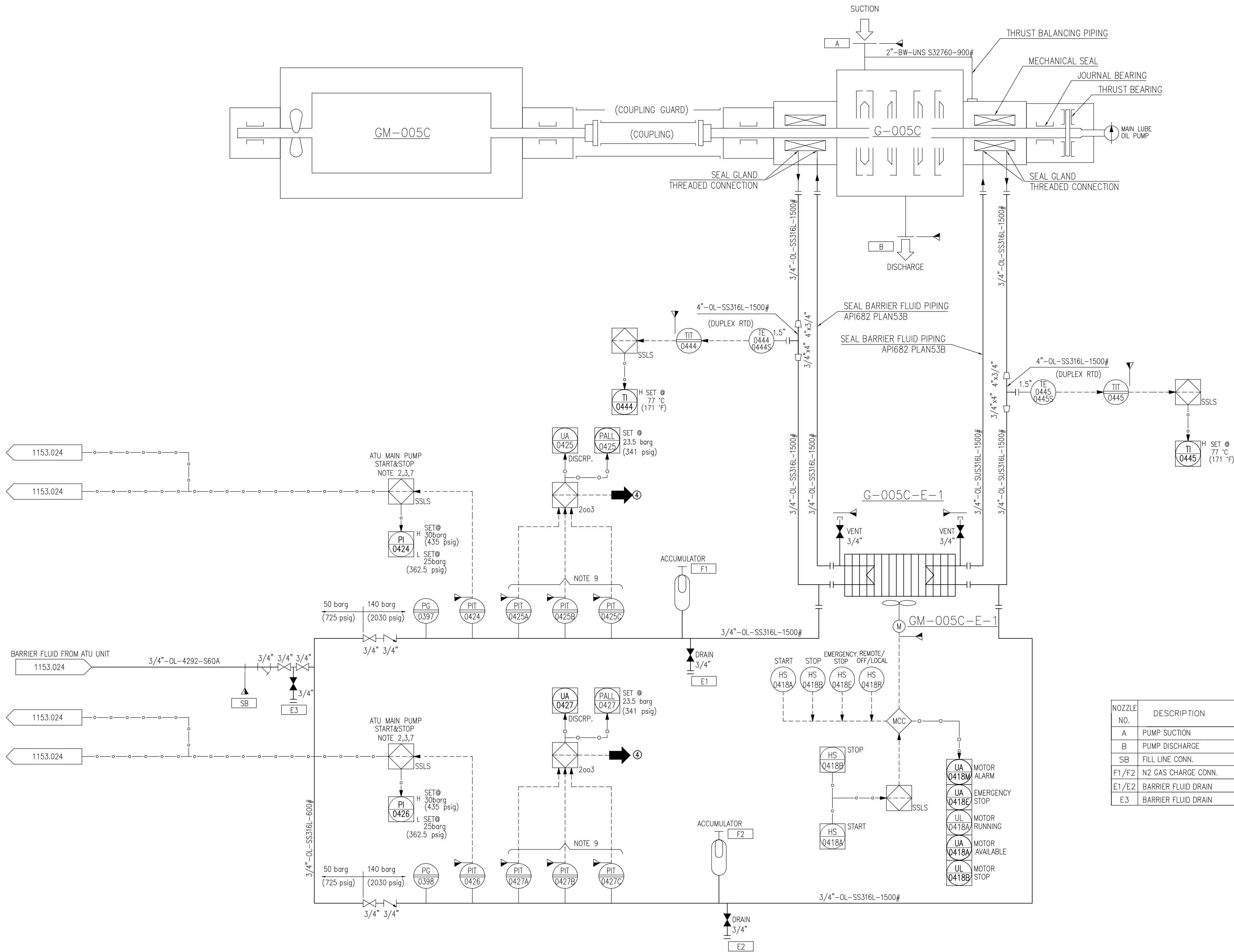


G-005C-E-1
SEAL FLUID COOLER

DUTY KW (HP) : 6 (8)
OPERATING PRESS./DESIGN PRESS barg (psig). : 30 (435)/ 140 (2030)
OPERATING INLET/OUTLET TEMP. °C (°F) : 80 (176)/ 65 (149)
DESIGN TEMP. °C (°F) : -3~100 (27~212)



NOZZLE NO.	DESCRIPTION	NOZZLE SIZE (INCH)	RATING (Lbs)	TYPE	MATERIAL	
					JIS	ASTM EQUIV.
A	PUMP SUCTION	12	900	RTJ	---	A890 Gr5A
B	PUMP DISCHARGE	8	900	RTJ	---	A890 Gr5A
SB	FILL LINE CONN.	3/4	600	RF	---	A182 F316L
F1/F2	N2 GAS CHARGE CONN.	1/4	BSP M	---	---	A182 F316L
E1/E2	BARRIER FLUID DRAIN	3/4	1500	RTJ	---	A182 F316L
E3	BARRIER FLUID DRAIN	3/4	1500	RTJ	---	A182 F316L

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, SBDV, XV, MOV & ESDV DETAILS SEE DRAWINGS 50489-530-020-PID-1106.001, .002, .003, .004, .005, .006 & .007.
- 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.
- 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.
- PAINING & COATING ARE IN ACCORDANCE WITH KOC-P-001.
- LOW POINT DRAIN & HIGH POINT VENT ARE INDICATED IN P&ID.
- FOR CAUSE & EFFECT REFER DOC. NO. 50489-530-020-PHL-1009.
- FOR ALARM VALUES REFER DOC. NO. 50489-530-020-SUM-1006.

NOTES:

- CABLE GLANDS FOR CONTRACTOR CONNECTION ARE PUMP VENDOR SCOPE OF SUPPLY.
- ABSENCE OF PAL-0424 & PAL-0426 IS USED FOR START PERMISSIVE SIGNAL OF G-005C.
- DELETED.
- VENDOR
CONTRACTOR
- BARRIER FLUID: POTABLE WATER / PROPYLENE GLYCOL (85% / 15%).
- WHEN PUMP IS OPERATED, SEAL FLUID FAN COOLER MOTOR IS OPERATED AND WHEN PUMP IS STOPPED, SEAL FLUID FAN COOLER MOTOR IS STOPPED.
- a) WHEN PIT-0424 OR 0426 IS ALARMED AS LOW WHILE MAIN PUMP RUNNING, ATU DUTY PUMP IS STARTED AND WHEN BOTH PIT- IS ALARMED AS HIGH WHILE MAIN PUMP RUNNING, ATU PUMPS ARE STOPPED.
b) IN CASE OF DEMAND & DUTY PUMP FAIL TO START OR DEVELOP PRESSURE, STANDBY SHALL START.
- VENDOR REFERENCE DOC. NO.
(a) 50489-530-020-07673-PID-V002.
(b) OPERATION CONTROL PHILOSOPHY OF PACKAGES (50489-530-020-07673-PHL-V001).
(c) ALARM & TRIP SCHEDULE (50489-530-020-07673-LST-V006).
- ISOLATION VALVES OF PRESSURE TRANSMITTER (CONNECTED TO ESD) ARE LO TYPE.

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

AS-BUILT
LARSEN & TOUBRO LIMITED
NAME :
DESIGNATION : VAIBHAV VERMA
SIGNATURE :
DATE : 28-Aug-2018
DEPT/ DIVISION : ENGINEERING

Z0	ISSUED FOR AS-BUILT	BAK/SSI	AKG	SRA	RAK	28.08.18
01	ISSUED FOR CONSTRUCTION	BAK/SSI	AKG	SRA	RAK	08.11.16
0	ISSUED FOR CONSTRUCTION	SHH/PS	AKG	SRA	RAK	26.05.16
D	ISSUED INCORPORATED CLIENT COMMENTS	SHH/PS	AKG	SRA	RAK	19.04.16
C	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	10.09.15
B	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	19.02.15
A	ISSUED FOR APPROVAL	BAK/VSA	AKG	SRA	RAK	05.12.14
REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE
				APPRD.		

CONTRACTOR REVISION

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
SEAL SYSTEM FOR TREATED WATER DISPOSAL PUMP
(G-005C)

PROJECT NO.	DRAWING NO.		
	CONTRACTOR DRG. NO.	REV.	KOC DRG. NO.
EF1902	50489-530-020-PID-1153.022	Z0	
	SHEET NO. 22 OF 25		
	COMPANY DRG. NO.	REV.	SHEET NO.
	EF1902-530-DCO-PID-0153.008	A1	
	SHEET NO.		