

## List of components needed for Vacuum Oil Dehydration system

| Sr No. | Item description                                                                                                                                                                      | Unit  | Qty                   |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------|
| 1      | Equipment wire, Flexible, Size: 1mm <sup>2</sup> , Length : 90Meter, 40/0076", Color: Red, Black and Green, Total Quantity: 03                                                        | Reel  | 3                     |
| 2      | Equipment wire, Flexible, Size: 0.5mm <sup>2</sup> , Length : 90Meter, 23/0076", Color: Red, Black and Green, Total Quantity: 03                                                      | Reel  | 3                     |
| 3      | Equipment wire, Flexible, Size: 2.5mm <sup>2</sup> , Length : 90Meter, 110/0076", Color: Red, Black and Green, Total Quantity: 03                                                     | Reel  | 3                     |
| 4      | Panel Wire, Size:6mm <sup>2</sup> ,Current carrying capacity: 40 Ampere, No of cores : 3                                                                                              | Meter | 9                     |
| 5      | Panel Wire, Size:10mm <sup>2</sup> ,Current carrying capacity: 54 Ampere, No of cores : 5                                                                                             | Meter | 10                    |
| 6      | Copper Bus bar - Width: 20mm                                                                                                                                                          | Feet  | 5                     |
| 7      | Heat Shrink Sleeving Tube Color: Red, Green, Blue Length: 2 inch, Diameter: 4mm <sup>2</sup> , 10mm <sup>2</sup>                                                                      | Pcs   | 150 each              |
| 8      | Insulated Crimp terminal, Fork Type, Insulation Color: Red, Blue (2 types) Cable Size:0.5 mm <sup>2</sup> , stud size as per Relay Socket connection                                  | Dozen | 4 each                |
| 9      | Din rail terminals , feed through symmetric for 1mm <sup>2</sup> , 2.5mm <sup>2</sup> , 6mm <sup>2</sup> , 10mm <sup>2</sup> (total 4 types)                                          | Dozen | 2 Dozen for each type |
| 10     | Earth leakage circuit breaker, Number of Protected poles : 2, Rated Current : 40, Make : CHINT sensitivity : 30 / 300mA or equivalent                                                 | No    | 1                     |
| 11     | Schneider or equivalent circuit breaker NSX100F, TMD trip unit 100A, 3 poles                                                                                                          | No    | 1                     |
| 12     | Magnetic Contactor, Make: CHINT, Coil Voltage: 220VAC to 240VAC, No. of Poles: 3P, Current rating three phase : 15 Amps or Equivalent                                                 | No    | 4                     |
| 13     | Thermal Overload Relay for Magnetic Contactor, Make: CHINT, Current Range : 12 to 15 Amp or Equivalent                                                                                | No    | 4                     |
| 14     | Magnetic Contactor, Make: CHINT, Coil Voltage: 220VAC to 240VAC, No. of Poles: 3P, Current rating three phase : 7 Amps or Equivalent                                                  | No    | 2                     |
| 15     | Thermal Overload Relay for Magnetic Contactor, Make: CHINT, Current Range : 4 to 7 Amp or Equivalent                                                                                  | No    | 2                     |
| 16     | Magnetic Contactor, Make: CHINT,Coil Voltage: 220VAC to 240VAC, No. of Poles: 3P, Current rating three phase : 5 Amps or Equivalent                                                   | No    | 3                     |
| 17     | Thermal Overload Relay for Magnetic Contactor, Make: CHINT, Current Range : 2 to 5 Amp or Equivalent                                                                                  | No    | 3                     |
| 18     | Under and Over Voltage protection, Adjustable current and voltage or equivalent, Over Voltage range : above 462 VAC, Under Voltage range : Below 370 VAC Over Current range : 0-40Amp | No    | 1                     |
| 19     | EMI Noise filter for DC Voltage : 220 VAC, Current : 6 Amp                                                                                                                            | No    | 3                     |
| 20     | Panel Fan, Operating Voltage: 220VAC, Size : 6 inch                                                                                                                                   | No    | 4                     |
| 21     | Miniature Circuit Breaker, Make: Chint , No of Poles : 3P, Rated current: 15A                                                                                                         | No    | 4                     |
| 22     | Miniature Circuit Breaker, Make: Chint, No of Poles : 3P, Rated current: 7A                                                                                                           | No    | 2                     |
| 23     | Miniature Circuit Breaker, Make: Chint, No of Poles : 3P, Rated current: 4A                                                                                                           | No    | 3                     |
| 24     | Power Distribution Strip, Voltage: 220VAC, Material: Nylon, Color: Black, No of pins : 6                                                                                              | No    | 5                     |

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| 25 | Power Distribution Strip, Voltage: 220VAC, Color: Black, No of pins : 10                                                                                                                       | No    | 5      |
| 26 | Industrial Male Socket, No of pins: 5 pin, Current capacity: 64A                                                                                                                               | No    | 2      |
| 27 | Din Rail Mount Power Supply, Voltage : 24VDC, Current : 6.2 Amp, Make: MeanWell                                                                                                                | No    | 2      |
| 28 | Cable wire ties, Size: 4 inch, 6 inch (2 types)                                                                                                                                                | Pkt   | 4 each |
| 29 | Programmable logic controller PLC, Make: Delta, Model: DVP20SX211T, Type: Transistor, No. of inputs: 8, No. of outputs : 6, Analog Input: 4, Analog Out: 2, Supply:24VDC                       | No    | 1      |
| 30 | Analog/Digital Output Extension Card PLC Delta DVP20SX311T                                                                                                                                     | No    | 1      |
| 31 | Analog/Digital Input Extension Card PLC Delta DVP20SX311T                                                                                                                                      | No    | 1      |
| 32 | Thermocouple Module Make: Delta Model: DVP20SX311T                                                                                                                                             | No    | 1      |
| 33 | RS485 Communication Module Make: Delta Model: DVP20SX311T                                                                                                                                      | No    | 1      |
| 34 | Human Machine Interface, HMI, Make: Delta, Model: DOP110CS                                                                                                                                     | No    | 1      |
| 35 | Female header: Size : 2.54mm, No of channel: 40                                                                                                                                                | Dozen | 4      |
| 36 | Multi Sockets, Input : 2 Pin                                                                                                                                                                   | No    | 6      |
| 37 | Banana Plug, Pure copper Platted, Stackable, Size: 4mm                                                                                                                                         | Dozen | 1      |
| 38 | Extension Board, CMS 118 or Equivalent                                                                                                                                                         | No    | 2      |
| 39 | Slotted Duct, Size: 25x60MM, Size: 25x40MM, Size: 40x60MM (3 types)                                                                                                                            | No    | 4 each |
| 40 | Slotted duct, Din rail Channel, Width: 35M, Length: 1 meter                                                                                                                                    | No    | 10     |
| 41 | Trasparent Spiral Pipe for Wiring 6mm 25 meter                                                                                                                                                 | No    | 2      |
| 42 | Trasparent Spiral Pipe for Wiring 10mm 10 meter                                                                                                                                                | No    | 4      |
| 43 | Line Up, Terminal Block, 2.5mm, 4mm (2 types)                                                                                                                                                  | Dozen | 2 each |
| 44 | End Stopper, Line Up                                                                                                                                                                           | Dozen | 2      |
| 45 | Din rail Ground Earthing Terminal Block                                                                                                                                                        | No    | 2      |
| 46 | Replacement Soldering iron For Suoer 878A station, No of Pins: 5, Wattage: 60, Voltage: 24V                                                                                                    | No    | 1      |
| 47 | Relay card, Trigger Voltage:24VDC, No of channel: 8, Relay Contact: 1No 1NC, Relay contact Current : 6Amp                                                                                      | No    | 2      |
| 48 | Din rail Slim Type relay with Base, Make :FGCK, Model : 41F-1Z-C2-1, Coil: 24Vdc, Contact current : 6A                                                                                         | No    | 12     |
| 49 | Push button with indicator & locking nut, Model: LAS4Y-11/G/24V, make: ONPOW, Size: 8mm, Color: Green, Red, Yellow (3 types) operation type: momentary, 1NO/1NC, LED voltage: 24V, Type: Round | No    | 5 each |
| 50 | Push button with indicator & locking nut, Model: LAS4Y-11Z/G/24V, make: ONPOW, Size: 8mm, Color: Green, Red (2 types) operation type: Latching, 1NO/1NC, LED voltage: 24V, Type: Round         | No    | 5 each |
| 51 | Emergence stop button with indicator & locking nut, Model: ONPOW26BK-11Z/R/220V, Make: ONPOW, Current rating: 10A, 220VAC, Size: 22mm, , operation type: Latching                              | No    | 5      |
| 52 | Rochester Sensors T/LL350 Capacitance Liquid Level Sensor with Max Contact                                                                                                                     | No    | 1      |
| 53 | Baumer CleverLevel point level sensor LBFS-01111.0 - 11044623                                                                                                                                  | No    | 3      |
| 54 | Motor Protection Relay XJ3-G Phase Sequence Protection and Faulty Relay; Coil Rated Voltage: AC420V. Make CHINT or equivalent                                                                  | No    | 3      |
| 55 | QDX50E Mechanical type Adjustable Pressure Switch or Equivalent                                                                                                                                | No    | 1      |
| 56 | Digital Temperature indicator and Controller Model TK4S-24RR AUTONICS with Thermocouple sensor K type                                                                                          | No    | 1      |
| 57 | Emergency ON/OFF Switch Chint or Equivalent                                                                                                                                                    | No    | 2      |
| 58 | WIKA Pressure transmitter A-10 Range -1 to +4 bar                                                                                                                                              | No    | 1      |

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| 60 | Balmer Pressure Sensor CTX-3.3.3.B79.0 Range -1 to +9 bar                                                                                                                           | No    | 1                       |
| 61 | Schneider DM3210 CI 0.5 LED Three Phase Ammeter or Equivalent                                                                                                                       | No    | 1                       |
| 62 | Chint BH (SDH)-0.66 60 II Current Transformer                                                                                                                                       | No    | 6                       |
| 63 | Nan kong or equivalent Oil Flow Meter Port Size 1.5" and Capacity 3000 Ltr/Hr with 4-20mA output or Digital RS485                                                                   | No    | 1                       |
| 64 | Moisture in Oil Sensor EE364 E + E Elektronik (Austria)                                                                                                                             | No    | 1                       |
| 65 | 3.7kW 3-Phase 420V Variable Frequency Drive 5hp ZK600B-4T3R7kW or equivalent                                                                                                        | No    | 2                       |
| 66 | DN40 1.5" DC Stainless steel 2-way Solenoid Ball Valve                                                                                                                              | No    | 7                       |
| 67 | Electrically Controlled DC Proportional Solenoid Valve 1.5" Stainless steel.                                                                                                        | No    | 2                       |
| 68 | Stainless steel Not Return Valve 1.5"                                                                                                                                               | No    | 1                       |
| 69 | Distribution Box or panel (powder coated) with lock. Size: 3' x 3.3' x 7"                                                                                                           | No    | 1                       |
| 70 | RS-485 Communication cable                                                                                                                                                          | No    | 6                       |
| 71 | Pressure Module Diffusion Silicon with 4-20mA and 0--5V output                                                                                                                      | No    | 1                       |
| 72 | 2in/4out Analog signal isolator transmitter                                                                                                                                         | No    | 1                       |
| 73 | HanYoung or Equivalent NUX Thyristor Power Regulator TPR-2N 220VAC and 50Hz                                                                                                         | No    | 3                       |
| 74 | Thimble insulated 0.5mm, 1mm, 2.5mm (3 types) Make: Multicomp pro or equivalent                                                                                                     | Pcs   | 100 each                |
| 75 | Thimble or lug 6mm, 10mm (2 types) Make: Multicomp pro or equivalent                                                                                                                | Pcs   | 50 each                 |
| 76 | PVC cable shroud 6mm and 10mm Red Blue Yellow                                                                                                                                       | Dozen | 5 each in all 3 colors  |
| 77 | Solid State Relay 3 phase 30A Make Tense or Equivalent                                                                                                                              | No    | 3                       |
| 78 | Plastic Cable Marking Number 0 to 9 and Alphabet A to Z cable dimension 0.5mm <sup>2</sup> , 1mm <sup>2</sup> , 2.5mm <sup>2</sup> , 6mm <sup>2</sup> , 10mm <sup>2</sup> (5 types) | Pcs   | 150 for each wire types |
| 79 | PHOENIX or Equivalent , Coil Voltage: 24VDC, No of Poles: 1no 1nc relay with base                                                                                                   | No    | 10                      |
| 80 | Power Distribution Block, Number of Poles: 5                                                                                                                                        | No    | 2                       |
| 81 | PLC AC voltage and current transforemer, Communication Mode: RS485, No of channel 4, CT measument : 420 AC Voltage, Current : 0-20Amp                                               | No    | 2                       |
| 82 | 3- Phase Panel Voltmeter, Size: 96 x 96mm, Voltage measurement: 420 3-phase                                                                                                         | No    | 2                       |
| 83 | 3 phase digital Display Ammeter, Size: 96 x 96mm                                                                                                                                    | No    | 2                       |
| 84 | Plastic Cable Gland for 0.5mm <sup>2</sup> , 1mm <sup>2</sup> , 2.5mm <sup>2</sup> , 6mm <sup>2</sup> and 10mm <sup>2</sup> (total 5 types)                                         | Dozen | 1 each                  |

*7/11/18*