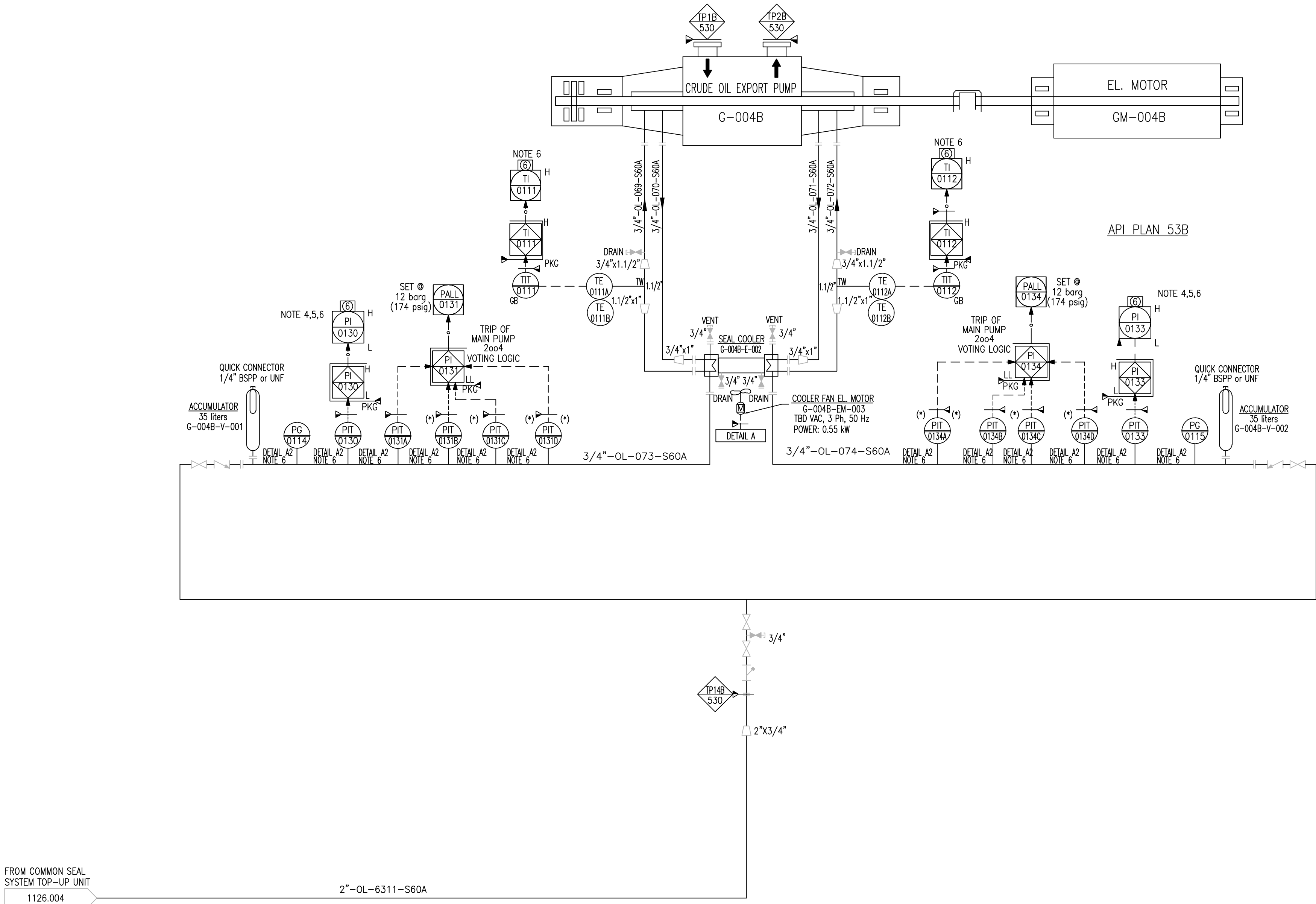


G-004B-E-002
SEAL COOLER (INDUCED DRAFT)

DUTY MMKCAL/HR (MMBTU/HR) : 0.0043 (0.017)
OP. PRESS./DESIGN PRESS. barg (PSIG) : 18/74.3 (261/1077.6)
OP. TEMP./INLET/OUTLET °C (°F) : 87/75 (188.6/167)
DESIGN TEMP. °C (°F) : 110/-3 (230/26.6)
MATERIAL OF CONSTRUCTION : SS AISI 316L



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/ DIVISON :	ENGINEERING

GENERAL NOTES:

- FOR STANDARD SYMBOLS AND NOMENCLATURE SEE DRAWINGS 50489-530-020-PID-1104.001 & .002.
- ALL EQUIPMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 530-.
- ALL INSTRUMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 030-.
- FOR TYPICAL INSTRUMENT CONNECTION SBOV, XV, MOV AND ESDV DETAILS SEE DRAWINGS 50489-530-020-PID-1106.001, .002, .003, .004, .006 & .007.
- 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.
- FOR MATERIAL SELECTION DIAGRAM SEE DRAWINGS 50489-530-020-MSD-1001.001 TO 1023.
- DETAIL NUMBERING FOR CI, SC, CC & CP SEE DRAWING 50489-530-020-PID-1108.003.
- PAINTING & COATING ARE IN ACCORDANCE WITH KOC-P-001.
- LOW POINT DRAIN & HIGH POINT VENT ARE PROVIDED AS PER PIPING LAYOUT.
- FOR CAUSE & EFFECT REFER DOC. NO. 50489-530-020-PHL-1009.
- FOR ALARM VALUES REFER DOC. NO. 50489-530-020-SUM-1006.

NOTES:

- DELETED.
- DELETED.
- REFERENCE VENDOR P&ID:- 50489-530-020-07278-PID-V001, SHEET 2 OF 3.
- ATU PUMP SHALL "STOP" WHEN PIT-0130 & PIT-0133 SHOWS 18 BARG PRESSURE AND ALSO CLOSE SOLENOID VALVE (XSV-0140)
- ATU PUMP SHALL "START" WHEN PIT-0130 AND/OR PIT-0133 SHOWS 13 BARG PRESSURE AND ALSO OPEN SOLENOID VALVE (XSV-0140, PID-1126.004)
- FOR DETAILS & LEGENDS REFER : 50489-530-020-PID-1126.012.
- FOR VENDOR CAUSE & EFFECT REFER : 50489-530-020-07278-CAE-V001.
- FOR VENDOR ALARM VALUES REFER : 50489-530-020-07278-LST-V003.
- FOR VENDOR PIPING DETAILS REFER : 50489-530-040-07278-GAD-V006, V-0005.
- BARRIER FLUID : MINERAL OIL ISO VG 10.

LEGEND:

- CONTRACTOR
VENDOR
(*) SIL2 RATED TRANSMITTER

PIPING CONNECTIONS		
REF.	DIMENSION	SERVICE
TP1B	10" 600 RF	PUMP SUCTION
TP2B	6" 600 RF	PUMP DISCHARGE
TP3B	3/4" 600 RF	PUMP DRAIN
TP4B	3/4" 600 RF	PUMP VENT
TP5B	1" 150 RF	L.O. TANK DRAIN
TP6B	1" 150 RF	L.O. TO AIR COOLER
TP7B	1" 150 RF	L.O. FROM AIR COOLER
TP8B	1" 150 RF	L.O. AIR COOLER INLET
TP9B	1" 150 RF	L.O. AIR COOLER OUTLET
TP10B	3/4" 150 RF	L.O. AIR COOLER DRAIN
TP11B	3/4" 150 RF	L.O. AIR COOLER VENT
TP14B1	3/4" 600 RF	FILLING FLAN 53B
TP15B1/B2	1" 150 RF	L.O. BASE DRAIN
TP16B1/B2	2" 150 RF	FILLING PLAN B
TP18B	3/4" 600 RF	BLEED PUMP DRAIN
TP19B	3/4" 600 RF	BLEED PUMP VENT
TP20B	1" 150 RF	VENT PROVISION
TP21B	1" 150 RF	PURGING PROVISION
TP22B	2" NPT	FILLER BREATHER

REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE
ZO	ISSUED FOR AS-BUILT	BAK/SSI	AKG	SRA	RAK	05.08.18
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
C	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	28.10.15
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

CONTRACTOR REVISION					
<div><div><div><div><div><div></div><div>KUWAIT OIL CO.</div><div>K. S. C.</div></div></div><div><div><div></div><div>شركة نفط الكويت</div><div>ش.م.ك.</div></div><div><div><div></div><div>ك.س.ك.</div><div>K. S. C.</div></div></div><div><div><div></div><div>ك.س.ك.</div><div>K. S. C.</div></div></div></div><div><div><div></div><div>ك.س.ك.</div><div>K. S. C.</div></div></div><div><div><div></div><div>ك.س.ك.</div><div>K. S. C.</div></div></div></div></div></div>					

CONTRACTOR DETAILS:-	<div><div><div><div></div><div>LARSEN & TOUBRO LIMITED</div><div>FARIDABAD</div></div></div></div>
PROJECT TITLE:-	NEW GATHERING CENTRE GC-30 IN NORTH KUWAIT

DOCUMENT TITLE:-	PIPING & INSTRUMENTATION DIAGRAM SEAL SYSTEM FOR CRUDE OIL EXPORT PUMP (G-004B)				
PROJECT NO.	DRAWING NO.				
EF1902	CONTRACTOR DRG. NO.	REV.	KOC DRG. NO.	REV.	
	50489-530-020-PID-1126.007	Z0			
	SHEET NO. 7 OF 12		SHEET NO.		
	COMPANY DRG. NO.	REV.			
	EF1902-530-DCO-PID-0126.007	A1			
	SHEET NO.				