GENERAL NOTES: A. FOR STANDARD SYMBOLS AND NOMENCLATURE SEE DRAWINGS 50489-530-020-PID-1104.001 & .002. <u>TR-2240</u> <u>CP-2240</u> B. ALL EQUIPMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 530-. <u>PU-2240</u> C. ALL INSTRUMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 030-. DUAL FREQUENCY AUTO TRANSFORMER DF POWER UNIT DF LRC-II PANEL D. FOR TYPICAL INSTRUMENT CONNECTION SBDV, XV, MOV & ESDV DETAILS SEE DRAWINGS RATING: 100 KVA, 480 VAC, 50 HZ, 3PHASE RATING: 136 KVA, 440 VAC, 50 HZ, 3PHASE RATING: 110VAC, 50HZ, 1PHASE 50489-530-020-PID-1106.001, .002, .003, .004, .005, .006 & .007. E. FOR MISCELLANEOUS PIPING TYPICAL VALVING, DRAINAGE & GENERAL ARRANGEMENT OF LEVEL INSTRUMENTS PRIMARY CURRENT : 179AAC PRIMARY CURRENT : 138AAC PUMPS, STRAINERS & CONTROL VALVES SEE DRAWINGS 50489-530-020-PID-1108.001 TO 1108.010. SECONDARY CURRENT : 164AAC SECONDARY VOLTAGE: 34 KV DC PEAK. F. Drawing numbers shown in P&ID continuation boxes are abbreviated showing drawing sequential SECONDARY VOLTAGE : 480VAC 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 INDICATED IN P&ID. 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: CONTRACTOR 1,2,3. DELETED VENDOR 4. EACH DUAL FREQUENCY DESALTER IS PROVIDED WITH LCS (LOCAL CONTROL STATION) IN THE FIELD FOR FOLLOWING: A. LRC BOARD 'ON' (INDICATION) B. CHOPPER ENABLE (INDICATION) UL 2240H C. 440V AC POWER 'ON' (INDICATION) D. EMERGENCY PUSH BUTTON. FROM LSLL-2241 ALARM CONTACT OUTPUT 5. TSV MOUNTED ON THE POWER UNIT IS PIPED TO AN OPEN DRAIN. DCS SYSTEM LRC POWER 1135.002 PANEL POWER 6. THERE ARE THREE INTERNAL LIQUID LEVEL SWITCHES IN POWER UNIT (ONE IN EACH TANK) LCD SCREEN KEY PAD 120V AC 12V DC REMOTE ESD S/D STATUS CLIENT WHICH ARE WIRED IN SERIES TO A COMMON TERMINAL IN THE JUNCTION BOX. DCS SYSTEM 7. VENDOR REFERENCE DOCUMENT/DRAWING IS AS FOLLOWS. CLIENT CUSTOMER ESD SIGNAL DESALTER P&ID-(50489-530-020-07226-PID-V006). ESD SYSTEM POWER UNIT DATA SHEET-(50489-530-070-07226-DAT-V001). AUTO TRANSFORMER DATA SHEET-(50489-530-070-07226-DAT-V002). LIMITS CLEAR CHÓPPER ENÀBLE HIGH VOLTAGE HIGH VOLTAGE POWER UNIT INSTRUMENT CABLE BLOCK DIAGRAM-(50489-530-080-07226-BLD-V001). CAUSE & EFFECT DIAGRAM-(50489-530-020-07226-CAE-V001). DCS SYSTEM UPS SUPPLY 9. TYPE OF FLUID IN TRANSFORMER: CROSS 206 MINERAL OIL (NON-PCB). MODBUS RS 485 SWITCHGEAR 110 V AC,50 HZ COMMUNICATION TO DCS 10. LIST OF ABRREVIATION -----(MCC) <u>CP-2240</u> 1 PH,2 WIRE DF: DUAL FREQUENCY (LOCATED IN CONTROL ROOM HT: HIGH TENSION (SUBSTATION) BUILDING) CP : DF LRC II PANEL LCS: LOCAL CONTROL SWITCH LRC: LOAD RESPONSIVE CONTROLLER TR: DF AUTO TRANSFORMER SET @ 1" BELOW [ PCB: POLYCHLORINATED & BI-PHENYL SET @ 90°C TSHH FROM NORMAL PU: POWER UNIT 0.35 barg (5.0 PSIG) 2240A (194°F) 2240 2240 OIL LEVEL SAFE AREA SUBSTATION SAFE AREA HAZARDOUS AREA **AS-BUILT** ZONE 2 KOC APPROVAL NAME / KOC No: **DESIGNATION** \_\_\_\_\_\_ **GROUP / TEAM** SIGNATURE **AS-BUILT** ₹ 2246A PS 2240 VAIBHAV VERMA DESIGNATION: AGM SIGNATURE: (LS ) 2240 1/2" X 1/2" SET @ 0.138 barg (2.0 PSIG) 1/2" X 1/2" SET @ 0.138 barg 01-Sep-2018 (2.0 PSIG) DEPT/ DIVISON: ENGINEERING (2.0 PSIG) LCS-2240 1/2"X 3/4" SET @ 0.482 barg CHOPPER ENABLE 1/2" X 3/4" SET @ 0.482 barg (7 PSIG) AKG SRA DER 01.09.18 ZO ISSUED FOR AS-BUILT 440V AC POWER 'ON' EMERGENCY PUSH BUTTON HSH/SSI AKG SRA DER 27.12.16 01 ISSUED FOR CONSTRUCTION PAK/PRS AKG SRA RAK 09.06.16 0 ISSUED FOR CONSTRUCTION DF POWER UNIT B ISSUED INCORPORATED CLIENT COMMENTS PAK/ABY AKG SRA RAK 14.04.16 NOTE 4 <u>PU-2240</u> JSI/VSA AKG SRA RAK 28.10.15 A ISSUED FOR APPROVAL DRAWN CHECKED HOD PEM DATE APPRD. DESCRIPTION 2241B 2242 2241 DUAL FREQUENCY CONTRACTOR REVISION AUTO TRANSFORMER DESALTER VESSEL <u>TR-2240</u> (C-202)**KUWAIT OIL CO.** 2240A 2240B 2240C K. S. C. HT CABLE TO GRID HT CABLE TO GRID LARSEN & TOUBRO LIMITED FARIDABAD NEW GATHERING CENTRE GC-30 IN NORTH KUWAIT DOCUMENT TITLE:-2"-D0-2200-C15B PIPING & INSTRUMENTATION DIAGRAM FIRST STAGE DESALTER POWER UNIT TRAIN-B (530-C-202) DRAWING NO. REV. KOC DRG. NO. CONTRACTOR DRG. NO. 50489-530-020-PID-1135.004 SHEET NO. 4 OF 4 SHEET NO. EF1902 COMPANY DRG. NO. PORTABLE DRUM SHEET NO.