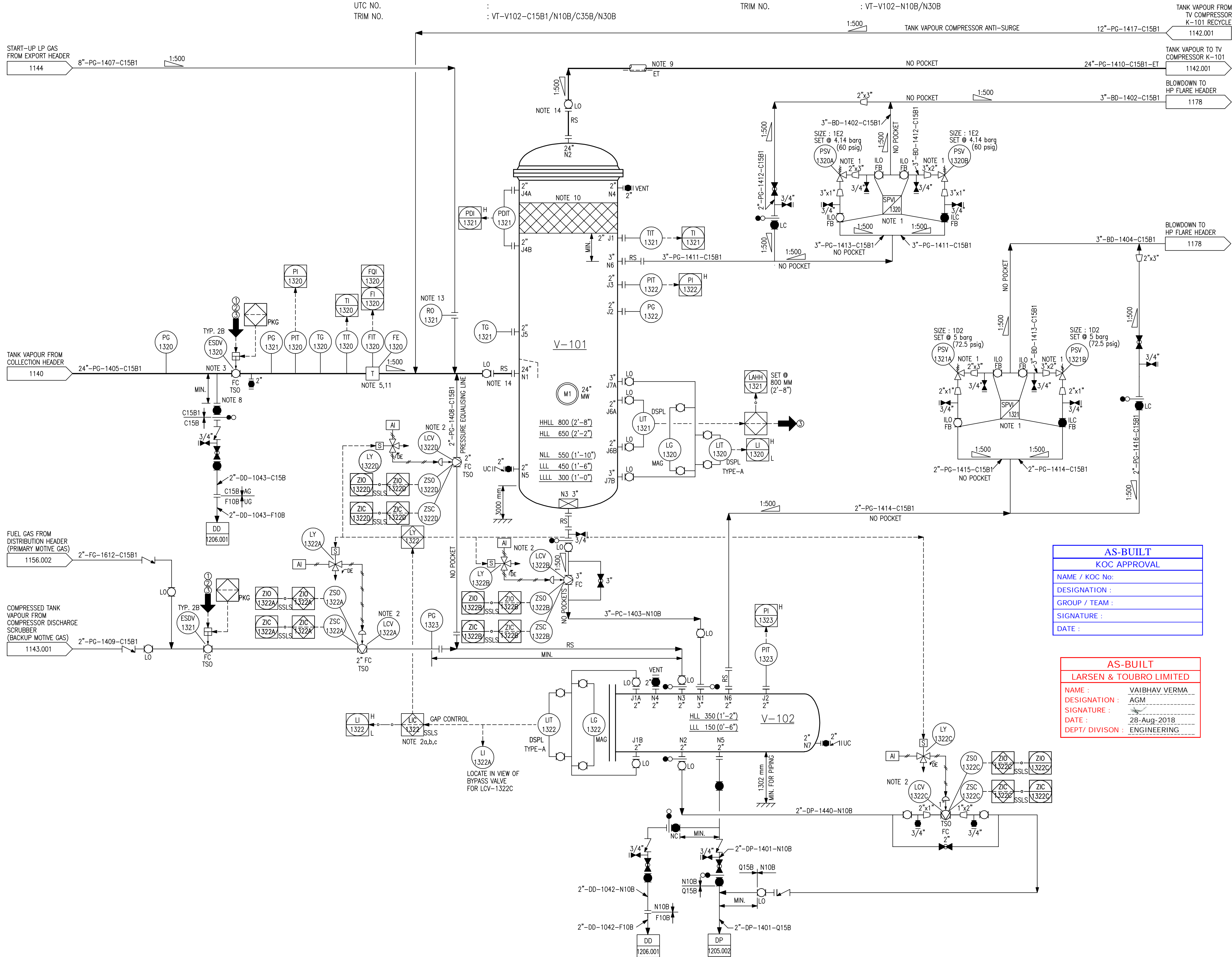


V-101
TANK VAPOUR COMPRESSOR SUCTION SCRUBBER (TRAIN A)
DUTY: VAPOUR - Nm3 (MMSFD) : 3216 (2.875)
LIQUID - m3/hr (BPD) : 0.662 (100)
OD mm (ft.-in) : 1016 (3'-4")
HEIGHT (TL-FLANGE FACE) mm (ft.-in) : 3124 (10'-3")
OP PRESS/DES PRESS barg (PSIG) : 0.0048/4.14(0.0696/60.03) FV
OP TEMP/DESIGN TEMP °C (°F) : 36.56~56.61/140/-3 (98~134/284/27)
CORROSION ALLOWANCE mm (in) : 3 (0.118)
INSULATION THICKNESS mm (in) :
UTC NO. :
TRIM NO. : VT-V102-C15B1/N10B/C35B/N30B

V-102
SCRUBBER DRAIN SEAL DRUM (TRAIN A)
DUTY LIQUID m3/hr (BPD) : 0.662 (100)
OD mm (ft.-in) : 406 (1'-4")
LENGTH (T/T) mm (ft.-in) : 1680 (5'-6")
OP PRESS /DES PRESS barg (PSIG) : 0.0048~4.5/FV (0.0696~58/72.5/FV)
OP TEMP/DESIGN TEMP °C (°F) : 42.32~56.4/93/-3 (108.2~133.5/200/27)
CORROSION ALLOWANCE mm (in) :
INSULATION THICKNESS mm (in) :
UTC NO. :
TRIM NO. : VT-V102-N10B/N30B



- 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-1106.001, .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 CL, 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 INLET AND DISCHARGE VALVES ARE KEY INTERLOCKED SUCH THAT ONE RELIEF VALVE IS ALWAYS ON LINE AT ANY TIME.
 - (a) ON HIGH LIQUID LEVEL IN V-102, LCV-1322D & LCV-1322B CLOSURES & LCV-1322C OPENS. AFTER A SHORT DURATION LCV-1322A OPENS.
(b) WHEN LEVEL IN V-102 REACHES MINIMUM, LCV-1322C, LCV-1322A CLOSURES & LCV-1322D OPENS. AFTER A SHORT DURATION LCV-1322B OPENS.
(c) LIC-1322 SET POINT OF SEQUENCE OPERATION FOR HIGH LEVEL & LOW LEVEL IS 300mm & 175mm RESPECTIVELY FOR GAP CONTROL.
- | V-102 LEVEL | LCV-1322A | LCV-1322B | LCV-1322C | LCV-1322D |
|-------------|----------------------|---------------------|-----------|-----------|
| LAH-1322 | OPEN (10 SEC. DELAY) | CLOSE | OPEN | CLOSE |
| LAL-1322 | CLOSE | OPEN (5 SEC. DELAY) | CLOSE | OPEN |
- COMPRESSOR SUCTION/DISCHARGE ESDVS AND ANTI-SURGE VALVE ARE OPENED BY STARTING SEQUENCE. ON COMPRESSOR TRIP SUCTION AND DISCHARGE ESDV'S ARE CLOSED AND ANTI SURGE VALVE OPENS.
 - DELETED.
 - INSERTION TYPE THERMAL MASS FLOW METER WITH 1 1/2" BALL VALVE.
 - DELETED.
 - THIS MANUAL VALVE IS OPEN PERIODICALLY WHEN TV COMPRESSOR SHUTDOWN OR OUT OF SERVICE.
 - LINE TO BE CHEMICALLY CLEANED PRIOR TO COMMISSIONING.
 - DEMISTER PAD IS DESIGNED FOR MAXIMUM PARTICLE SIZE 50µm.
 - STRAIGHT LENGTH REQUIRED FOR THERMAL MASS FLOW METER ARE 10D UPSTREAM & 5D DOWNSTREAM.
 - ALL VALVES (MOV'S/ESDV'S/XV'S/SBDV'S) ARE FIRE SAFE INSIDE THE TV COMPRESSOR SHELTER.
 - RO SIZING IS BASED ON START UP GAS REQUIRED FOR TV COMPRESSOR.
 - DRIP RING WITH BLEED VALVE IS PROVIDED BETWEEN ISOLATION VALVE & REMOVABLE SPOOL PIECE FLANGE CONNECTION FOR BLEED PURPOSE. BLIND FLANGE TO BE PROVIDED AFTER DISMANTLING OF REMOVABLE SPOOL PIECE DURING MAINTENANCE.

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

AS-BUILT	
LARSEN & TOUBRO LIMITED	
NAME :	
DESIGNATION :	
SIGNATURE :	
DATE :	
DEPT/ DIVISION :	

REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE
ZO	ISSUED FOR AS-BUILT	BAK/SSI	AKG	SRA	RAK	28.08.18
O1	ISSUED FOR CONSTRUCTION	BAK/SSI	AKG	SRA	RAK	29.11.16
O	ISSUED FOR CONSTRUCTION	HSB/VSA	AKG	SRA	RAK	25.03.16
D	ISSUED INCORPORATED CLIENT COMMENTS	JSI/VSA	AKG	SRA	RAK	22.12.15
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	JSI/VSA	AKG	SRA	RAK	17.02.15
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.**

CONTRACTOR DETAILS:-

LARSEN & TOUBRO LIMITED FARIDABAD

PROJECT TITLE:-

NEW GATHERING CENTRE GC-30 IN NORTH KUWAIT

DOCUMENT TITLE:-	
PIPING & INSTRUMENTATION DIAGRAM	
TANK VAPOUR COMPRESSOR SUCTION SCRUBBER (V-101) TRAIN A	
PROJECT NO.	DRAWING NO.
CONTRACTOR DRG. NO.	REV. KOC DRG. NO.
50489-530-020-PID-1141.001	Z0
SHEET NO. 1 OF 3	SHEET NO.
COMPANY DRG. NO.	REV.
EF1902-530-DCO-PID-0141.001	A4
SHEET NO.	