

## 5. Overview of deliveries and services

### 5.1 Contents of delivery

| Quantity | Description  | Item    |
|----------|--|---------|
|          | <b>Genset</b>  | 6.1     |
|          | <b>Base engine</b>                                   | 6.1.1   |
| 3        | Base engine CG260-16 50 Hz C-package                 | 6.1.1   |
|          | <b>Base alternator</b>                               | 6.1.2   |
| 3        | Standard alternator n = 1,000 / min                  | 6.1.2   |
|          | <b>Base genset</b>                                   |         |
| 3        | Base genset 50Hz, Marelli                            |         |
|          | <b>Preservation</b>                                  |         |
| 3        | Standard conservation (24 months)                    |         |
|          | <b>Cooling Water Pre-Heating</b>                     | 6.1.3   |
| 3        | Coolant preheat 50Hz=400V / 60Hz=440V                | 6.1.3   |
|          | <b>Mixture piping</b>                                |         |
| 3        | Gas mixture pipe                                     |         |
|          | <b>Exhaust turbo charger</b>                         |         |
| 3        | Exhaust turbo charger                                |         |
|          | <b>Lube oil system</b>                               |         |
| 3        | Lube oil system with mounts for IFE dehumidification |         |
|          | <b>Combustion air filter</b>                         | 6.1.3.1 |
| 3        | front mounted air filter without preheating          | 6.1.3.1 |
|          | <b>Combustion air preheat</b>                        | 6.1.3.1 |
| 3        | without air preheating                               | 6.1.3.1 |
|          | <b>Integrated Front End</b>                          |         |
| 3        | IFE dehumidification                                 |         |
|          | <b>Paint job</b>                                     | 6.1.4   |
| 3        | Primer, top coat and spare paint: Cat-yellow EATY008 | 6.1.4   |
|          | <b>Name plate</b>                                    |         |
| 3        | name plate in English                                |         |
|          | <b>Exhaust pressure monitor</b>                      | 6.2.4   |
| 3        | Exhaust back pressure sensor (2 pieces)              | 6.2.4   |
|          | <b>Tools</b>   | 6.1.9   |
| 1        | Standard tool set, base scope incl. barring motor    | 6.1.9   |

| Quantity | Description   | Item    |
|----------|---|---------|
|          | <b>Spare parts for commissioning</b>                                      | 6.1.7   |
| 3        | Spare parts for commissioning   | 6.1.7   |
|          | <b>TEM system</b>   | 6.1.6   |
|          | <b>Base system TEM</b>  | 6.1.6   |
| 3        | Base system (CST260-F)  | 6.1.6   |
|          | <b>Frequently chosen options TEM</b>                                      | 6.1.6   |
| 3        | Radiator controller (TKS1)  | 6.1.6   |
| 3        | Modbus RTU (MRTU)   | 6.1.6   |
|          | <b>Special options TEM</b>  | 6.1.6   |
| 3        | 4 parameterizable measurements (4MW)                                      | 6.1.6   |
|          | <b>Visualisation TEM</b>  | 6.1.6   |
| 3        | Operating terminal (BRT-C)  | 6.1.6   |
|          | <b>TEM control cabinet, packaging, cables</b>                             | 6.1.6   |
| 3        | Standing switch cabinet 500mm deep, door hinge left (TS5L+HVS)            | 6.1.6   |
| 3        | TEM connecting cable set CG 260 8m (K32ARM)                               | 6.1.6   |
|          | <b>TEM documentation, circuit diagrams</b>                                | 6.1.6   |
| 1        | Documentation in other languages (DP32SC)                                 | 6.1.6   |
|          | <b>Plant components</b>   | 6.2     |
|          | <b>Compressed air bottle</b>  | 6.2.1   |
| 3        | compressed air bottle, 2000 liter, upright (c/w condensate drain)         | 6.2.1   |
|          | <b>Zero-pressure gas control train</b>                                    | 6.1.5   |
| 3        | Gas train DN 125/100/125 (RMG)  | 6.1.5   |
|          | <b>Inlet fuel pressure regulator</b>                                      | 6.2.2   |
| 3        | Pre pressure gas train DN80/80/100  | 6.2.2   |
|          | <b>Lube oil heat exchanger engine cooling circuit</b>                     | 6.2.3.2 |
| 3        | Counter flange lube oil heat exchanger DN 100, cpl. Steel/Stainless steel | 6.2.3.2 |
| 3        | Lube oil heat exchanger   | 6.2.3.2 |
|          | <b>Sensors intercooling circuit</b>                                       | 6.2.3.1 |
| 9        | Counter flange DN 80  | 6.2.3.1 |
| 3        | Safety valve 3 bar  | 6.2.3.1 |
| 3        | Temperature sensor PT 100   | 6.2.3.1 |
| 3        | Water low level switch  | 6.2.3.1 |
| 3        | Differential pressure switch  | 6.2.3.1 |
| 3        | Ventilation valve   | 6.2.3.1 |
| 3        | Three-way valve DN 80/ PN16, 230 V  | 6.2.3.1 |

| Quantity | Description   | Item    |
|----------|---|---------|
|          | <b>Sensors engine cooling circuit</b>   | 6.2.3.2 |
| 9        | Counter flange DN 100   | 6.2.3.2 |
| 6        | Safety valve 3 bar  | 6.2.3.2 |
| 6        | Temperature sensor PT 100   | 6.2.3.2 |
| 3        | Water low level switch  | 6.2.3.2 |
| 3        | Differential pressure switch  | 6.2.3.2 |
| 3        | Ventilation valve   | 6.2.3.2 |
| 3        | Three-way valve DN 100/ PN16, 230 V   | 6.2.3.2 |
|          | <b>Cooling water pumps intercooling circuit</b>                               | 6.2.3.1 |
| 6        | Counter flange DN 65  | 6.2.3.1 |
| 3        | Coolant pump DN 65 Etaline 065-065-160/146                                    | 6.2.3.1 |
|          | <b>Cooling water pumps engine cooling circuit</b>                             | 6.2.3.2 |
| 6        | Counter flange DN 80  | 6.2.3.2 |
| 3        | Counter flange set DN 80  | 6.2.3.2 |
| 3        | Throttle valve DN 80  | 6.2.3.2 |
| 3        | Coolant pump DN 80 Etaline 080-080-200/188                                    | 6.2.3.2 |
|          | <b>Expansion vessels intercooling circuit</b>                                 | 6.2.3.1 |
| 3        | Expansion vessel 250l   | 6.2.3.1 |
| 3        | Lock-off valve for expansion tank   | 6.2.3.1 |
| 3        | Expansion tank manometer  | 6.2.3.1 |
| 3        | Manometer cut-off valve   | 6.2.3.1 |
|          | <b>Expansion vessels engine cooling circuit</b>                               | 6.2.3.2 |
| 3        | Expansion vessel 500l   | 6.2.3.2 |
| 3        | Lock-off valve for expansion tank   | 6.2.3.2 |
| 3        | Expansion tank manometer  | 6.2.3.2 |
| 3        | Manometer cut-off valve   | 6.2.3.2 |
|          | <b>Exhaust gas silencer</b>   | 6.2.4   |
| 6        | Exhaust gas counter flange complete, steel DN 800                             | 6.2.4   |
| 3        | Exhaust silencer, heat resistant steel, radial-axial, DN 800, 60 dB(A) in 10m | 6.2.4   |
|          | <b>Switchgear load sharing</b>  | 6.2.6   |
| 1        | Load sharing 2-4 gensets  | 6.2.6   |
|          | <b>Services</b>   | 6.3     |
|          | <b>Final inspection</b>   | 6.3.5   |
| 3        | genset test without customer participation                                    | 6.3.5   |
|          |   |         |