



**G-003A/B** NOTE 10  
CRUDE OIL BOOSTER PUMP  
FLOWRATE m<sup>3</sup>/h (BPD) : 364 (55000)  
DRIVER POWER KW (HP) : 110 (147.51)  
DIFF PRESS ΔP bar (PSI) : 6.115 (88.7)  
SP GRAVITY @ OP/OT : 0.897~0.843  
FLUID VISCOSITY @ PT CP : 48~8  
OP PRESS/DES PRESS barg (PSIG) : 6.19/8.97 (89.8/130)  
OP TEMP/DESIGN TEMP °C (°F) : 15~65 (93/-3)/(59~149/200/27)  
UTC NO. :  
TRIM NO. : GT-G-003A/B-C15B

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, .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 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.

NOTES:

- 1. DELETED.
- 2. CHECK VALVES ARE OF THE NON-SLAM TYPE.
- 3.4. DELETED.
- 5. DELETED.
- 6. DUPLEX STRAINERS WITH PROPER DRAINAGE TO DRAIN SYSTEM. REFER P&ID:- 50489-530-020-PID-1108.004.
- 7. DELETED.
- 8. PIPING PURGE CONNECTION IS PROVIDED.
- 9. FUTURE CHEMICAL INJECTION POINT FOR CHEMICAL INJECTION NOZZLE DETAIL SEE STANDARD DRAWING 50489-530-020-PID-1108.001. 300# CHEMICAL INJECTION QUILL SHALL BE PROVIDED FOR FUTURE.
- 10. TWO OFF 50% PUMPS OPERATING AND ONE OFF 50% STANDBY.
- 11. DELETED.
- 12. PUMP PURGE CONNECTION IS PROVIDED TO PURGE THE PUMP FROM SUCTION LINE TO DISCHARGE LINE.
- 13. ALL A/G PIPING SUPPORTS & MOV'S ARE FIRE PROOFED INSIDE THE CRUDE OIL BOOSTER PUMP SHELTER.
- 14. STRAIGHT LENGTH REQUIREMENT FOR ORIFICE FLOW METER ARE 20D UPSTREAM & 5D DOWNSTREAM.
- 15. BLEED POINT IS PROVIDED.

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

AS-BUILT	
LARSEN & TOUBRO LIMITED	
NAME :	VAIBHAV VERMA
DESIGNATION :	AGM
SIGNATURE :	
DATE :	15-Aug-2018
DEPT/ DIVISION :	ENGINEERING

Z0	ISSUED FOR AS-BUILT	BAK/SSI	AKG	SRA	RAK	15.08.18
01	ISSUED FOR CONSTRUCTION	BAK/SSI	AKG	SRA	RAK	07.12.16
0	ISSUED FOR CONSTRUCTION	HSH/VSA	AKG	SRA	RAK	22.03.16
D	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	23.12.15
C	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	15.10.15
OC	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	30.05.15
B	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	13.02.15
A	ISSUED FOR APPROVAL	BAK/VSA	AKG	SRA	RAK	29.11.14
REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE
				APPRD.		

CONTRACTOR REVISION



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

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

DOCUMENT TITLE:-  
**PIPING & INSTRUMENTATION DIAGRAM**  
**CRUDE OIL BOOSTER PUMP G-003A/B**

PROJECT NO.	DRAWING NO.		
EF1902	CONTRACTOR DRG. NO.	REV.	KOC DRG. NO.
	50489-530-020-PID-1125.001	Z0	
	SHEET NO. 1 OF 2		SHEET NO.
	COMPANY DRG. NO.	REV.	
	EF1902-530-DCO-PID-0125.001	A2	
	SHEET NO.		