

# ANNEX AGRI -9

Sector: AGRICULTURE Sub-sector: IRRIGATION  
Activity : Development and Utilization of Groundwater Resources within the Sector :First

| CODE                                                       | Item Description and its complementary items(if applicable)                       | Intended use (and targeted end user)                                                                                                                                        | Qty . In unit                |
|------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 05-09-00001                                                | Water Well Drilling Requirements<br>See App. 8                                    | Equipments, materiast and spares are needed for improving groundwater resources use.(in Governorates Keballa, Nineva, Anbar, Tamem, Diyala, Najaf, Salah Aldeen and Basrah) | As stated in App.8           |
| 05-09-00002                                                | Spare Parts For Machinery And Equipments.See App.9C I - 9C III and 9C-V           | Maintenance of madhinery and equipments to maintain irrigation projects (All irrigation projects in the 15 Governorates projects)                                           | As stated in App.9C          |
| 05-09-00003                                                | Spare Parts For Drilling Rigs and Pumps.See App 9C.IV and App.9A code 00088-00100 | Rehabilitation Saddam Dam grouting processes. (Saddam Dam at Ninava )                                                                                                       | As stated in App. 9A & 9C-IV |
| <b>APPENDIX 9 A .<br/>SPARE PARTS FOR PUMPING STATIONS</b> |                                                                                   |                                                                                                                                                                             |                              |
| CODE                                                       | DESCRIPTION                                                                       | QUANTITY                                                                                                                                                                    | UNIT OF MEASURE              |
| 05-09-00004                                                | Phase Failer-Protection relay 380 V A.C. 75%                                      | 200                                                                                                                                                                         |                              |
| 05-09-00005                                                | Air BreakerContactor 380V-220 VA.C.                                               | 1500                                                                                                                                                                        |                              |
| 05-09-00006                                                | Manual change over switch different capacities                                    | 200                                                                                                                                                                         |                              |
| 05-09-00007                                                | Air BreakerContactor K-ID 1 220 VA.C.                                             | 10                                                                                                                                                                          |                              |
| 05-09-00008                                                | Air Breaker Contactor ESU 250/3 220 VA.C.                                         | 10                                                                                                                                                                          |                              |
| 05-09-00009                                                | Current Transformer 6 S12                                                         | 10                                                                                                                                                                          |                              |
| 05-09-00010                                                | Current Transformer                                                               | 100                                                                                                                                                                         |                              |
| 05-09-00011                                                | Circuit Breaker different types                                                   | 250                                                                                                                                                                         |                              |
| 05-09-00012                                                | Control Transformer                                                               | 100                                                                                                                                                                         |                              |

| CODE        | Item Description and its complementary items(if applicable)                                        | Intended use (and targeted end user) | Qty . In unit |
|-------------|----------------------------------------------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00013 | Copper busbar                                                                                      | 150                                  |               |
| 05-09-00014 | Automatic Circuit Breaker                                                                          | 350                                  |               |
| 05-09-00015 | Circuit Breaker 11 kv 630 A , SF6                                                                  | 4                                    |               |
| 05-09-00016 | Voltage Transformer GZ 12, 11000/100 V                                                             | 5                                    |               |
| 05-09-00017 | Voltage Transformer GZ 12 , 6000/100 V                                                             | 5                                    |               |
| 05-09-00018 | Voltage Transformer GZ 12,380/220 V                                                                | 50                                   |               |
| 05-09-00019 | Voltage Transformer GZ 12,33000/380 V (630 KVA)                                                    | 2                                    |               |
| 05-09-00020 | Seat valve roller operated and way valve hand operated                                             | 4                                    |               |
| 05-09-00021 | Steel pipe for pump different diameter with accessories                                            | 20000 m                              |               |
| 05-09-00022 | Electrical cable different sizes                                                                   | 60000 m                              |               |
| 05-09-00023 | Projector for nuderwater lightening                                                                | 10                                   |               |
| 05-09-00024 | Circuit breaker for switch board and accessories                                                   | 500                                  |               |
| 05-09-00025 | Lifting Gate gear box complete                                                                     | 150                                  |               |
| 05-09-00026 | Shock - obsorber for hydraulic gates different sizes                                               | 72                                   |               |
| 05-09-00027 | Out door Stationary substation 33/11 KV different capacities (MVA)with accessories and spare parts | 10                                   |               |
| 05-09-00028 | Hydraulic spare parts for stop logs in Hydraulic structure.                                        | 2                                    |               |
| 05-09-00029 | electrical tower and cables                                                                        | 2000 meter                           |               |
|             | <b>Spare Parts for Pumping station</b>                                                             |                                      |               |
| 05-09-00030 | *Main power transformer different sizes                                                            | 20                                   |               |
| 05-09-00031 | *High voltage switch gear oil break circuit breaker                                                | 10                                   |               |
| 05-09-00032 | *Low voltage moulded case circuit breaker different type                                           | 120                                  |               |

| CODE        | Item Description and its complementary items(if applicable)                                                            | Intended use (and targeted end user) | Qty . In unit |
|-------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00033 | *Low voltage air break contactor with coil 220 V, A .C                                                                 | 200                                  |               |
| 05-09-00034 | *bearing NU1036                                                                                                        | 5                                    |               |
| 05-09-00035 | *bearing NU238                                                                                                         | 5                                    |               |
| 05-09-00036 | *bearing NU29332                                                                                                       | 10                                   |               |
| 05-09-00037 | *bearing NU29348                                                                                                       | 3                                    |               |
| 05-09-00038 | *ball bearing NU309                                                                                                    | 5                                    |               |
| 05-09-00039 | *ball bearing 6309                                                                                                     | 3                                    |               |
|             | <b>Spare Parts for Pump type 720-P-1225 (Q=6m3/s)</b>                                                                  |                                      |               |
| 05-09-00040 | *Pump bowl with guide bearing parts                                                                                    | 3                                    |               |
| 05-09-00041 | *Suction bell mouth                                                                                                    | 3                                    |               |
| 05-09-00042 | *Casing                                                                                                                | 4                                    |               |
| 05-09-00043 | *Impeller                                                                                                              | 2                                    |               |
| 05-09-00044 | *Insert ring                                                                                                           | 4                                    |               |
| 05-09-00045 | *Shaft                                                                                                                 | 2                                    |               |
| 05-09-00046 | *Bearing bush                                                                                                          | 5                                    |               |
| 05-09-00047 | *Shaft protection sleeve                                                                                               | 5                                    |               |
|             | <b>Spare Parts for 6 KV &amp; 11KV Switch Gear from Techono Commerze</b>                                               |                                      |               |
| 05-09-00048 | *circuit breaker SCI 1 - 10 / 630 /350                                                                                 | 4                                    |               |
| 05-09-00049 | *current transformer GS 12 30 / 5 /5A                                                                                  | 6                                    |               |
| 05-09-00050 | *voltage transformer GZ 12 11 / 0.1 KV                                                                                 | 2                                    |               |
| 05-09-00051 | *overcurrent time lag relay                                                                                            | 10                                   |               |
| 05-09-00052 | *neutral relay 2 RH 30 100 W A.C.                                                                                      | 10                                   |               |
| 05-09-00053 | *neutral relay ZRH30 100 W A.C. with drop indicator                                                                    | 10                                   |               |
| 05-09-00054 | *neutral relay 2 RH 06 24 V D.C.                                                                                       | 10                                   |               |
| 05-09-00055 | coil of under voltage 100 V A.C. 06-34                                                                                 | 40                                   |               |
| 05-09-00056 | *3-pole minimum oil circuit breaker HL4-8,Vm = 12 KV, Im 1250 A, Hz = 50,Ith =39 KA,t=35,Im = 107 KA type HL4-8-6 1334 | 5                                    |               |

| CODE        | Item Description and its complementary items(if applicable)       | Intended use (and targeted end user) | Qty . In unit |
|-------------|-------------------------------------------------------------------|--------------------------------------|---------------|
|             | <b>Spare Parts for Main Pump Type KAEA<br/>1000 / 10 / 4 - 29</b> |                                      |               |
| 05-09-00057 | *main pump shaft with sleeves for pump KAEA<br>1000 / 10 / 4 - 29 |                                      | 1             |
| 05-09-00058 | *end bearing 712.97303.0 - 77st.                                  |                                      | 3             |
| 05-09-00059 | *axial bearing 29348TGL 2996                                      |                                      | 3             |
| 05-09-00060 | *shaft protection sleeve 711.13363.0-73                           |                                      | 3             |
| 05-09-00061 | *shaft protection sleeve 711.13362.0-23                           |                                      | 4             |
| 05-09-00062 | *shaft protection sleeve 711.13364.0-33                           |                                      | 3             |
| 05-09-00063 | *wearing ring 711.26166.0 - 23                                    |                                      | 10            |
| 05-09-00064 | *seal ring MN 54.1A47 / 20                                        |                                      | 10            |
| 05-09-00065 | *rubber bellow form No. 5424                                      |                                      | 10            |
|             | <b>Spare Parts for Pump HAEC 1200/5/2 - 091</b>                   |                                      |               |
| 05-09-00066 | *impeller                                                         |                                      | 1             |
| 05-09-00067 | *wearing ring                                                     |                                      | 3             |
| 05-09-00068 | *end bearing                                                      |                                      | 1             |
| 05-09-00069 | *intermediate bearing                                             |                                      | 1             |
| 05-09-00070 | *shaft protection sleeve 0 - 83                                   |                                      | 1             |
| 05-09-00071 | *shaft protection sleeve 0 - 43                                   |                                      | 1             |
| 05-09-00072 | *shaft protection sleeve 0 - 73                                   |                                      | 1             |
| 05-09-00073 | *O-ring 230*5                                                     |                                      | 6             |
| 05-09-00074 | *rubber for coupling 42                                           |                                      | 6             |
| 05-09-00075 | *drive shaft                                                      |                                      | 1             |
| 05-09-00076 | *pump shaft                                                       |                                      | 1             |
| 05-09-00077 | *Impeller for pump KDAEA 600/16/2 - 21                            |                                      | 1             |
| 05-09-00078 | *Bearing 222 C                                                    |                                      | 10            |
| 05-09-00079 | *Bearing 29324 D                                                  |                                      | 10            |
| 05-09-00080 | *Bearing 6324                                                     |                                      | 10            |
| 05-09-00081 | *Bearing 6312                                                     |                                      | 5             |
| 05-09-00082 | *Bearing 6313                                                     |                                      | 10            |
| 05-09-00083 | *Bearing HM 804848                                                |                                      | 5             |
| 05-09-00084 | *Bearing HM 807049                                                |                                      | 5             |
| 05-09-00085 | *Grease lubrication pump with motor complete                      |                                      | 10            |

| CODE        | Item Description and its complementary items(if applicable)                    | Intended use (and targeted end user) | Qty . In unit |
|-------------|--------------------------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00086 | *Slip ring body for electric motor DSAKJ 5627-12                               | 10                                   | sets          |
| 05-09-00087 | *Synchro gear reducer U.S. motor parallel shaft type GSMA Frame 52 Ratio 3 : 1 | 10                                   |               |
|             | <b>Spare Parts for Drilling Rig type B1A</b>                                   |                                      |               |
| 05-09-00088 | Oil cooler with drive compilation DR.NO.5001605                                | 10                                   |               |
| 05-09-00089 | *Rotary group A1028 ETL NO. 958654                                             | 30                                   |               |
| 05-09-00090 | *Pilot valve H ETL NR. 914110                                                  | 20                                   |               |
| 05-09-00091 | *Pilot valve DFR1-SR10 10ETL NR909066                                          | 20                                   |               |
| 05-09-00092 | *Direct-circulation swivel compilation DR.NO.5000609                           | 10                                   |               |
| 05-09-00093 | *Axial Cyl. roller bearing 81130                                               | 20                                   |               |
| 05-09-00094 | *Needle bearing 140/32 RSA3                                                    | 20                                   |               |
| 05-09-00095 | *Hydraulic motor 6M076                                                         | 10                                   |               |
| 05-09-00096 | *Power swivel B1A complete + 50% spare parts Dr.No.5103123                     | 10                                   |               |
| 05-09-00097 | *Retaining Jaws dia 47-73 mm 5200254                                           | 200                                  |               |
| 05-09-00098 | *Retaining Jaws dia 70-114.3 mm 5200255                                        | 100                                  |               |
| 05-09-00099 | *Gear accessory to DRWG Dr. No.5400373                                         | 20                                   |               |
| 05-09-00100 | *Hub accessory to DRWG DR. No. 5400374                                         | 20                                   |               |
|             | <b>Spare Parts for Submersible Pumps type FLYGHT model CP 3300-180 HT</b>      |                                      |               |
| 05-09-00101 | *Inner seal unit                                                               | 10                                   | sets          |
| 05-09-00102 | *Outer seal unit                                                               | 10                                   | sets          |
| 05-09-00103 | *O-ring                                                                        | 10                                   | sets          |

| CODE        | Item Description and its complementary items(if applicable)                                                                                                                                                                                                                                                                                                                                              | Intended use (and targeted end user)                                                                             | Qty . In unit |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|---------------|
|             | <b>Spare Parts for Submersible Pumps type FLYGHT model 3201</b>                                                                                                                                                                                                                                                                                                                                          |                                                                                                                  |               |
| 05-09-00104 | *Upper seal unit                                                                                                                                                                                                                                                                                                                                                                                         | 10                                                                                                               | sets          |
| 05-09-00105 | *Lower seal unit                                                                                                                                                                                                                                                                                                                                                                                         | 10                                                                                                               | sets          |
| 05-09-00106 | *O-ring                                                                                                                                                                                                                                                                                                                                                                                                  | 10                                                                                                               | sets          |
|             | <b>Spare Parts for Submersible Pumps type FLYGHT</b>                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                  |               |
| 05-09-00107 | *Terminal board assy<br>-Power cable entry assy<br>- Shaft rotor unit<br>- Impeller<br>- Wear ring rotating<br>- Locking assy<br>- Washer<br>-Screw<br>- Compression spring<br>- Stator 380 VA<br>- Seal sleeve (33-37)mm<br>- Seal sleeve (37-39)mm<br>- Outer casing<br>- Starter casing<br>-Plate<br>- Packing<br>- Starter housing<br>- Oil housing bottom<br>- Bearing holder<br>- Cable entry unit | 20<br>10<br>8<br>15<br>10<br>15<br>15<br>100<br>100<br>10<br>25<br>25<br>3<br>3<br>10<br>20<br>3<br>5<br>5<br>10 |               |
|             | <b>spare part for Kirkuk Irrigation Project.<br/>1./ MAIN PUMP</b>                                                                                                                                                                                                                                                                                                                                       |                                                                                                                  |               |
| 05-09-00108 | *Bearing different sizes with cover                                                                                                                                                                                                                                                                                                                                                                      | 1100                                                                                                             |               |
| 05-09-00109 | *Bearing bush (int.m.b.)1040438                                                                                                                                                                                                                                                                                                                                                                          | 4                                                                                                                |               |
| 05-09-00110 | *Bearing sleeve (int.m.b) 1040439                                                                                                                                                                                                                                                                                                                                                                        | 8                                                                                                                |               |
| 05-09-00111 | *Impeller                                                                                                                                                                                                                                                                                                                                                                                                | 12                                                                                                               |               |
| 05-09-00112 | *Coupling                                                                                                                                                                                                                                                                                                                                                                                                | 24                                                                                                               |               |
| 05-09-00113 | *Sleeve 58424                                                                                                                                                                                                                                                                                                                                                                                            | 15                                                                                                               |               |
| 05-09-00114 | *Bearing sleeve (int.m.b) 1040368                                                                                                                                                                                                                                                                                                                                                                        | 14                                                                                                               |               |
| 05-09-00115 | *Bearing bush (int.m.b) 1040367                                                                                                                                                                                                                                                                                                                                                                          | 7                                                                                                                |               |
| 05-09-00116 | *Pump element with piston 600-25046-2                                                                                                                                                                                                                                                                                                                                                                    | 40                                                                                                               |               |

| CODE        | Item Description and its complementary items(if applicable)                                                                                                             | Intended use (and targeted end user) | Qty . In unit |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00117 | *Coupling                                                                                                                                                               | 200                                  |               |
| 05-09-00118 | * Mechanical seal                                                                                                                                                       | 200                                  |               |
| 05-09-00119 | * Shaft                                                                                                                                                                 | 50                                   |               |
|             | <b>2/OIL PRESSURERE DEVICE</b>                                                                                                                                          |                                      |               |
| 05-09-00120 | *Control magnet valve s10 w 01                                                                                                                                          | 10                                   |               |
| 05-09-00121 | *Pressure switch Ts 60-do 10.0mpa                                                                                                                                       | 10                                   |               |
| 05-09-00122 | *Pressure gauge P(0-16 mpa)                                                                                                                                             | 10                                   |               |
| 05-09-00123 | *Non-Return valve RHD 12 S                                                                                                                                              | 10                                   |               |
|             | <b>3./ ELECTRIC PARTS</b>                                                                                                                                               |                                      |               |
| 05-09-00124 | Three-pole H.V contactor for rated voltage 7.2Kv 50.4s for rated current 400 A for auxiliary voltage 110 D.C type vc 3ad 400c . made by GEC.452.58763 stranea RK 132946 | 10                                   |               |
| 05-09-00125 | H .V fuse type 36A 121 250A , 7.2 KV                                                                                                                                    | 100                                  |               |
| 05-09-00126 | H.V HRC fuse cartridge for 10 kv .type unvc with striker . 452.58763 stranea RK 132946                                                                                  | 20                                   |               |
| 05-09-00127 | Auto - transformer for starting of H.V motor                                                                                                                            | 120                                  |               |
| 05-09-00128 | Single- phase capacity of rated voltage6.1k .v of rated capacity150 KVAR for frequency 50/c/s type M3p6 -150 M24 for indoor mounting.RK44629                            | 10                                   |               |
| 05-09-00129 | Rotor for motors                                                                                                                                                        | 20                                   |               |
| 05-09-00130 | Stator for motors                                                                                                                                                       | 20                                   |               |
| 05-09-00131 | Compact HV vacuum contactor                                                                                                                                             | 25                                   |               |
| 05-09-00132 | Economy resistor for HV vacuum                                                                                                                                          | 150                                  |               |
|             | <b>4/AIR CONDITIONING PARTES</b>                                                                                                                                        |                                      |               |
| 05-09-00133 | Circulation pump boiler type GHR-401 .N=100W                                                                                                                            | 2                                    |               |

| CODE        | Item Description and its complementary items(if applicable)                                     | Intended use (and targeted end user) | Qty . In unit |
|-------------|-------------------------------------------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00134 | Control three way valve heating coil V5015 A - honey well- NO 25. CV=10 G=3.0 m3/n p =12.5 KPA. |                                      | 2             |
| 05-09-00135 | Diverting - three - valve fan coil v 5066 honey well - N 40 KV =25 G=11.4M/H AP=8KPA            |                                      | 4             |
| 05-09-00136 | Circulation pump fan coil GHR 651 N = 435W                                                      |                                      | 4             |
| 05-09-00137 | Circulation pump- Chiller(T 501-4,G=8M3/h H=13 KPA)                                             |                                      | 2             |
| 05-09-00138 | Double shaft motor for fan coil unit with code 823478 -411                                      |                                      | 10            |
| 05-09-00139 | Circulation pump forfan coil unit GHN 402A-R/2 G=6KPA , N=0.42 KW                               |                                      | 2             |
| 05-09-00140 | Circulation pump for boiler GHN 404 C-R/2 G=20 M3/h H=26 kpa N= 0.11/0.19 kw.                   |                                      | 2             |
| 05-09-00141 | Circulation pump for Chiller type G 65/21 G = 50 m3/h H=60 kpa N = 0.8 kw                       |                                      | 2             |
| 05-09-00142 | Circulation pump for cooling tower type G65/2 G =5.5 m3/h H=95 kpa N = 1.0 kw                   |                                      | 2             |
|             | <b>Spare parts for pump type KDEA 800/16 10-31</b>                                              |                                      |               |
| 05-09-00143 | Protective shaft sleeve                                                                         |                                      | 3             |
| 05-09-00144 | Protective shaft sleeve                                                                         |                                      | 3             |
| 05-09-00145 | Protective shaft sleeve                                                                         |                                      | 3             |
| 05-09-00146 | Impeller                                                                                        |                                      | 1             |
| 05-09-00147 | Impeller cap.                                                                                   |                                      | 1             |
| 05-09-00148 | Coupling shell,divided .                                                                        |                                      | 2             |
| 05-09-00149 | Coupling ring,divided .                                                                         |                                      | 2             |
| 05-09-00150 | End bearing                                                                                     |                                      | 3             |
| 05-09-00151 | Intermediate bearing                                                                            |                                      | 3             |
| 05-09-00152 | Mechanical seal                                                                                 |                                      | 3             |
| 05-09-00153 | Coupling universal joint                                                                        |                                      | 2             |
| 05-09-00154 | Shaft                                                                                           |                                      | 2             |
| 05-09-00155 | Crease lubrication pump                                                                         |                                      | 2             |
|             | <b>Spare Parts for type KAEA 800/10/ 6-21</b>                                                   |                                      |               |
| 05-09-00156 | Main pump shaft with sleeves 712-973-00-0-17 st.                                                |                                      | 1 set         |



| CODE        | Item Description and its complementary items(if applicable)               | Intended use (and targeted end user) | Qty . In unit   |
|-------------|---------------------------------------------------------------------------|--------------------------------------|-----------------|
| 05-09-00157 | End bearing 712-973-00-0-17 st.                                           |                                      | 2               |
| 05-09-00158 | Intermediate bearing 712-97523- 0-47 st .                                 |                                      | 2               |
| 05-09-00159 | Seal ring m s4.1a.47120                                                   |                                      | 2               |
| 05-09-00160 | Protection tube .                                                         |                                      | 2               |
| 05-09-00161 | intermediate shaft .                                                      |                                      | 2               |
| 05-09-00162 | Circuit breaker el-630/220 a .c.motor drive bisi - sp-a 200-400           |                                      | 1               |
| 05-09-00163 | Circuit breaker el-400/220 ov a.c hand drive bisi - sp-a 100-2001800-1600 |                                      | 2               |
|             | <b>Spare parts for Generator sets type(NPG-...)</b>                       |                                      |                 |
| 05-09-00164 | AVR p46x206020                                                            |                                      | 10              |
| 05-09-00165 | Relay stop 64918 - 62800                                                  |                                      | 10              |
| 05-09-00166 | Relay synchro device p 38x206020                                          |                                      | 10              |
| 05-09-00167 | Relay set bath barage p 22x206020                                         |                                      | 10              |
| 05-09-00168 | Relay set p 48x206020                                                     |                                      | 10              |
| 05-09-00169 | Change over switch p 66x206020                                            |                                      | 5               |
| 05-09-00170 | Magnetic condition p 67x206020                                            |                                      | 10              |
| 05-09-00171 | Turbocharge 49167-00101                                                   |                                      | 10              |
| 05-09-00172 | Diod rotor sets P 44x206020                                               |                                      | 100             |
| 05-09-00173 | Solenoid valve 04400x02010                                                |                                      | 50              |
| 05-09-00174 | Contactors EG 315 - 1 418018-N(coil 220v)                                 |                                      | 120             |
| 05-09-00175 | Contactors EG 160 - 1sk 418015-N(coil 220v)                               |                                      | 70              |
|             |                                                                           |                                      |                 |
|             |                                                                           |                                      |                 |
|             | <b>APPENDIX 9 B<br/>SPARE PARTS FOR AL-JAZIRAH MAIN PUMP STATION</b>      |                                      |                 |
| CODE        | DESCRIPTION                                                               | QUANTITY                             | UNIT OF MEASURE |
| 05-09-00176 | PB 400 Input Card ref V08D ref 61136                                      | 5                                    |                 |
| 05-09-00177 | PB 400 Output Card 24 / 48 V D.C., 0.5 A ref 61130                        | 5                                    |                 |

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|-------------|---------------------------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00178 | PB 400 Output Card 3A, 250V AC, ref 61100                                       |                                      | 2             |
| 05-09-00179 | PB 400 Power Supply CPLEX ref 61032                                             |                                      | 2             |
| 05-09-00180 | PB 400 Power Supply ALIM ref 61061                                              |                                      | 2             |
| 05-09-00181 | PB 80 Input Card 24V D.C., ref 60730                                            |                                      | 2             |
| 05-09-00182 | PB 80 Output Card 3A, 250V, A.C. ref 60740                                      |                                      | 5             |
| 05-09-00183 | D.C. Power Supply F 24V, 3A/1A, ref 71035                                       |                                      | 1             |
| 05-09-00184 | D.C. Power supply F 12V, 0.6 A, ref 71031                                       |                                      | 1             |
| 05-09-00185 | Instantaneous or definite time over current relay(I.T.G.7153)                   |                                      | 1             |
| 05-09-00186 | Motor protective relays medium voltage ( I.T.M. 7860)                           |                                      | 1             |
| 05-09-00187 | Voltage current convertor module HDOXO ( FT 42295 / C )                         |                                      | 1             |
| 05-09-00188 | High level input differential alarm modul ( FT 42 - 166 / D )                   |                                      | 1             |
| 05-09-00189 | Alarm high level input module(FT42-160/C)P.S.                                   |                                      | 1             |
| 05-09-00190 | Voltage frequency ( FT 42 - 164 / D ) multiplierand divider module(FT 42-163/D) |                                      | 2             |
| 05-09-00191 | *Machine differential protection relay (D.T.M.7031)                             |                                      | 1             |
| 05-09-00192 | *Instantaneous or definite timeVoltage relay (T.T.G.7013)                       |                                      | 1             |
| 05-09-00193 | *Frequency relay (H.T.G.7012)                                                   |                                      | 1             |
| 05-09-00194 | *Zero sequence over voltage                                                     |                                      | 1             |
| 05-09-00195 | * Sensitive relay(R.N.V.H.3110)                                                 |                                      | 1             |

| CODE        | Item Description and its complementary items(if applicable)                                                                                                                        | Intended use (and targeted end user) | Qty . In unit   |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------|
| 05-09-00196 | *Directional over current relay (R.S.D.W.3000)                                                                                                                                     |                                      | 1               |
| 05-09-00197 | *Electronic gauge pressure transmitter(Type F60 EP 3100)Ref.S P6 -1-12                                                                                                             |                                      | 1               |
| 05-09-00198 | * Invertor . of. maxipac (SXM.5000)UPS                                                                                                                                             |                                      | 1               |
| 05-09-00199 | *Temperature controller (Pyromat plus 300) FT42-405/C                                                                                                                              |                                      | 1               |
| 05-09-00200 | - Galvanic isolation module ( FT 42-165/B)                                                                                                                                         |                                      | 1               |
| 05-09-00201 | -Summation module ( FT 42-167/E)                                                                                                                                                   |                                      | 1               |
| 05-09-00202 | -PB 80 C.P.U. ref 60720                                                                                                                                                            |                                      | 1               |
| 05-09-00203 | -PB 80 power supply ref 60701                                                                                                                                                      |                                      | 1               |
| 05-09-00204 | - PB 80 emulator ref 60757                                                                                                                                                         |                                      | 1               |
| 05-09-00205 | -PB 400 input card ref 61080                                                                                                                                                       |                                      | 1               |
| 05-09-00206 | -PB 400 input card ref 61120                                                                                                                                                       |                                      | 1               |
| 05-09-00207 | -PB 400 input card ref 61132                                                                                                                                                       |                                      | 1               |
| 05-09-00208 | -PB 400 output card ref 61101                                                                                                                                                      |                                      | 1               |
| 05-09-00209 | -PB 400 monitoring ref 61057                                                                                                                                                       |                                      | 1               |
| 05-09-00210 | -PB 400 mem ref 61041                                                                                                                                                              |                                      | 1               |
| 05-09-00211 | -PB 400 JBUS - CPL ref 61183                                                                                                                                                       |                                      | 1               |
| 05-09-00212 | -PB 400 alim(220V) ref 61081                                                                                                                                                       |                                      | 1               |
| 05-09-00213 | -PB 400 pu                                                                                                                                                                         |                                      | 1               |
|             |                                                                                                                                                                                    |                                      |                 |
|             |                                                                                                                                                                                    |                                      |                 |
|             |                                                                                                                                                                                    |                                      |                 |
|             | <b>APPENDIX 9 C - I<br/>SPARE PARTA FOR (TRUK CHASSIS AND PUMP CRETE)<br/>TRUCK MODEL : MACK<br/>TYPE : 850 DM 690S<br/>ENGINE MODEL : MACK - EM 6- 300L<br/>PRODUCTION : 1988</b> |                                      |                 |
| CODE        | DESCRIPTION                                                                                                                                                                        | QUANTITY                             | UNIT OF MEASURE |

| CODE        | Item Description and its complementary items(if applicable) | Intended use (and targeted end user) | Qty . In unit |
|-------------|-------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00214 | (BRAKE)( CHAMBER) ASSY                                      | 150                                  |               |
| 05-09-00215 | DLAPHRAGM                                                   | 200                                  |               |
| 05-09-00216 | COVER ASSY                                                  | 15                                   |               |
| 05-09-00217 | DLAPHRAM                                                    | 100                                  |               |
| 05-09-00218 | VALVE ASSY                                                  | 20                                   |               |
| 05-09-00219 | CHAVPEL ASSY                                                | 100                                  |               |
| 05-09-00220 | CHOWPER ASSY                                                | 100                                  |               |
| 05-09-00221 | OIL SEAL                                                    | 100                                  |               |
| 05-09-00222 | GASKET CYL HD(FIKERIN6)                                     | 60                                   |               |
| 05-09-00223 | GASKET CYL HD                                               | 40                                   |               |
| 05-09-00224 | GUID , INL ANDEXHVLY                                        | 80                                   |               |
| 05-09-00225 | VALVE , EXH.                                                | 98                                   |               |
| 05-09-00226 | VALVE - INL.                                                | 98                                   |               |
| 05-09-00227 | GASKET SET . ENG                                            | 20                                   |               |
| 05-09-00228 | GASKET SET , VLVGRINDNG                                     | 20                                   |               |
| 05-09-00229 | CRANK SHALT AND BEARING KIT                                 | 4                                    |               |
| 05-09-00230 | MAIN BARING KIT STD.                                        | 4                                    |               |
| 05-09-00231 | MAIN BEARING KIT(0.010)U/S                                  | 15                                   |               |
| 05-09-00232 | MAIN BEARING KIT(0.020)U/S                                  | 15                                   |               |
| 05-09-00233 | OIL SEAL , C/S RR                                           | 40                                   |               |
| 05-09-00234 | FUEL FILTER , SEC                                           | 400                                  |               |
| 05-09-00235 | SLEEVE , CYL.                                               | 80                                   |               |
| 05-09-00236 | SEAL NTPUMP                                                 | 40                                   |               |
| 05-09-00237 | GASKET , LOW C/C                                            | 2                                    |               |
| 05-09-00238 | OIL COOLER ASSY                                             | 4                                    |               |
| 05-09-00239 | CORE OIL COOLER                                             | 4                                    |               |
| 05-09-00240 | GASKIT                                                      | 20                                   |               |
| 05-09-00241 | SEAL                                                        | 20                                   |               |
| 05-09-00242 | OIL FILTER                                                  | 400                                  |               |
| 05-09-00243 | BEURING,CON,ROD (STD)                                       | 12                                   |               |
| 05-09-00244 | BEARING,CON,ROD (010)                                       | 60                                   |               |
| 05-09-00245 | BEARING,CON,ROD (020)                                       | 60                                   |               |
| 05-09-00246 | WASHER , C.S.THRUST                                         | 20                                   |               |
| 05-09-00247 | CON , ROD                                                   | 12                                   |               |
| 05-09-00248 | PIN, PISTON (STD)                                           | 12                                   |               |
| 05-09-00249 | RING , SETS                                                 | 48                                   |               |
| 05-09-00250 | PISTON RING SET                                             | 80                                   |               |
| 05-09-00251 | PISTON KIT                                                  | 80                                   |               |
| 05-09-00252 | TURBO CHARGER                                               | 20                                   |               |
| 05-09-00253 | W.PUMP REPAIRKIT                                            | 20                                   |               |
| 05-09-00254 | W.PUMP ASSY                                                 | 6                                    |               |
| 05-09-00255 | GASKET SETENG                                               | 20                                   |               |
| 05-09-00256 | AIR COMP. ASSY                                              | 6                                    |               |
| 05-09-00257 | CON.ROD                                                     | 8                                    |               |
| 05-09-00258 | CON. ROD INSERT KIT                                         | 20                                   |               |
| 05-09-00259 | CY L. HEAD ASSY                                             | 8                                    |               |
| 05-09-00260 | OIL SEAL, C/C                                               | 15                                   |               |
| 05-09-00261 | PISTON STD                                                  | 20                                   |               |
| 05-09-00262 | PISTON RING SET KIT                                         | 20                                   |               |

| CODE        | Item Description and its complementary items(if applicable) | Intended use (and targeted end user) | Qty . In unit |
|-------------|-------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00263 | REPAIR KIT                                                  |                                      | 20            |
| 05-09-00264 | UNL DER KIK                                                 |                                      | 20            |
| 05-09-00265 | NOZZLF HOLDER ASSY                                          |                                      | 80            |
| 05-09-00266 | NOZZLE                                                      |                                      | 80            |
| 05-09-00267 | WT . PUMP                                                   |                                      | 8             |
| 05-09-00268 | PLUNGER RARREL ASSY                                         |                                      | 60            |
| 05-09-00269 | GOVER NOR ASSY                                              |                                      | 8             |
| 05-09-00270 | OIL PUMP , ASSY                                             |                                      | 15            |
| 05-09-00271 | PLUNGER , OIL PRSSURE                                       |                                      | 15            |
| 05-09-00272 | BEARING , BALL                                              |                                      | 20            |
| 05-09-00273 | BEARING , BALL                                              |                                      | 20            |
| 05-09-00274 | COVER , WAT .PUMP                                           |                                      | 8             |
| 05-09-00275 | ROTOR , WAT .PUMP                                           |                                      | 8             |
| 05-09-00276 | SEAL                                                        |                                      | 20            |
| 05-09-00277 | SEAL                                                        |                                      | 40            |
| 05-09-00278 | SHATT , WAT PUMP                                            |                                      | 15            |
| 05-09-00279 | CLUTCH ASSY                                                 |                                      | 50            |
| 05-09-00280 | DIS FRT                                                     |                                      | 80            |
| 05-09-00281 | DIS RIR                                                     |                                      | 80            |
| 05-09-00282 | PIATE , INTM                                                |                                      | 80            |
| 05-09-00283 | LEVER                                                       |                                      | 24            |
| 05-09-00284 | PIVOT , PRESS SPRNG                                         |                                      | 80            |
| 05-09-00285 | RETAINER                                                    |                                      | 50            |
| 05-09-00286 | RING                                                        |                                      | 15            |
| 05-09-00287 | PIATE                                                       |                                      | 40            |
| 05-09-00288 | BEARING                                                     |                                      | 40            |
| 05-09-00289 | FORK                                                        |                                      | 50            |
| 05-09-00290 | OIL SEAL                                                    |                                      | 15            |
| 05-09-00291 | OIL SEAL                                                    |                                      | 15            |
| 05-09-00292 | FORK                                                        |                                      | 8             |
| 05-09-00293 | FORK                                                        |                                      | 8             |
| 05-09-00294 | SEAL                                                        |                                      | 15            |
| 05-09-00295 | SEAL                                                        |                                      | 15            |
| 05-09-00296 | UNIVERSAL JOINT                                             |                                      | 20            |
| 05-09-00297 | BEARING                                                     |                                      | 18            |
| 05-09-00298 | CUSHION IRBG                                                |                                      | 18            |
| 05-09-00299 | SLINGER FOLL                                                |                                      | 18            |
| 05-09-00300 | UNIVERSAL JOINT                                             |                                      | 20            |
| 05-09-00301 | VALVE                                                       |                                      | 20            |
| 05-09-00302 | VALVE SELEC                                                 |                                      | 20            |
| 05-09-00303 | VALVE                                                       |                                      | 15            |
| 05-09-00304 | STEERINGGEAR                                                |                                      | 8             |
| 05-09-00305 | MATED SERV KF KIT                                           |                                      | 8             |
| 05-09-00306 | UNIVERSAL JOINT                                             |                                      | 8             |
| 05-09-00307 | PUMP ASSY                                                   |                                      | 15            |
| 05-09-00308 | CARTRIDGC SERVICE KIT                                       |                                      | 15            |
| 05-09-00309 | SEAL SERVICE KIT                                            |                                      | 15            |
| 05-09-00310 | ELEMENT ASSY                                                |                                      | 100           |
| 05-09-00311 | ENGINE ASSY                                                 |                                      | 5             |
| 05-09-00312 | HYDRULIC MOTOR<br>210.16.21.73 A2F 28 W3<br>Z1              |                                      | 8             |

| CODE        | Item Description and its complementary items(if applicable) | Intended use (and targeted end user) | Qty . In unit |
|-------------|-------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00313 | SPRING PRESSURE PLATE BRAKE 790 -10-021                     |                                      | 8             |
| 05-09-00314 | SCRAPER 65X75X7                                             |                                      | 20            |
| 05-09-00315 | GROOVED RING SEALING SET 90/70 X12,5 G18 -90                |                                      | 20            |
| 05-09-00316 | SCRAPER 40X50X7                                             |                                      | 40            |
| 05-09-00317 | GROOVED RING SEALING SET 40/50/10                           |                                      | 40            |
| 05-09-00318 | CONTROL BLOCK WITH PRESSURE LIMIT VALVE                     |                                      | 8             |
| 05-09-00319 | PISTON RING SG 110X 100,8X3                                 |                                      | 15            |
| 05-09-00320 | SEALING GLAND SET 63X83X37                                  |                                      | 15            |
| 05-09-00321 | GATE VALVE KIT 180/55/25                                    |                                      | 15            |
| 05-09-00322 | GUID SLEEVE                                                 |                                      | 50            |
| 05-09-00323 | PLSTON BUSHING                                              |                                      | 15            |
| 05-09-00324 | SEALING RING                                                |                                      | 15            |
| 05-09-00325 | GROOVED RING SEALING SET 45/65X12.5                         |                                      | 15            |
| 05-09-00326 | SEALING GLAND SET 45/65X27.5                                |                                      | 15            |
| 05-09-00327 | HYDRULIC MOTOR AMS 25-M10                                   |                                      | 14            |
| 05-09-00328 | WATER PUMP (HYDR)7560-N-KMT2                                |                                      | 8             |
| 05-09-00329 | SEALING SET FOR HYDRULIC MOTOR AMS 25 M-10                  |                                      | 15            |
| 05-09-00330 | SEALING SET FOR WATER PUMP HYPRO- ROLLE (SMALL)             |                                      | 15            |
| 05-09-00331 | SEALING SET FOR WATER PUMP HYPRO- ROLLE                     |                                      | 15            |
| 05-09-00332 | SEALING SET CPL.                                            |                                      | 15            |
| 05-09-00333 | HAND VALVE HVM-ROL 10632L EV 413.000                        |                                      | 8             |
| 05-09-00334 | HAND VALVE HSRL10632L EV 357.000                            |                                      | 8             |
| 05-09-00335 | SOLENDID VALVE MSE 06432/12V                                |                                      | 8             |
| 05-09-00336 | VALVE CARTRIDGE A2A 125 200 BAR                             |                                      | 8             |
| 05-09-00337 | VALVE CARTRIDGE A2A 125 70 BAR                              |                                      | 8             |
| 05-09-00338 | VENTILATION ONIT 12V FOR OIL COOLER                         |                                      | 15            |
| 05-09-00339 | HYDRULIC PUMP 226.22.04.18 A7V0 80 LRH/ 60RPZBI             |                                      | 20            |
| 05-09-00340 | HYDRULIC PUMP 210.16.28.66A2F 23 L3 Z4                      |                                      | 20            |

| CODE        | Item Description and its complementary items(if applicable) | Intended use (and targeted end user) | Qty . In unit |
|-------------|-------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00341 | HYDRULIC PUMP<br>210.12.28.50A2F 23 L3 Z4                   |                                      | 15            |
| 05-09-00342 | HAND VALVE HVM 10632<br>WITH PISTON EV 355.127A             |                                      | 16            |
| 05-09-00343 | HAND VALVE HVM 10632F<br>WITH PISTON EV 355. 126B           |                                      | 20            |
| 05-09-00344 | HAND VALVE HSR 10631                                        |                                      | 16            |
| 05-09-00345 | HAND VALVE HVM 106311<br>WITH PISTON EV 355. 129            |                                      | 8             |
| 05-09-00346 | SOLENDID VALVE MSE D<br>06432/12V.                          |                                      | 16            |
| 05-09-00347 | PRE-LOAD VALVE VV - 2<br>R 3/4                              |                                      | 8             |
| 05-09-00348 | THROTTLE CHCK VALVE<br>SRD-A- 10 .S                         |                                      | 8             |
| 05-09-00349 | PRESSURE LIMIT VALVE<br>DVP-P-10S (EV 884.006)              |                                      | 8             |
| 05-09-00350 | VALVE CARTRIDGE SVP -<br>10S 80 BAR                         |                                      | 16            |
| 05-09-00351 | THROTTLE CHCK VALVE<br>1/2" DRVL - R1/2 1.8 L               |                                      | 8             |
| 05-09-00352 | THROTTLE CHCK VALVE 1/2<br>DRVL - R1/2" 1.3C"               |                                      | 8             |
| 05-09-00353 | THROTTLE CHCK VALVE<br>1/2" DRVL-R1/2 0.9" K"               |                                      | 8             |
| 05-09-00354 | VALVE CARTRIDGE DRP<br>10S                                  |                                      | 12            |
| 05-09-00355 | VALVE CARTRIDGE SVP-<br>10S 280 BAR                         |                                      | 12            |
| 05-09-00356 | HYDRULIC CYLINDES<br>180/110X1.050                          |                                      | 8             |
| 05-09-00357 | HYDRULIC CYLINDES<br>200/140X1400                           |                                      | 8             |
| 05-09-00358 | HYDRULIC CYLINDES<br>160X100 X 1000                         |                                      | 8             |
| 05-09-00359 | HYDRULIC CYLINDES<br>110X70X670                             |                                      | 8             |
| 05-09-00360 | SEALING GLAND SET<br>110X130X40 E2 -110/SM5-<br>110         |                                      | 30            |
| 05-09-00361 | SCRAPER 110X122X12                                          |                                      | 30            |
| 05-09-00362 | GROOVE RING SEALING<br>SET 180/150X18.8,G18-180             |                                      | 30            |
| 05-09-00363 | SEALING GLAND SET<br>140/165X46 E2 -140/SM5-<br>140         |                                      | 20            |
| 05-09-00364 | CRAPER 140X155X16                                           |                                      | 20            |
| 05-09-00365 | SCRAPER 70X80X7                                             |                                      | 20            |
| 05-09-00366 | GROOVED RING SEALING<br>SET 200/170X18,8G 18-200            |                                      | 30            |
| 05-09-00367 | SEALING GLAND SET<br>70190140 E 2-70 SM5 -70                |                                      | 20            |

| CODE        | Item Description and its complementary items(if applicable)                      | Intended use (and targeted end user) | Qty . In unit   |
|-------------|----------------------------------------------------------------------------------|--------------------------------------|-----------------|
| 05-09-00368 | GROOVED RING SEALING SET 110/90X12,5G 18-110                                     | 30                                   |                 |
| 05-09-00369 | CLEANING BALL FOR DN 125 HARD                                                    | 100                                  |                 |
| 05-09-00370 | FILTER ELEMENT                                                                   | 100                                  |                 |
| 05-09-00371 | HYDRULIC MOTOR OMR 2001 SN21/RS 200                                              | 15                                   |                 |
|             |                                                                                  |                                      |                 |
|             | <b>APPENDIX 9 C - II<br/>SPARE PARTS FOR HITACHI<br/>HYDRAULIC<br/>EXCAVATOR</b> |                                      |                 |
| CODE        | DESCRIPTION                                                                      | QUANTITY                             | UNIT OF MEASURE |
| 05-09-00372 | Filter Fuel tank                                                                 | 3000                                 |                 |
| 05-09-00373 | Filter for Fuel and oil (engine)                                                 | 6000                                 |                 |
| 05-09-00374 | Filter oil Bypass                                                                | 3000                                 |                 |
| 05-09-00375 | Large element Air Filter                                                         | 2000                                 |                 |
| 05-09-00376 | Element small Air Filter                                                         | 2000                                 |                 |
| 05-09-00377 | Filter (Duct)                                                                    | 2000                                 |                 |
| 05-09-00378 | Filter suction (oil hydraulic tank )                                             | 4000                                 |                 |
| 05-09-00379 | hydraulic Filter                                                                 | 4000                                 |                 |
| 05-09-00380 | Different spare parts                                                            | LOT                                  |                 |
|             |                                                                                  |                                      |                 |
|             | <b>APPENDIX 9 C -III<br/>FOR LIEBHERR EXCAVATOR</b>                              |                                      |                 |
| CODE        | DESCRIPTION                                                                      | QUANTITY                             | UNIT OF MEASURE |
| 05-09-00381 | Oil exchange Filter                                                              | 3000                                 |                 |
| 05-09-00382 | Fuel first and secondary filter                                                  | 6000                                 |                 |
| 05-09-00383 | Hydraulic filter element                                                         | 2000                                 |                 |
| 05-09-00384 | Water filter                                                                     | 2000                                 |                 |
| 05-09-00385 | Safety element                                                                   | 2000                                 |                 |
| 05-09-00386 | filter element                                                                   | 2000                                 |                 |
| 05-09-00387 | Breather                                                                         | 2000                                 |                 |
| 05-09-00388 | Servo                                                                            | 2000                                 |                 |
| 05-09-00389 | Fuel filter                                                                      | 2000                                 |                 |
| 05-09-00390 | Screen filter element                                                            | 2000                                 |                 |
| 05-09-00391 | Cartridge                                                                        | 1500                                 |                 |
| 05-09-00392 | Gasket and seal                                                                  | 1500                                 |                 |
| 05-09-00393 | Filter insert                                                                    | 1000                                 |                 |
| 05-09-00394 | O-ring                                                                           | 500                                  |                 |
| 05-09-00395 | Gasket ring                                                                      | 2000                                 |                 |
| 05-09-00396 | Air filter                                                                       | 1500                                 |                 |
| 05-09-00397 | Insulation                                                                       | 1500                                 |                 |
| 05-09-00398 | Different spare parts                                                            | LOT                                  |                 |
|             |                                                                                  |                                      |                 |



| CODE        | Item Description and its complementary items(if applicable)                                           | Intended use (and targeted end user) | Qty . In unit   |
|-------------|-------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------|
|             | <b>APPENDIX 9 C<br/>IV<br/>DRILLING RIGS B0 / B1A<br/>WIRTH</b>                                       |                                      |                 |
| CODE        | DESCRIPTION                                                                                           | QUANTITY                             | UNIT OF MEASURE |
|             | * Hydraulic -Cylinder<br>80163- 400 M 1076.1                                                          |                                      |                 |
| 05-09-00399 | Rod Sealing (P 121)                                                                                   | 100                                  |                 |
| 05-09-00400 | O-Ring                                                                                                | 200                                  |                 |
| 05-09-00401 | Piston sealing                                                                                        | 200                                  |                 |
| 05-09-00402 | Oil cooler                                                                                            | 10                                   |                 |
|             | * Hydraulic -Cylinder<br>80140- 830 M 1280                                                            |                                      |                 |
| 05-09-00403 | Piston                                                                                                | 20                                   |                 |
| 05-09-00404 | Wiper                                                                                                 | 100                                  |                 |
| 05-09-00405 | Rood Sealing                                                                                          | 200                                  |                 |
| 05-09-00406 | Guiding                                                                                               | 100                                  |                 |
| 05-09-00407 | O-Ring                                                                                                | 200                                  |                 |
| 05-09-00408 | Piston sealing                                                                                        | 200                                  |                 |
|             | * Hydraulic -Cylinder<br>Dr.NO.520/900                                                                |                                      |                 |
| 05-09-00409 | End ring                                                                                              | 10                                   |                 |
| 05-09-00410 | Grooved Ring                                                                                          | 300                                  |                 |
| 05-09-00411 | Round packing Ring                                                                                    | 200                                  |                 |
| 05-09-00412 | Ball 7 III DIN 5401                                                                                   | 10                                   |                 |
| 05-09-00413 | *Sewage Plant &<br>Irrigation System                                                                  |                                      |                 |
| 05-09-00414 | Time Delay Relay (Timer)<br>Range -30 220 V, 50HZ<br>For (l - D) operation .                          | 25                                   |                 |
| 05-09-00415 | Current Operted earth<br>Leakage Circuit Breaker<br>25A v =220-415; 50 HZ<br>Rated Fault Current 0.3A | 50                                   |                 |
| 05-09-00416 | N - type AC miniature<br>are Circuit Breaker<br>single Pole 25 A rated<br>voltage 240/415,50HZ        | 100                                  |                 |
| 05-09-00417 | Transformer 250VA<br>380/24V ,50HZ                                                                    | 20                                   |                 |
| 05-09-00418 | Contacto ,420A Rated<br>Voltage 500V , 50HZ<br>Control (voltage = 220V)<br>AUX. Contact (2N/0,2N/C)   | 3                                    |                 |
| 05-09-00419 | Over Load Relays 165A-<br>235A                                                                        | 5                                    |                 |
|             |                                                                                                       |                                      |                 |
|             | <b>APPENDIX 9 C - V<br/>SPARE PARTS FOR DREDGER</b>                                                   |                                      |                 |

| CODE        | Item Description and its complementary items(if applicable) | Intended use (and targeted end user) | Qty . In unit   |
|-------------|-------------------------------------------------------------|--------------------------------------|-----------------|
| CODE        | DESCRIPTION                                                 | QUANTITY                             | UNIT OF MEASURE |
|             | <b>for Diesel engin type D 399</b>                          |                                      |                 |
| 05-09-00420 | Cli-head gasket kit                                         | 64                                   |                 |
| 05-09-00421 | Frrule                                                      | 168                                  |                 |
| 05-09-00422 | Frrule                                                      | 192                                  |                 |
| 05-09-00423 | Gasket k                                                    | 128                                  |                 |
| 05-09-00424 | Champer ass                                                 | 16                                   |                 |
| 05-09-00425 | Valve (exh)                                                 | 64                                   |                 |
| 05-09-00426 | Valve (int)                                                 | 64                                   |                 |
| 05-09-00427 | Guide (int)                                                 | 32                                   |                 |
| 05-09-00428 | Guide (exh)                                                 | 32                                   |                 |
| 05-09-00429 | Liner                                                       | 64                                   |                 |
| 05-09-00430 | Piston Group with ring                                      | 64                                   |                 |
| 05-09-00431 | fuel no 33 lep                                              | 128                                  |                 |
| 05-09-00432 | Pump                                                        | 128                                  |                 |
| 05-09-00433 | Fuel transfer Pump                                          | 8                                    |                 |
| 05-09-00434 | Water Pump repaer kit                                       | 8                                    |                 |
| 05-09-00435 | Turbo charger assem                                         | 4                                    |                 |
| 05-09-00436 | Gear drive                                                  | 6                                    |                 |
| 05-09-00437 | Bearing (big end)std                                        | 6                                    |                 |
| 05-09-00438 | Bearing (main.end) std                                      | 64                                   |                 |
| 05-09-00439 | Crank shaft                                                 | 2                                    |                 |
| 05-09-00440 | Valve                                                       | 2                                    |                 |
| 05-09-00441 | Valve                                                       | 2                                    |                 |
| 05-09-00442 | Matles . Ass                                                | 2                                    |                 |
| 05-09-00443 | Fule filter                                                 | 120                                  |                 |
| 05-09-00444 | Oil filter                                                  | 120                                  |                 |
| 05-09-00445 | Air starter                                                 | 12                                   |                 |
| 05-09-00446 | Cavernor                                                    | 2                                    |                 |
| 05-09-00447 | Bearing(0.5"under size)                                     | 50                                   |                 |
| 05-09-00448 | Bearing(0.5"under size)                                     | 50                                   |                 |
|             | <b>IHC BEREAR 4000 for deage pump type 162-3570</b>         |                                      |                 |
| 05-09-00449 | Pump casing cs-30mn5                                        | 3                                    |                 |
| 05-09-00450 | Impeller with no3-bladed gs . 30m5                          | 3                                    |                 |
| 05-09-00451 | Suetion cover with water flwing                             | 3                                    |                 |
| 05-09-00452 | Shaft cover                                                 | 3                                    |                 |
| 05-09-00453 | Water champen shaft side                                    | 3                                    |                 |
| 05-09-00454 | Suetion mouth wearing ring . maxidur                        | 3                                    |                 |
| 05-09-00455 | Wearing plate suetion side with water flushing              | 6                                    |                 |
| 05-09-00456 | Wearing plate shaft side                                    | 6                                    |                 |
| 05-09-00457 | Sesparation plate 57005-091                                 | 9                                    |                 |
| 05-09-00458 | Bush 57022-014                                              | 9                                    |                 |
| 05-09-00459 | Wearing ring 57022-104                                      | 9                                    |                 |

| CODE        | Item Description and its complementary items(if applicable) | Intended use (and targeted end user) | Qty . In unit |
|-------------|-------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00460 | Manchet suction side 57022-134                              |                                      | 9             |
| 05-09-00461 | Bearing block complete                                      |                                      | 1             |
| 05-09-00462 | Simmer ring 300x335x18                                      |                                      | 5             |
| 05-09-00463 | Wearing bush 57005-051                                      |                                      | 5             |
| 05-09-00464 | For greasing apparatus type R-fs 24                         |                                      | 24            |
| 05-09-00465 | Cartridge kit A38 for vickesPump                            |                                      | 24            |
| 05-09-00466 | Cartridge kit A17 for vickesPump                            |                                      | 6             |
| 05-09-00467 | Seal kit38 for vickes Pump                                  |                                      | 24            |
|             | <b>for staffa hydn . Motor m(b200 s red divil)</b>          |                                      |               |
| 05-09-00468 | Complete Motor                                              |                                      | 10            |
| 05-09-00469 | Service kit                                                 |                                      | 40            |
| 05-09-00470 | Stork Pump kge 16-6                                         |                                      | 12            |
| 05-09-00471 | Air comprossor tk-170 Complete                              |                                      | 6             |
| 05-09-00472 | Valve set (6A,6B,8B,8B)                                     |                                      | 24            |
| 05-09-00473 | Connecting rod 18-41                                        |                                      | 6             |
| 05-09-00474 | Piston 18-3                                                 |                                      | 6             |
| 05-09-00475 | Piston ring 18- 9                                           |                                      | 6             |
| 05-09-00476 | Piston ring 18-10                                           |                                      | 6             |
| 05-09-00477 | Piston ring 18- 11                                          |                                      | 6             |
| 05-09-00478 | Bearing 10-31                                               |                                      | 6             |
| 05-09-00479 | Pressure switch 6-460                                       |                                      | 3             |
|             | <b>For fresh water hydrophone</b>                           |                                      |               |
| 05-09-00480 | Stonk Pump sp 154                                           |                                      | 3             |
| 05-09-00481 | Pressure switch 28-1607-1                                   |                                      | 3             |
|             | <b>For gland type nic - 50230</b>                           |                                      |               |
| 05-09-00482 | Impeller (bron 3e) 88/10/2                                  |                                      | 4             |
| 05-09-00483 | Shaft with key and nut                                      |                                      | 4             |
| 05-09-00484 | Shaft bush                                                  |                                      | 6             |
| 05-09-00485 | Set wearing ring                                            |                                      | 6             |
| 05-09-00486 | Set bearings                                                |                                      | 6             |
|             | <b>For main switch board</b>                                |                                      |               |
| 05-09-00487 | Switch 4-pol -63A-172N0140                                  |                                      | 30            |
| 05-09-00488 | Key switch 03-191                                           |                                      | 3             |
| 05-09-00489 | Regulating Trans formator 220 V1A                           |                                      | 3             |
| 05-09-00490 | Relay 24v dc(m4-variatic) dg 24 vdc                         |                                      | 100           |
| 05-09-00491 | Relay foot v23                                              |                                      | 25            |

| CODE        | Item Description and its complementary items(if applicable) | Intended use (and targeted end user) | Qty . In unit |
|-------------|-------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00492 | Alarm annun ciator<br>5points 24v.dc2702                    |                                      | 6             |
|             | <b>for Diesel - Marine<br/>Engine cater piller 3412</b>     |                                      |               |
| 05-09-00493 | Cyl-head gasket kit                                         |                                      | 8             |
| 05-09-00494 | Cyl-head gasket kit                                         |                                      | 8             |
| 05-09-00495 | Ferrule                                                     |                                      | 48            |
| 05-09-00496 | Valve(exh)                                                  |                                      | 24            |
| 05-09-00497 | Valve(int)                                                  |                                      | 24            |
| 05-09-00498 | Liner                                                       |                                      | 12            |
| 05-09-00499 | Piston group with rings                                     |                                      | 12            |
| 05-09-00500 | Fule nozzel                                                 |                                      | 24            |
| 05-09-00501 | Fule transfer Pump                                          |                                      | 2             |
| 05-09-00502 | Water Pump repair kit                                       |                                      | 2             |
| 05-09-00503 | Bearing (big end)std                                        |                                      | 12            |
| 05-09-00504 | Bearing (main .std )                                        |                                      | 7             |
| 05-09-00505 | Crank shaft                                                 |                                      | 1             |
| 05-09-00506 | Oil filter                                                  |                                      | 20            |
| 05-09-00507 | Injection fule Pump                                         |                                      | 1             |
| 05-09-00508 | Bearing 0.05 under size                                     |                                      | 12            |
| 05-09-00509 | Air cleaner                                                 |                                      | 2             |
| 05-09-00510 | Plat thrust                                                 |                                      | 4             |
| 05-09-00511 | Guide (exh)                                                 |                                      | 24            |
| 05-09-00512 | Guide (int)                                                 |                                      | 24            |
| 05-09-00513 | Zeal                                                        |                                      | 1             |
| 05-09-00514 | Turbo charger                                               |                                      | 1             |
| 05-09-00515 | Ring asse                                                   |                                      | 24            |
| 05-09-00516 | Rod assy                                                    |                                      | 12            |
| 05-09-00517 | For vicker Pump<br>gertridge                                |                                      | 30            |
| 05-09-00518 | For vicker Pump<br>gertridge A                              |                                      | 80            |
| 05-09-00519 | Roll bearing                                                |                                      | 30            |
| 05-09-00520 | Ball bearing                                                |                                      | 20            |
|             | <b>for 301 CSD C O &amp; K and<br/>351 CSD C O &amp; K</b>  |                                      |               |
| 05-09-00521 | Coupling<br>combination(fludex 590)                         |                                      | 4             |
| 05-09-00522 | Siro -Pump , complete                                       |                                      | 6             |
| 05-09-00523 | Expansion joints with<br>mounting parts                     |                                      | 6             |
| 05-09-00524 | Pump casing 300/940                                         |                                      | 6             |
| 05-09-00525 | Pump impeller complete                                      |                                      | 6             |
| 05-09-00526 | Pump impeller complete<br>for (CSD 301 C)                   |                                      | 4             |
| 05-09-00527 | Wear ring 220/240                                           |                                      | 12            |
| 05-09-00528 | Lip-type seal, shaft<br>side 155/229                        |                                      | 50            |
| 05-09-00529 | Lip-type sealing ring<br>155/229                            |                                      | 50            |

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|-------------|-------------------------------------------------------------|--------------------------------------|---------------|
| 05-09-00530 | Casing wear ring 300/350                                    |                                      | 8             |
| 05-09-00531 | Sph-roll bearing 232 20C3                                   |                                      | 48            |
| 05-09-00532 | Sph-roll bearing 230 24C                                    |                                      | 24            |
| 05-09-00533 | Sph-roll bearing 222 26                                     |                                      | 24            |
| 05-09-00534 | Sph-roll bearing 222 16C3                                   |                                      | 24            |
| 05-09-00535 | Axial sph. Roller B.293 24 B                                |                                      | 24            |
| 05-09-00536 | Oil engine with coupling half                               |                                      | 6             |
| 05-09-00537 | Oil engine coupling half for (CSD 301 D)                    |                                      | 4             |
| 05-09-00538 | Gear for cutter head                                        |                                      | 4             |
| 05-09-00539 | Gear for cutter head (CSD 301)                              |                                      | 2             |
| 05-09-00540 | Control - valve NG30                                        |                                      | 4             |
| 05-09-00541 | Turbocharger for engine MTU                                 |                                      | 10            |
| 05-09-00542 | Gear box complete with fludex 590                           |                                      | 4             |
|             | <b>for Diesel Engin D 398</b>                               |                                      |               |
| 05-09-00543 | Valve asse                                                  |                                      | 100           |
| 05-09-00544 | Piston ring group                                           |                                      | 50            |
| 05-09-00545 | Piston assy                                                 |                                      | 40            |
| 05-09-00546 | Liner                                                       |                                      | 40            |
| 05-09-00547 | Motor assy                                                  |                                      | 4             |
|             | <b>for Diesel Engin D 343 62B 11032 AND 62 B 12803</b>      |                                      |               |
| 05-09-00548 | Nozzil assy                                                 |                                      | 30            |
| 05-09-00549 | Piston assy                                                 |                                      | 18            |
| 05-09-00550 | Bearing                                                     |                                      | 24            |