**BFP Main Motor Component Specifications**

**General Specifications:**

Type – Revolving Field, Cylindrical Rotor, Brushless

Enclosure – Closed Air Circuit Water Cooled (CACW)

Insulation Class – F

Air Gap – 25mm

Speed – 5600RPM

Power Factor – 0.85

Voltage – 2700V

Current – 1119A

Frequency – 93.33Hz

Number of Phases – 6

Number of Poles – 2

Output Power – 8.8MW

**Mass of Components:**

Rotor (including exciter rotor) – 5.48 Tonne

Main Stator – 13.10 Tonne

Main Bearings – 0.60 Tonne

Heat Exchanger (full) – 1.50 Tonne

Exciter Stator – 0.40 Tonne

Exciter Pedestal – 0.14 Tonne

Exciter acoustic Hood – 0.38 Tonne

Total Weight of Motor – 30 Tonne

**Stator Temperature Detectors:**

Make Sensing Devices Ltd

Type Platinum Resistance

Alarm Setting 135°C

Trip Setting 145°C

**Make-up Air Filters:**

Make Davis Industrial Filters Ltd.

Type 150x150x50 Front Withdrawal

**Anti-Condensate Heaters:**

Make Bray Chromalox Ltd.

Type EV

Voltage 220V, 50Hz

Rating 250W

Number off 5

**Motor Bearings:**

Make Glacier Metal Co. Ltd.

Type HSR 18 Tilting Pad

Load between pads 25kN

Diametrical clearance between pivots 0.353/0.274mm

Oil Grade ISO VG32 at 50°C

Oil Inlet Temperature 50°C

Oil Outlet Temperature 70°C

Oil Inlet Pressure 100-200kPa

Oil Flow @ 5600RPM 0.55l/s

**Bearing Thermocouple:**

Make Universal Thermosensors ltd.

Type Chromel/Alumel

Extension Lead Spec. L13K

Alarm Setting 105°C

Trip Setting 110°C

**Earthing Brush:**

Make Morgan Components Ltd.

Brush Holder Type ZKA (Radial) 10x16mm

Brush Morgan, crucible brush grade ‘CM’ standard length Insulated Pigtail, 10x16x32mm with slotted double clip

Spring Pressure 284gm

**Heat Exchanger**

Water Design Pressure 1000kPa

Hydrostatic Test Pressure 1500kPA

**BFP Exciter Specifications**

**Exciter Details:**

Type Brushless

Speed 5600RPM

Insulation Class F

Air Gap 2mm

Number of Poles 4

Full load output (diode wheel) 204ADC, 204VDC

Armature Connection Star

Armature Resistance @ 20°C 0.012Ω per phase

Stator Resistance @ 20°C 0.054Ω per phase

**Exciter Bearing**

Make Glacier Metal Co. Ltd.

Type HSR14 Tilting Pad

Load between pads 2.3kN

Diametrical clearance at pivots 0.237/0.171mm

**Exciter Bearing Thermocouple:**

Make Universal Thermosensors ltd.

Type Chromel/Alumel

Extension Lead Spec. L13K

Alarm Setting 105°C

Trip Setting 110°C