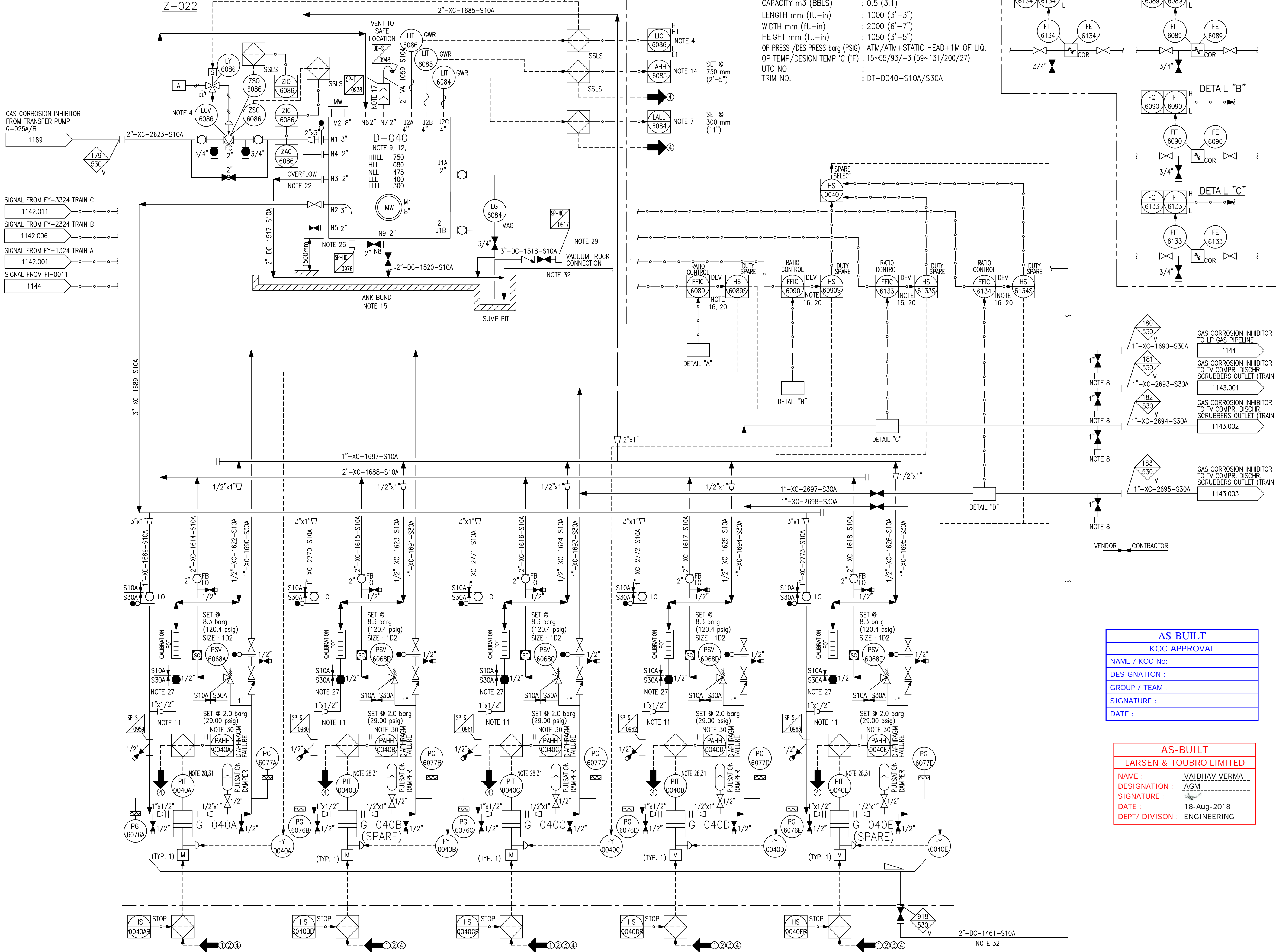


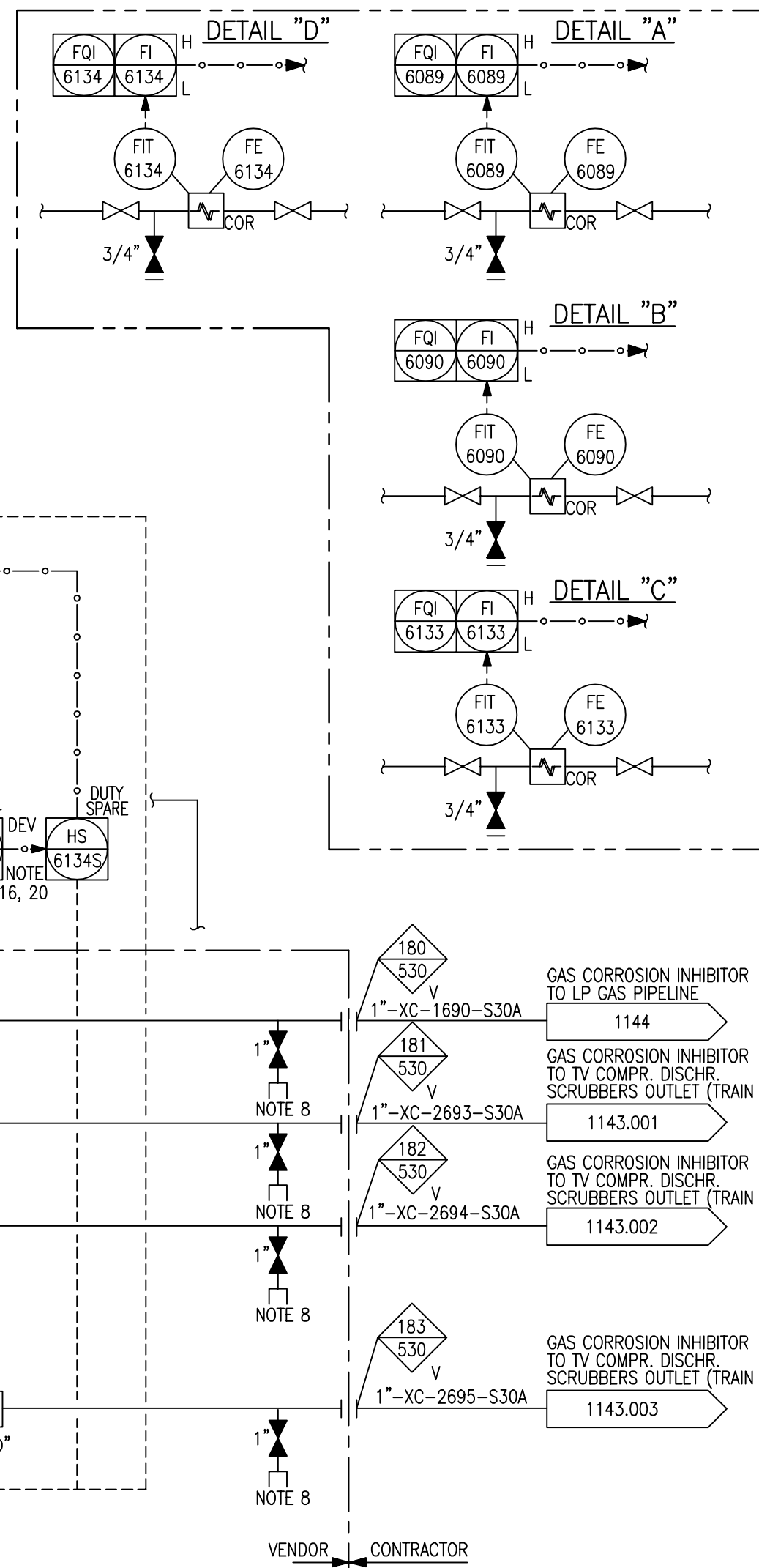
Z-022  
CHEMICAL INJECTION SKID



**G-040A/B (SPARE) NOTE 2, 7**  
GAS EXPORT GAS CORROSION INHIBITOR INJECTION PUMP  
FLOWRATE l/hr (USGPH) : 2.62 (0.69)  
DRIVER POWER KW (HP) : 0.75 (1)  
DIFF PRESS ΔP bar (PSI) : 6.3 (91.4)  
S.G. @ OP OT : 0.85~1.03  
FLUID VISCOSITY @ PT CP : 50  
OP PRESS/DES PRESS barg (PSIG) : 6.3/8.3 (91.4/120.4)  
OP TEMP/DESIGN TEMP °C (°F) : 15~55/93/-3 (59~131/200/27)  
UTC NO. :  
TRIM NO. : GT-G040A/B-S30A

**G-040C/D/E (SPARE) NOTE 2, 7**  
TV COMPRESSOR DISCHARGE SCRUBBER GAS CORROSION INHIBITOR INJECTION PUMP  
FLOWRATE l/hr (USGPH) : 0.11 (0.029)  
DRIVER POWER KW (HP) : 0.75 (1)  
DIFF PRESS ΔP bar (PSI) : 6.3 (91.37)  
S.G. @ OP OT : 0.85~1.03  
FLUID VISCOSITY @ PT CP : 50  
OP PRESS/DES PRESS barg (PSIG) : 6.3/8.3 (91.37/120.38)  
OP TEMP/DESIGN TEMP °C (°F) : 15~55/93/-3 (59~131/200/27)  
UTC NO. :  
TRIM NO. : GT-G040C/D/E-S30A

**D-040**  
GAS CORROSION INHIBITOR DAY TANK  
CAPACITY m3 (BBLs) : 0.5 (3.1)  
LENGTH mm (ft.-in) : 1000 (3'-3")  
WIDTH mm (ft.-in) : 2000 (6'-7")  
HEIGHT mm (ft.-in) : 1050 (3'-5")  
OP PRESS/DES PRESS barg (PSIG) : ATM/ATM+STATIC HEAD+1M OF LIQ.  
OP TEMP/DESIGN TEMP °C (°F) : 15~55/93/-3 (59~131/200/27)  
UTC NO. :  
TRIM NO. : DT-D040-S10A/S30A



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

**AS-BUILT**  
**LARSEN & TOUBRO LIMITED**  
NAME : VAIBHAV VERMA  
DESIGNATION : AGM  
SIGNATURE :  
DATE : 18-Aug-2018  
DEPT/ DIVISION : ENGINEERING

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 SBOV, XV, MOV & ESDV DETAILS SEE DRAWINGS 50489-530-020-PID-1108.001, .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:**
- DELETED.
  - AUTOMATIC VARIABLE PUMP STROKE ADJUSTMENT IS THROUGH DCS.
  - DELETED.
  - VALVE CLOSURES AT HIGH LIQUID LEVEL H1 (SET @660mm) VALVE OPENS AT LOW LIQUID LEVEL L1 (SET @410mm). ZSC OF LCV-6074 & ZSC OF LCV-6086 STOPS DUTY & STANDBY TRANSFER PUMP G-025A/B BY SLS LOGIC.
  - DELETED.
  - LOW LIQUID LEVEL STOPS GAS CORROSION INHIBITOR INJECTION PUMPS G-040A/B/C/D/E.
  - FLUSHING CONNECTIONS.
  - GAS CORROSION INHIBITOR DAY STORAGE TANK COMES UNDER BUND AREA & GAS CORROSION INHIBITOR INJECTION PUMP IS PART OF PUMP SKID.
  - EYEWASH AND SAFETY SHOWERS ARE PROVIDED IN THE CHEMICAL INJECTION SKID AREA.
  - PROVIDE CORIOLIS FLOW MEASUREMENT AND FACILITY FOR LOCAL CALIBRATION.
  - TANK LEVEL INSTRUMENTS ARE CALIBRATED IN VOLUMETRIC UNITS.
  - DELETED.
  - HIGH HIGH LIQUID LEVEL STOPS GAS CORROSION INHIBITOR TRANSFER PUMP G-025A/B.
  - TANK BUND NOT IN VENDOR SCOPE. TANK CONCRETE BUND SHALL BE 115% CONTAINMENT OF D-040.
  - DEVIATION ALARMS ARE TO BE CONFIGURED IN THE DCS TO ALARM IF ACTUAL FLOW DIFFERS FROM SET BY 10%.
  - FLAME ARRESTOR INSTALLED WITH GOOSE NECK PIPE FOR VENT.
  - DELETED.
  - CHEMICAL INJECTION RATIO CONTROLLER IS SET IN PPM.
  - ANTI-RESISTANT CHEMICAL FLOOR IS PROVIDED.
  - OVERFLOW NOZZLE IS LOCATED ABOVE HLL.
  - TANK AREA IS PAVED. FLOOR IS SLOPED TOWARDS SUMP PIT.
  - VENT TO SAFE LOCATION ARE AS PER KOC-G-002 ALONG WITH GOOSE NECK & BIRD SCREEN.
  - (A) LOW POINT DRAIN IS PROVIDED AS APPROPRIATE.  
(B) DELETED.
  - CHEMICAL PUMPOUT CONNECTION.
  - PUMP SUCTION BALL VALVE & CALIBRATION POT BALL VALVE ARE LOCATED ADJACENT TO ONE ANOTHER FOR MEASURING THE FLOW.
  - PUMPS ARE PROVIDED WITH DIAPHRAGM RUPTURE ALARM (PAHH).
  - VACUUM TRUCK CONNECTION (PIPE & VALVE) : L&T SCOPE
  - PAHH STOPS GAS CORROSION INHIBITOR INJECTION PUMP.
  - DIRECT MOUNTING TO THE PUMP HEAD FOR DETECTING RUPTURE OF DIAPHRAGM.
  - CHEMICAL SKID DRAIN LINE TILL INLINE TEE CONNECTION IS IN L&T SCOPE.
  - MINIMUM STROKE OF 10% IS PROVIDED FOR ALL CHEMICAL INJECTION PUMP.

REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE
ZO	ISSUED FOR AS-BUILT	BAK/CHS	AKG	SRA	DER	18.08.18
01	ISSUED FOR CONSTRUCTION	BAK/CHS	AKG	SRA	DER	20.12.16
0	ISSUED FOR CONSTRUCTION	HSR/CHS	AKG	SRA	RAK	06.06.16
D	ISSUED FOR INCORPORATED CLIENT COMMENTS	HSR/CHS	AKG	SRA	RAK	08.04.16
C	ISSUED FOR INCORPORATED CLIENT COMMENTS	JSI/ABY	AKG	SRA	RAK	29.10.15
OC	ISSUED FOR INCORPORATED CLIENT COMMENTS	BAK/ABY	AKG	SRA	RAK	03.06.15
B	ISSUED FOR INCORPORATED CLIENT COMMENTS	JSI/ABY	AKG	SRA	RAK	23.02.15
A	ISSUED FOR APPROVAL	PK/ABY	AKG	SRA	RAK	12.12.14

CONTRACTOR REVISION					
CONTRACTOR DETAILS:-					
LARSEN & TOUBRO LIMITED FARIDABAD					
PROJECT TITLE:-					
NEW GATHERING CENTRE GC-30 IN NORTH KUWAIT					
DOCUMENT TITLE:-					
PIPING & INSTRUMENTATION DIAGRAM CHEMICAL INJECTION SKID #2 - GAS CORROSION INHIBITOR (D-040 & G-040A/B/C/D/E)					

PROJECT NO.		DRAWING NO.	
CONTRACTOR DRG. NO.		REV. KOC DRG. NO.	
50489-530-020-PID-1195.004		Z0	
SHEET NO. 4 OF 4		SHEET NO.	
COMPANY DRG. NO.		REV.	
EF1902-530-DCO-PID-0195.004		A2	
SHEET NO.			