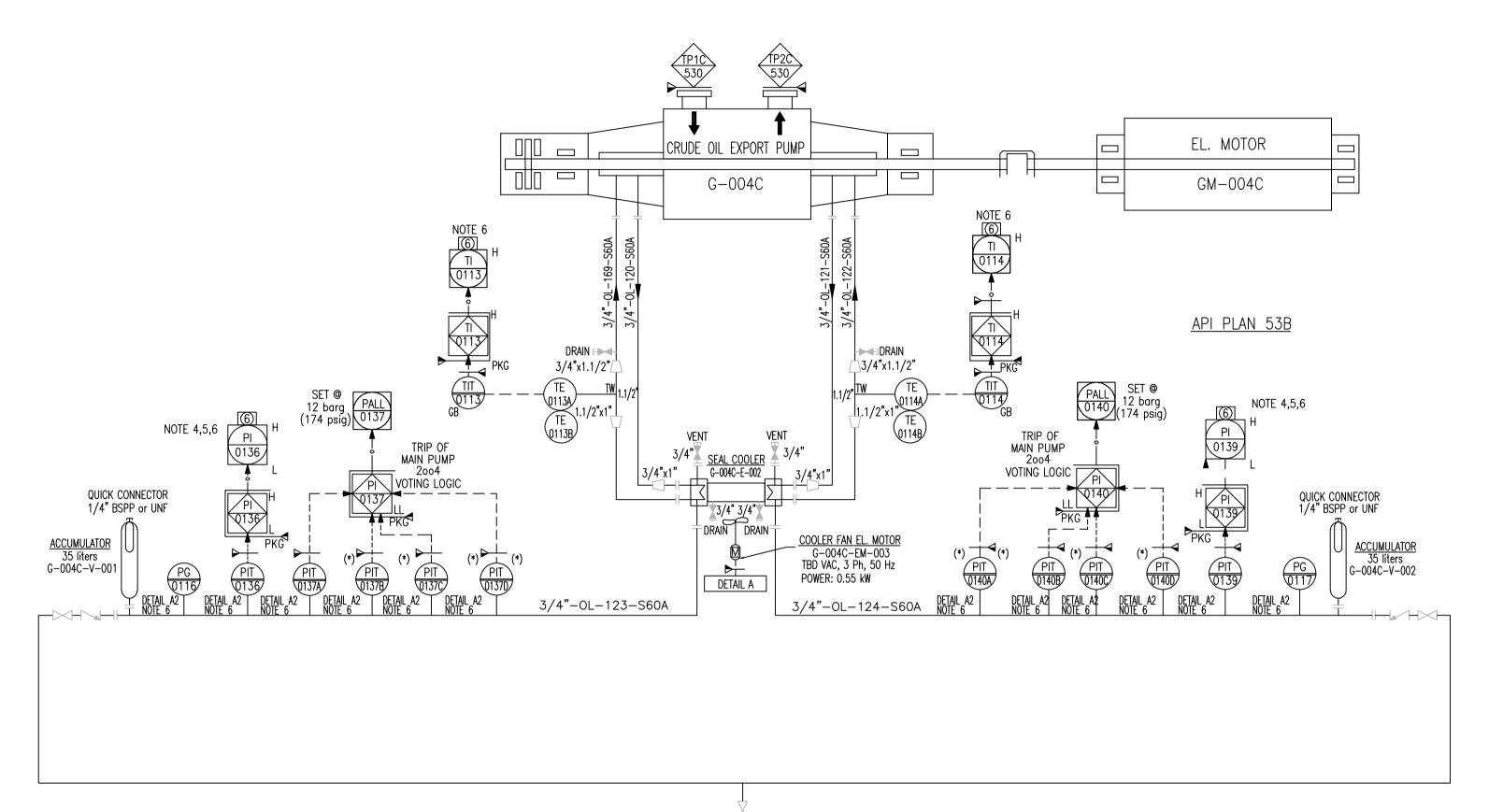
#### G-004C-E-002 SEAL COOLER (INDUCED DRAFT)

DUTY MMKCAL/HR (MMBTU/HR) OP. PRESS./DESIGN PRESS. barg (PSIG) OP. TEMP.INLET/OUTLET \*C (\*F) DESIGN TEMP. 'C ('F)

MATERIAL OF CONSTRUCTION

: 0.0043 (0.017) : 18/74.3 (261/1077.6) : 87/75 (188.6/167) : 110/-3 (230/26.6) : SS AISI 316L



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

## **AS-BUILT** LARSEN & TOUBRO LIMITED

VAIBHAV VERMA DESIGNATION: AGM SIGNATURE : DATE: 06-Aug-2018 DEPT/ DIVISON: ENGINEERING

# 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 AND ESDV DETAILS SEE DRAWINGS
- 50489-530-020-PID-1106.001, .002, .003, .004, .006 & .007. E. FOR MISCELLANEOUS PIPING TYPICAL VALVING, DRAINAGE AND GENERAL ARRANGEMENT OF LEVEL
- INSTRUMENTS, PUMPS, STRAINERS & CONTROL VALVES SEE DRAWING 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.
- 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 PROVIDED AS PER PIPING LAYOUT.
- 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.
- DELETED.
- 3. REFERENCE VENDOR P&ID:- 50489-530-020-07278-PID-V001, SHEET 2 OF 3.
- 4. ATU PUMP SHALL "STOP" WHEN PIT-0136 & PIT-0139 SHOWS 18 BARG PRESSURE AND ALSO CLOSE SOLENOID VALVE (XSV-0140)
- 5. ATU PUMP SHALL "START" WHEN PIT-0136 AND/OR PIT-0139 SHOWS 13 BARG PRESSURE AND ALSO OPEN SOLENOID VALVE (XSV-0140, PID-1126.004)
- 6. FOR DETAILS & LEGENDS REFER: 50489-530-020-PID-1126.012.
- 7. FOR VENDOR CAUSE & EFFECT REFER: 50489-530-020-07278-CAE-V001.
- 8. FOR VENDOR ALARM VALUES REFER: 50489-530-020-07278-LST-V003.
- 9. FOR VENDOR PIPING DETAILS REFER: 50489-530-040-07278-GAD-V006, V-0005.
- 10. BARRIER FLUID: MINERAL OIL ISO VG 10.

### <u>LEGEND:</u>



(\*) SIL2 RATED TRANSMITTER

	PIPING CONNECTIONS				
REF.	DIMENSION	SERVICE			
TP1C	10" 600 RF	PUMP SUCTION			
TP2C	6" 600 RF	PUMP DISCHARGE			
TP3C	3/4" 600 RF	PUMP DRAIN			
TP4C	3/4" 600 RF	PUMP VENT			
TP5C	1" 150 RF	L.O. TANK DRAIN			
TP6C	1" 150 RF	L.O. TO AIR COOLER			
TP7C	1" 150 RF	L.O. FROM AIR COOLER			
TP8C	1" 150 RF	L.O. AIR COOLER INLET			
TP9C	1" 150 RF	L.O. AIR COOLER OUTLET			
TP10C	3/4" 150 RF	L.O. AIR COOLER DRAIN			
TP11C	3/4" 150 RF	L.O. AIR COOLER VENT			
TP14C1	3/4" 600 RF	FILLING FLAN 53B			
TP15C1/C2	1" 150 RF	L.O. BASE DRAIN			
TP16C1/C2	2" 150 RF	FILLING PLAN B			
TP18C	3/4" 600 RF	BLEED PUMP DRAIN			
TP19C	3/4" 600 RF	BLEED PUMP VENT			
TP20C	1" 150 RF	VENT PROVISION			
TP21C	1" 150 RF	PURGING PROVISION			
TP22C	2" NPT	FILLER BREATHER			

			881	- 100/11	\$200L	- 19		
	ZO	ISSUED FOR AS-BUILT	BAK/SSI	AKG	SRA	RAK	06.08.18	
	01	ISSUED FOR CONSTRUCTION	BAK/SSI	AKG	SRA	RAK	30.11.16	
	0	ISSUED FOR CONSTRUCTION	PAK/PRS	AKG	SRA	RAK	04.06.16	
	D	ISSUED INCORPORATED CLIENT COMMENTS	PAK/ABY	AKG	SRA	RAK	26.04.16	
	С	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	28.10.15	
	В	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	13.02.15	
	Α	ISSUED FOR APPROVAL	BAK/VSA	AKG	SRA	RAK	29.11.14	
ſ	REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE	
L	INL V.	. DESCRIPTION	DIVAMIN	OTILONED	APP	RD.	DATE	
	CONTRACTOR REVISION							

CONTRACTOR REVISION

K. S. C.



CONTRACTOR DETAILS:-



LARSEN & TOUBRO LIMITED FARIDABAD

NEW GATHERING CENTRE GC-30 IN NORTH KUWAIT

DOCUMENT TITLE:-

SHEET NO.

PIPING & INSTRUMENTATION DIAGRAM

SEAL SYSTEM FOR CRUDE OIL EXPORT PUMP (G-004C) DRAWING NO. CONTRACTOR DRG. NO. REV. KOC DRG. NO. 50489-530-020-PID-1126.010 SHEET NO. EF1902 | COMPANY DRG. NO. EF1902-530-DCO-PID-0126.007

FROM COMMON SEAL

SYSTEM TOP-UP UNIT

1126.004

2"-OL-6316-S60A