




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-1106.002, .003, .004, .005, .006 & .007.  
E. FOR MISCELLANEOUS PIPING TYPING, VALVING, DRAINAGE & GENERAL ARRANGEMENT OF LEVEL INSTRUMENTS, PUMPS, AND OTHER DETAILS SEE VALVING AND PIPING DETAIL DRAWINGS 50489-530-020-PID-1108.001 TO 1108.010.  
F. DRAWING NUMBERS SHOWN IN P&ID CONTINUATION BOXES ARE ABBREVIATED SHOWING DRAWING SEQUENTIAL NUMBERS ONLY. THE FULL FORM OF THE DRAWING NUMBER IS 50489-530-020-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.

1. PROVISION IS AVAILABLE FOR LIMITING THE OPENING OF TCV TO A LOW FIRE POSITION (65 kg/hr) AT THE START-UP AND TO A HIGH FIRE POSITION AT THE MAXIMUM SAFE FIRING RATE (651 kg/h). NECESSARY PROVING SWITCHES, INTERLOCKS & MANUAL LOADING STATIONS PROVIDED FOR START-UP AND SHUTDOWN.
2. TYPICAL FP01 IS PROJECT SPECIFIC. REFER P&ID 50489-530-020-PID-1133.007 FOR DETAILS.
3. DELETED.
4. DELETED.
5. DELETED.
6. HEATER LOCAL CONTROL PANEL INCLUDES ALL RELATED ALARM SEQUENCE AND OPERATING LIGHT REPEATS.
7. VALVES ARE TIGHT SHUT-OFF (TSO) TYPE PER ANSI CLASS VI OR HIGHER REQUIRED.
8. DELETED.
9. PROVISION AVAILABLE FOR SAFE DRAINAGE OF CONDENSATE FROM FUEL GAS LINE (FOR START-UP).
10. VENT ARE AS PER KOC STANDARD KOC-G-002.
11. DELETED.
12. DELETED.
13. REFERENCE VENDOR DRAWING NO. 50489-530-020-29021-PID-V002
14. SHUTDOWN LEVELS ARE EXECUTED IN BMS (BURNER MANAGEMENT SYSTEM) LOGIC.
15. STRAIGHT RUN :420 UPSTREAM - 7D DOWNSTREAM.
16. ELECTRICAL HEAT TRACING FOR FUEL GAS LINES UP TO PREHEATER.
17. MECHANICAL MINIMUM STOP TO ENABLE MINIMUM FIRING RATE OF 10%.
18. UPSTREAM ISOLATION VALVE OF TCV IS KEPT CLOSED WHILE NOT USING THAT TCV.
19. PIT USED IN START UP SEQUENCE IN BMS LOGIC DIAGRAM.
20. VALVE PRESSURE RATING 300#
21. VOLUMETRIC FLOW RATE FOR FIG-2175A & FIG-2176A SET@ 630 kg/hr (842 Nm3/hr) WITH MOLECULAR WEIGHT OF 16.75.

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

AS-BUILT	
LARSEN & TOUBRO LIMITED	
NAME :	VAIBHAV VERMA
DESIGNATION :	AGM
SIGNATURE :	
DATE :	06-Sep-2018
DEPT/ DIVISION :	ENGINEERING

ZO	ISSUED FOR AS-BUILT	BAK/VSA	AKG	SRA	RAK	06.09.18
O1	ISSUED FOR CONSTRUCTION	BAK/VSA	AKG	SRA	RAK	27.09.16
O	ISSUED FOR CONSTRUCTION	PAK/PRS	AKG	SRA	RAK	10.06.16
D	ISSUED INCORPORATED CLIENT COMMENTS	HSH/PS	AKG	SRA	RAK	09.05.16
C	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	11.09.15
B	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	17.02.15
A	ISSUED FOR APPROVAL	BAK/VSA	AKG	SRA	RAK	29.11.14
REV.	DESCRIPTION	DRAWN	CHECKED	HOD APPRD.	PEM	DATE

CONTRACTOR REVISION

<b>KUWAIT OIL CO.</b> <b>K. S. C.</b>	 شركة نفط الكويت Kuwait Oil Company إسماعيل شركة نفط الكويت A Subsidiary of Kuwait Petroleum Corporation	<b>شركة نفط الكويت</b> <b>ش.م.ك.</b>
CONTRACTOR DETAILS:—		
 <b>LARSEN &amp; TOUBRO LIMITED</b> <b>FARIDABAD</b>		
PROJECT TITLE:—		
<b>NEW GATHERING CENTRE GC-30</b> <b>IN NORTH KUWAIT</b>		
DOCUMENT TITLE:—		
<b>PIPING &amp; INSTRUMENTATION DIAGRAM</b> <b>DESALTER FEED HEATER FUEL GAS SYSTEM TRAIN B (F-201B)</b>		
PROJECT NO.	DRAWING NO.	
<b>EF1902</b>	CONTRACTOR DRG. NO.  <b>50489-530-020-PID-1133.014</b>	REV. KOC DRG. NO.  <b>Z0</b>
	SHEET NO. <b>14 OF 16</b>	SHEET NO.
	COMPANY DRG. NO.  <b>EF1902-530-DCO-PID-0133.002</b>	REV. <b>A2</b>
	SHEET NO.	