



GENERAL NOTES:

- A. FOR STANDARD SYMBOLS AND NOMENCLATURE SEE DRAWINGS 50489-530-020-PID-1104.001 & 1104.002.
B. ALL EQUIPMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 530-.
C. FOR TYPICAL INSTRUMENT CONNECTION SBDV, XV, MOV & ESDV DETAILS SEE DRAWINGS NOS. 50489-530-020-PID-1106.001 TO 004, 006 & 007.
D. FOR MISCELLANEOUS PIPING DETAILS SEE DRAWING NOS. 50489-530-020-PID-1108.001.
E. FOR TYPICAL VALVING, DRAINAGE AND GENERAL ARRANGEMENT OF LEVEL INSTRUMENTATION, PUMPS AND CONTROL VALVES SEE DRAWING NOS. 50489-530-020-PID-1108.001 TO 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 50489-530-000-PID-XXXX.SHT. NO.

NOTES:

1. IN GENERAL HYDRANTS ARE INSTALLED NOT MORE THAN 30 METER INTERVAL EXCEPT FOR CRUDE TANK FARMS WHERE IT IS 23 METER INTERVAL.
2. SECTIONING VALVES ARE INSTALLED AT NOT MORE THAN 91 METER INTERVAL.
3. RINGMAIN MINIMUM COVER IS OF 1 METER FROM TOP OF PIPE.
4. HYDRANT NOZZLES ARE PARALLEL TO BUND WALL.
5. FIRE WATER PUMP DISCHARGE HEADER HAVE TWO SEPARATE CONNECTIONS TO FIRE WATER DISTRIBUTION SYSTEM.
6. THE FIRE WATER SYSTEM IS DESIGNED IN ACCORDANCE WITH 015-YH-1003, KOC-L-009 & KOC-GH-1004.
7. DELETED
8. FIRE WATER LINE NUMBER QUOTED ON FIREWATER PUMP P&ID No's 50489-530-000-PID-1111.001 & 1112.
9. FIRE ENGINE SUCTION RISER ARE PROVIDED AS PER CLAUSE 7.5.3 OF KOC-L-009.
10. ISOLATION VALVES ARE POST INDICATOR TYPE
11. HYDRANT AS PER CLAUSE NUMBER 7.5.1 OF KOC-L-009.
12. CATHODIC PROTECTION FOR FIRE WATER RING MAIN ARE PROVIDED AS PER KOC-L-015 & 015-WH-1006.
13. FOR DETAILS OF WATER SPRAY SYSTEM DOWNSTREAM OF TAP-OFF POINTS FROM THE FIRE WATER DISTRIBUTION NETWORK, REFER RESPECTIVE WATER SPRAY SYSTEM P&ID'S.

LEGEND:

- FIRE HYDRANT
—●*— FIRE HYDRANT WITH PRESSURE INDICATOR
—●**— FIRE HYDRANT WITH PUMPER CONNECTION
—|—|— POST INDICATOR ISOLATION VALVES IN CONCRETE PIT
—○— FIRE MONITOR
—DVS— DELUGE VALVE SKID.
—●— FIRE ENGINE SUCTION RISER
FH-XXX FIRE HYDRANT TAG NUMBER
FM-XXX FIRE MONITOR TAG NUMBER
FESR-XXX FIRE ENGINE SUCTION RISER TAG NUMBER
PIV-XXX POST INDICATOR VALVE TAG NO.

REFERENCE DOCUMENTS:

1. FIRE WATER NETWORK LAYOUT - 50489-530-000-LAD-1065.
2. FIRE PROTECTION HYDRAULIC CALCULATION - 50489-530-000-CAL-1002.
3. OVERALL PLOT PLAN - 5089-530-050-PLP-1001.

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

AS-BUILT	
LARSEN & TOUBRO LIMITED	
NAME :	VAIBHAV VERMA
DESIGNATION :	AGM
SIGNATURE :	
DATE :	05-Aug-2018
DEPT/ DIVISION :	ENGINEERING

REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE
01	ISSUED FOR CONSTRUCTION	JSI/HS	NIJ	SRA	RAK	05.08.18
0	ISSUED FOR DESIGN (GENERALLY REVISED)	JSI/HS	NIJ	SRA	RAK	04.02.16
B	ISSUED "INCORPORATED CLIENT COMMENTS"	HSJ/HS	NIJ	SRA	RAK	03.12.15
A	ISSUED FOR APPROVAL	PAK/HS	NIJ	SRA	RAK	12.08.15

CONTRACTOR REVISION						
ZO	ISSUED FOR AS-BUILT	JSI/HS	NIJ	SRA	RAK	05.08.18
01	ISSUED FOR CONSTRUCTION	JSI/HS	NIJ	SRA	RAK	04.02.16
0	ISSUED FOR DESIGN (GENERALLY REVISED)	JSI/HS	NIJ	SRA	RAK	03.12.15
B	ISSUED "INCORPORATED CLIENT COMMENTS"	HSJ/HS	NIJ	SRA	RAK	12.08.15
A	ISSUED FOR APPROVAL	PAK/HS	NIJ	SRA	RAK	13.02.15

CONTRACTOR DETAILS:-	
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	
FIRE WATER DISTRIBUTION	
PROJECT NO.	DRAWING NO.
50489-530-000-PID-1101.001	20
SHEET NO. 1 OF 2	SHEET NO.
COMPANY DRG. NO.	REV.
SHEET NO.	