



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, 1106.002, .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 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. PILOT BURNER MOUNTED ON FLARE TIP.
2. TEMPERATURE ELEMENT FAILURE.
3. BREAK FLANGE AT BASE OF STACK (BOS).
4. EACH TE IS DUAL ELEMENT TYPE. ONE ELEMENT OF EACH THERMOCOUPLE IS USED. THE OTHER IS TERMINATED AT THE IGNITION RACK AND AVAILABLE AS A SPARE.
5. OPEN PERMISSIVE OF MOV-1590 TO BE LINKED WITH PURGE COMPLETED VALUE OF FQI-1590.
6. TRAIN-B IS 100% SPARE FOR TRAIN-A.
7. MOV-1590 AND MOV-2590 (PID NO. 1180.006) SHALL NOT BE CLOSED SIMULTANEOUSLY. SIL RATED LIMIT SWITCHES TO BE USED.
8. HP FLARE IS A 100% SMOKELESS AIR-ASSISTED TYPE WITH 3 AIR BLOWERS.
9. MOV ARE LOCATED CLOSE TO THE DISTRIBUTION POINT (PID-1179) TO AVOID THE DEAD LEG.
10. VELOCITY SEAL IS INTEGRATED WITH FLARE TIP.
11. PILOT MIXER ASSEMBLY WITH ORIFICE AND STRAINER LOCATED TO AVOID SAND INGRESS.
12. DRAIN PIT LOCATED OUTSIDE OF STERILE AREA (SAFE LOCATION).
13. HP FLARE LINES TO F-029A/B ARE SLOPED BACK TO THE HP FLARE K.O DRUM V-016A/B.
14. DRAIN POINT IS MINIMUM LENGTH FROM VERTICAL PILOT GAS LINE FLANGE NOZZLE.
15. CLOSURE POSITION OF PCV-1594 IS DICTATED BY MOV-1590, IF MOV-1590 IS CLOSED, PCV-1594 SHALL BE CLOSED.
16. VALVE IS ACCESSIBLE WHEN FLARE IS OPERATING.
17. MOV (MOV-1590, MOV-2590) OPEN STATUS IS USED TO INDICATE FLARE TRAIN SERVICE STATUS. AND IT IS USED FOR AIR BLOWER START-UP AND CONTROL PERMISSIVE IN AUTOMATIC MODE.
18. MOV AND DRAIN VALVE ARE INSTALLED OUT OF RADIATION ZONE.
19. FFG FLAME PIPE WITH LONG RADIUS BEND ONLY TO EACH PILOT.
20. ONE IR SCANNER IS PROVIDED FOR MAIN FLARE MONITORING.
21. STRAIGHT LENGTH REQUIREMENT FOR ORIFICE FLOWMETER ARE 10D UPSTREAM & 3D DOWNSTREAM AS PER VENDOR GAD (50489-530-080-08847-GAD-V003) & THE SAME IS PART OF ORIFICE METER RUN SPOOL.
22. DELETED.
23. REFERENCE VENDOR PID NO. 50489-530-020-00052-PID-V001 SHEET 4 OF 8.
24. JUNCTION BOXES AT BASE OF FLARE IS PROTECTED BY RADATION SHIELD.
25. PILOT THERMOCOUPLE ARE INCONEL SHEATHED.
26. OPERATOR TO ENSURE THAT BOTH MOV-1590 & MOV-2590 (PID-1177.006) SHALL NOT CLOSED SIMULTANEOUSLY. REFER OPERATOR & MAINTENANCE MANUAL (50489-530-020-MAN-1001) FOR PROCEDURE OF OPEN/CLOSE OF MOV-1590 & MOV-2590.
27. MOV-1590 TYPICAL IS TYP-4B. THIS WILL BE ONLY FOR INDICATION PURPOSE, AS LOGIC HAS BEEN IMPLEMENTED IN ESD, NO LEVEL SHUTDOWN IS TAKEN FROM MOV-1590.

HEI
IG
XMR
FFG
★
Ex'd
Ex'e

HIGH ENERGY IGNITION
IGNITION GAS.
FFG IGNITION TRANSFORMER.
FLAME FRONT GENERATOR.
LOOSE SUPPLIED BY VENDOR.
FLAME PROOF ENCLOSURE
INCREASED SAFETY ENCLOSURE

Z0	ISSUED FOR AS-BUILT	VPA/CHS	AKG	SRA	RAK	17.09.18
04	ISSUED FOR CONSTRUCTION	VPA/CHS	AKG	SRA	RAK	06.01.18
03	ISSUED FOR CONSTRUCTION	BAK/AKG	AKG	SRA	RAK	13.05.17
02	ISSUED FOR CONSTRUCTION	BAK/AKG	AKG	SRA	RAK	01.11.16
01	ISSUED FOR CONSTRUCTION	BAK/CHS	AKG	SRA	RAK	23.09.16
0	ISSUED FOR CONSTRUCTION	HSH/CHS	AKG	SRA	RAK	22.06.16
B	ISSUED INCORPORATED CLIENT COMMENTS	PAK/VSA	AKG	SRA	RAK	09.05.16
A	ISSUED FOR APPROVAL	HSH/VSA	AKG	SRA	RAK	18.03.16
REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE

CONTRACTOR REVISION

KUWAIT OIL CO. **شركة نفط الكويت**
K. S. C. **ش.م.ك.**

CONTRACTOR DETAILS:- **LARSEN & TOUBRO LIMITED**
FARIDABAD

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

DOCUMENT TITLE:- **PIPING & INSTRUMENTATION DIAGRAM**
HIGH PRESSURE FLARE (Z-029A) TRAIN A
(HP FLARE STACK F-029A)

PROJECT NO.	DRAWING NO.
CONTRACTOR DRG. NO.	REV. KOC DRG. NO.
50489-530-020-PID-1180.003	Z0
SHEET NO. 3 OF 7	SHEET NO.
COMPANY DRG. NO.	REV.
EF1902-530-DCO-PID-0180.001	A4
SHEET NO.	