



- 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 SHALL BE IN ACCORDANCE WITH KOC-P-001.
  - LOW POINT DRAIN & HIGH POINT VENT SHALL BE INDICATED IN P&ID AT AS-BUILT STAGE 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
  - MCC IS NOT IN PUMP VENDOR SCOPE OF SUPPLY WIRING FROM LCS TO MCC IS NOT IN PUMP VENDOR SCOPE OF SUPPLY.
  - PUMP CASING DRAIN/VENT & PUMP BASE PLATE DRAIN SHALL BE CONNECTED TO PLANT DRAIN SYSTEM.
  - OFF SKID LUBE OIL COOLER INTERCONNECTING PIPEWORK NOT IN PUMP VENDOR SCOPE OF SUPPLY.
  - REFERENCE VENDOR DRAWING NUMBER:  
50489-530-020-07262-PID-V001 SHEET 1,2,3,4.
  - LUBE OIL HEATER WILL NOT START WHEN LUBE OIL RESERVOIR LEVEL IS LOW.
  - REFER VENDOR ALARM & TRIP LIST DOC. NO. 50489-530-080-07262-LST-V001 FOR SET POINT INFORMATION.
  - LUBE OIL HEATER START TEMP. <10°C
  - LUBE OIL PRESSURE FOR START PERMISSIVE FOR AUXILIARY LUBE OIL PUMP @1.7 BARG.
  - LUBE OIL RETURN LINE WILL ALWAYS GRADE DOWNWARDS FOR DRAIN AND UPWARDS FOR VENT.

| TERMINATION POINT LIST (PROVISIONAL) |                   |                           |
|--------------------------------------|-------------------|---------------------------|
| TP No.                               | SIZE/TYPE         | DESCRIPTION               |
| TP1A                                 | 14" 300 R.F       | PUMP SUCTION              |
| TP2A                                 | 10" 300 R.F       | PUMP DISCHARGE            |
| TP3A                                 | 2" 150 R.F        | PUMP CASING DRAIN         |
| TP4A                                 | 2" 150 R.F        | BASE PLATE DRAIN          |
| TP6A                                 | 2" 150 R.F        | LUBE OIL RESERVOIR DRAIN  |
| TP9A                                 | FILLER / BREATHER | LUBE OIL RESERVOIR FILLER |
| TP10A                                | 1.5" 150 R.F.     | LUBE OIL SUPPLY           |
| TP11A                                | 1.5" 150 R.F.     | LUBE OIL RETURN           |
| TP12A                                | 1.5" 150 R.F.     | LUBE OIL SUPPLY           |
| TP13A                                | 1.5" 150 R.F.     | LUBE OIL RETURN           |
| TP14A1/A2/A3                         | 1" 150 R.F.       | LUBE OIL COOLER VENT      |
| TP15A                                | 1" 150 R.F.       | LUBE OIL COOLER RESERVOIR |

| REV. | DESCRIPTION                         | DRAWN   | CHECKED | HOD | PEM | DATE     |
|------|-------------------------------------|---------|---------|-----|-----|----------|
| Z0   | ISSUED FOR AS-BUILT                 | HSB/VSA | AKG     | SRA | RAK | 12.11.18 |
| 02   | ISSUED FOR CONSTRUCTION             | HSB/VSA | AKG     | SRA | RAK | 22.09.16 |
| 01   | ISSUED FOR CONSTRUCTION             | HSB/CHS | AKG     | SRA | RAK | 28.07.16 |
| 0    | ISSUED FOR CONSTRUCTION             | HSB/VSA | AKG     | SRA | RAK | 30.06.16 |
| D    | ISSUED INCORPORATED CLIENT COMMENTS | PAK/VSA | AKG     | SRA | RAK | 13.05.16 |
| C    | ISSUED INCORPORATED CLIENT COMMENTS | PAK/VSA | AKG     | SRA | RAK | 13.10.15 |
| 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 |

**KUWAIT OIL CO.**  
K. S. C.

شركة نفط الكويت  
ش.م.ك.

الهيئة العامة للغذاء والدواء  
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  
LUBE OIL SYSTEM FOR TREATED WATER TRANSFER  
PUMP (G-011A)

| PROJECT NO. | DRAWING NO.                 |
|-------------|-----------------------------|
| EF1902      | 50489-530-020-PID-1153.006  |
|             | SHEET NO. 6 OF 25           |
|             | COMPANY DRG. NO.            |
|             | EF1902-530-DCO-PID-0153.004 |
|             | SHEET NO.                   |