): 85202 (76.15)
LIQUID - m³/hr (BPD): 0.099 (14.9)
ID mm (ft.-in): 2800 (9'-2")
LENGTH (T/T) mm (ft.-in): 4600 (15'-1")
OP PRESS /DES PRESS barg (PSIG): 2.26 (32.77)/6.21 (90.05)
OP TEMP/DESIGN TEMP °C (°F): 14.34~54.53 (57.81~130.15)/~3~93 (27~200)
INSULATION THICKNESS mm (in):
UTC NO.
TRIM NO. : VT-V003-C15B1/Q15B/C35B/Q35B



GENERAL NOTES:

- FOR STANDARD SYMBOLS AND NOMENCLATURE SEE DRAWINGS 50489-530-020-PID-1104.001 & .002.
- ALL EQUIPMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 530--.
- ALL INSTRUMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 030--.
- FOR TYPICAL INSTRUMENT CONNECTION SBDV, XV, MOV & ESDV DETAILS SEE DRAWINGS 50489-530-020-PID-1106.002, .003, .004, .005, .006 & .007.
- 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.
- 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.
- FOR MATERIAL SELECTION DIAGRAM SEE DRAWINGS 50489-530-020-MSD-1001.001 TO 1023.
- DETAIL NUMBERING FOR CI, SC, CC & CP SEE DRAWING 50489-530-020-PID-1108.003.
- PAINTING & COATING ARE IN ACCORDANCE WITH KOC-P-001.
- LOW POINT DRAIN & HIGH POINT VENT ARE INDICATED IN P&ID.
- FOR CAUSE & EFFECT REFER DOC. NO. 50489-530-020-PHL-1009.
- FOR ALARM VALUES REFER DOC. NO. 50489-530-020-SUM-1006.

NOTES:

- RELIEF VALVE SHALL BE BELLOW TYPE. INLET AND DISCHARGE VALVES ARE KEY INTERLOCKED SUCH THAT ONE RELIEF VALVE IS ALWAYS ON LINE AT ANY TIME.
- ALL LINES ENTER THE TOP OF THE HEADER.
- OVERSIZED SCRUBBER TO OVERCOME FLOW IMBALANCES.
- DELETED.
- INSERTION TYPE THERMAL MASS FLOW METER WITH 1 1/2" BALL VALVE.
- DELETED.
- HIGH HIGH LIQUID LEVEL IN V-003 (2oo3) INITIATES LEVEL 2 PLANT SHUTDOWN.
- DELETED.
- FOR CHEMICAL INJECTION NOZZLE DETAILS SEE STANDARD DWG. 50489-530-020-PID-1108.001
- DISSIMILAR CHECK VALVES.
- ESDV-0017 OPENS TO ADMIT PROCESS GAS FROM THE LP GAS EXPORT LINE AS EMERGENCY FUEL GAS ON ESD LEVELS 1 & 2.
- CONNECTION TO PROVIDE PROCESS GAS FOR BLANKETING HYDROCARBON TANKS DURING GC SHUTDOWN, WHEN ESDV-0017 IS CLOSED.
- ESDV-0015 & UPSTREAM NRV SHALL BE MINIMUM FROM GC-30 LOW SECURITY FENCE.
- (a) STRAIGHT LENGTH REQUIREMENT FOR THERMAL MASS FLOW METER ARE 10D UPSTREAM & 5D DOWNSTREAM.
(b) STRAIGHT LENGTH REQUIREMENT FOR ORIFICE FLOW METER ARE 20D UPSTREAM & 5D DOWNSTREAM.
- LIC-0014 SET POINT FOR HIGH LEVEL & LOW LEVEL IS 700mm & 480mm RESPECTIVELY FOR GAP CONTROL.
- XV-1018, XV-2018 & XV-3018 IS USED TO PRESSURIZE THE COMPRESSOR CIRCUIT BEFORE TV COMPRESSOR SUCTION ESDV-1320/2320/3320 OPENS RESPECTIVELY & IT PROVIDES THE PROCESS GAS FOR STARTING THE TV COMPRESSOR.
- FE TO HAVE MINIMAL PRESSURE DROP.
- FY PROVIDES PRESSURE & TEMPERATURE COMPENSATION FOR FQI.
- FOR CORROSION MONITORING STATIONS (CMS):-
(a) CMS ARE INSTALLED AS PER KOC-MP-035.
(b) PROPER ACCESS PIT OR PLATFORM ARE PROVIDED FOR RETRIEVAL OF COUPEN/PROBE.
(c) MATERIAL FOR CMS ARE PROCURED FROM KOC APPROVED VENDOR LIST.
(d) CMS ARE LOCATED IN BOTTOM 6 O'CLOCK POSITION.
(e) TAG NUMBERING OF CMS IS AS PER APPENDIX-C OF KOC-MP-035.
- ONE ADDITIONAL INTERNAL CORROSION MONITORING POINT IS INSTALLED AT THE TOP AT 12 O'CLOCK POSITION.

REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE
Z1	ISSUED FOR AS-BUILT	BAK/SSI	AKG	SRA	RAK	08.10.18
Z0	ISSUED FOR AS-BUILT	BAK/SSI	AKG	SRA	RAK	28.08.18
01	ISSUED FOR CONSTRUCTION	BAK/SSI	AKG	SRA	RAK	01.12.16
0	ISSUED FOR CONSTRUCTION	HSR/VSA	AKG	SRA	RAK	25.03.16
D	ISSUED INCORPORATED CLIENT COMMENTS	JSI/VSA	AKG	SRA	RAK	17.12.15
C	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	15.10.15
OC	ISSUED INCORPORATED CLIENT COMMENTS	JSI/VSA	AKG	SRA	RAK	30.05.15
B	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	21.02.15
A	ISSUED FOR APPROVAL	BAK/VSA	AKG	SRA	RAK	05.12.14

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
LP SEPARATOR GAS CRUDE OIL ACCUMULATOR (V-003)

PROJECT NO.	DRAWING NO.		
EF1902	CONTRACTOR DRG. NO.	REV.	KOC DRG. NO.
	50489-530-020-PID-1144	Z1	
	SHEET NO. 1 OF 1	REV.	SHEET NO.
	COMPANY DRG. NO.		
	EF1902-530-DCO-PID-0144.001	A3	
	SHEET NO.		