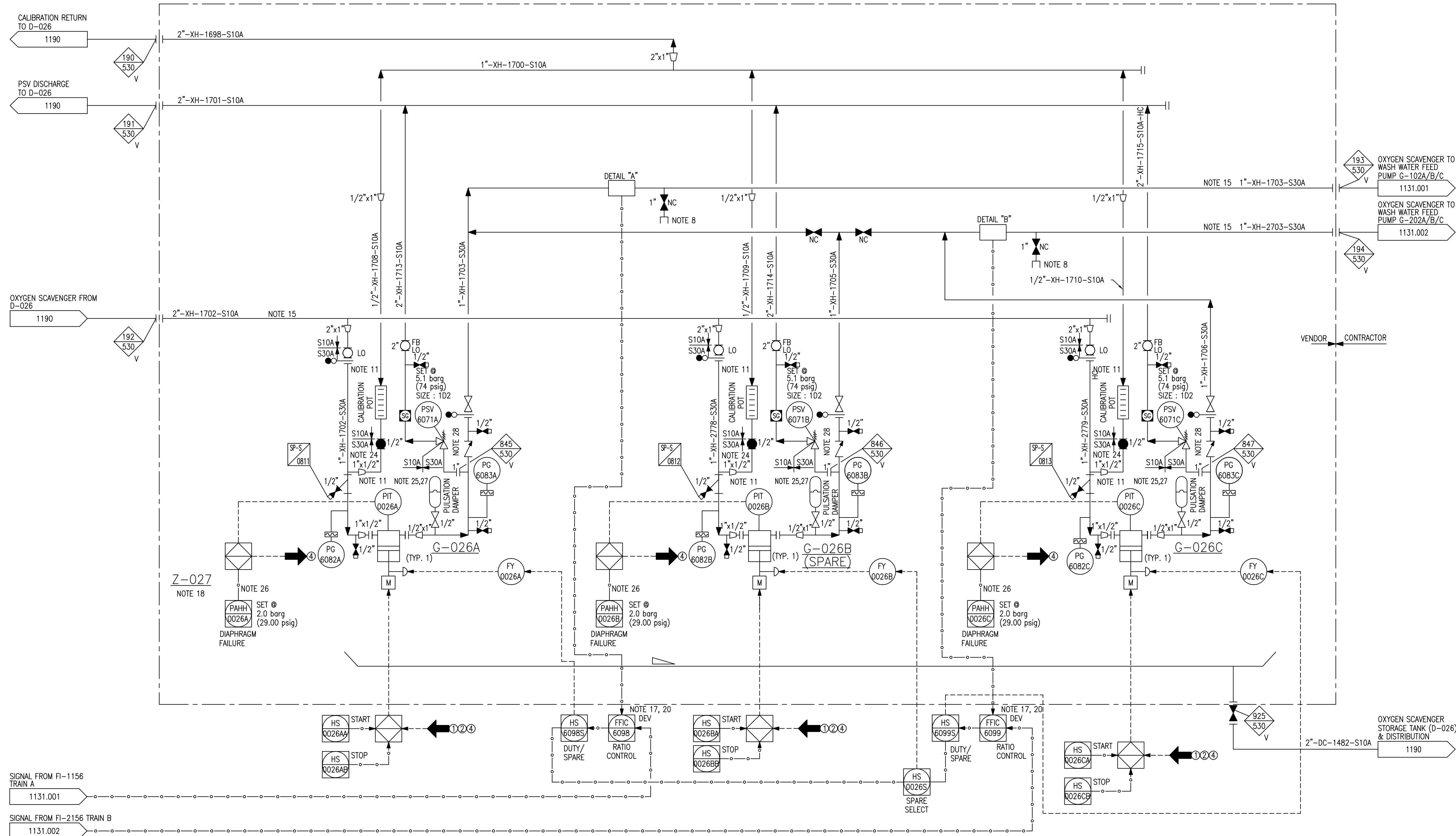


Z-027  
CHEMICAL INJECTION OXYGEN SCAVENGER



G-026A/B(SPARE)/C NOTE 2,7,18  
WASH WATER OXYGEN SCAVENGER INJECTION PUMP  
FLOWRATE l/hr (USOPH) : 2.73 (0.721)  
DRIVER POWER KW (HP) : 0.75 (1.0)  
DIFF PRESS ΔP bar (PSI) : 3.1 (44.5)  
S.G. @ OP OT : 1.4~1.33  
FLUID VISCOSITY @ PT CP : 15  
OP PRESS/DES PRESS barg (PSIG) : 3.1/5.1 (44.5/74)  
OP TEMP/DESIGN TEMP °C (°F) : 15~55/93/~3 (59~131/200/27)  
UTC NO. :  
TRIM NO. : GT-G026A/B/C-S30A

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

AS-BUILT  
LARSEN & TOUBRO LIMITED  
NAME : VAIBHAV VERMA  
DESIGNATION : AGM  
SIGNATURE :  
DATE : 18-Aug-2018  
DEPT/ DIVISION : 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 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.
- PAINTING & 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:

- DELETED.
- AUTOMATIC VARIABLE PUMP STROKE ADJUSTMENT IS THROUGH DCS.
- DELETED.
- LOW LOW LIQUID LEVEL IN D-026 STOPS OXYGEN SCAVENGER INJECTION PUMPS, G-026A/B/C.
- FLUSHING CONNECTIONS.
- DELETED.
- EYEWASH AND SAFETY SHOWERS ARE PROVIDED IN THE CHEMICAL INJECTION SKID AREA.
- PROVIDE CORIOLIS FLOW MEASUREMENT AND FACILITY FOR LOCAL CALIBRATION.
- DELETED.
- OXYGEN SCAVENGER SHALL BE STORED BELOW 60°C. ALL PIPEWORK TO BE INSULATED TO PROTECT THE FLOW FROM HEAT BUILD UP DUE TO SOLAR RADIATION.
- DELETED.
- HIGH AND LOW ALARMS ARE CONFIGURED IN THE DCS TO ALARM IF ACTUAL FLOW DIFFERS FROM SET BY 10%.
- CHEMICAL INJECTION SKID IS LOCATED AT THE CHEMICAL BULK STORAGE AREA.
- DELETED.
- CHEMICAL INJECTION RATIO CONTROLLER IS SET IN PPM.
- DELETED.
- PROVIDE INDICATION FOR PUMP STROKE IN DCS.
- (A) LOW POINT DRAIN IS PROVIDED AS APPROPRIATE.  
(B) DELETED.
- PUMP SUCTION BALL VALVE & CALIBRATION POT BALL VALVE IS LOCATED ADJACENT TO ONE ANOTHER FOR MEASURING THE FLOW.
- PUMPS ARE PROVIDED WITH DIAPHRAGM RUPTURE ALARM (PAHH).
- PAHH STOPS WASH WATER OXYGEN SCAVENGER INJECTION PUMP.
- DIRECT MOUNTING TO THE PUMP HEAD FOR DETECTING RUPTURE OF DIAPHRAGM.
- FOR PACKAGE 530-Z-027, THE PSV'S ARE LOCATED AWAY FROM CHEMICAL INJECTION SKID AND AT ELEVATION TO ENSURE FREE DRAINING OF PSV OUTLET IN CHEMICAL TANK.
- MINIMUM STROKE OF 10% IS PROVIDED FOR ALL CHEMICAL INJECTION PUMP.

Z0	ISSUED FOR AS-BUILT	BAK/CHS	AKG	SRA	DER	18.08.18
01	ISSUED FOR CONSTRUCTION	BAK/CHS	AKG	SRA	DER	21.12.16
0	ISSUED FOR CONSTRUCTION	HSH/CHS	AKG	SRA	RAK	06.06.16
D	ISSUED INCORPORATED CLIENT COMMENTS	PAK/CHS	AKG	SRA	RAK	07.04.16
C	ISSUED INCORPORATED CLIENT COMMENTS	JSI/ABY	AKG	SRA	RAK	29.10.15
OC	ISSUED INCORPORATED CLIENT COMMENTS	BAK/ABY	AKG	SRA	RAK	03.06.15
B	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	23.02.15
A	ISSUED FOR APPROVAL	PK/ABY	AKG	SRA	RAK	12.12.14
REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE

CONTRACTOR REVISION

**KUWAIT OIL CO. K. S. C.**  
شركة نفط الكويت  
ش.م.ك.  
A Subsidiary of Kuwait Petroleum Corporation

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

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

DOCUMENT TITLE:-  
PIPING & INSTRUMENTATION DIAGRAM  
CHEMICAL INJECTION SKID #7 -OXYGEN SCAVENGER (G-026A/B/C)

PROJECT NO.	DRAWING NO.	REV.	KOC DRG. NO.	REV.
EF1902	CONTRACTOR DRG. NO.	50489-530-020-PID-1196.004	Z0	
	SHEET NO. 4 OF 8			
	COMPANY DRG. NO.	EF1902-530-DCO-PID-0196.004	A4	
	SHEET NO.			