THE FOLLOWING STEAM TURBINE GENERATOR SET IS AVAILABLE FOR SALE WITH US WITH IMMEDIATE DELIVERY:

1 No. – 37 MW BHEL make, Condensing type Steam Turbine Generator set, having the Following Technical Specifications:

STEAM TURBINE DETAILS:

Make : BHEL  
Model : HNK 71/2-8-4(Condensing)  
Set : IK 033  
M/c no : T-0473  
Rated Capacity : 37.09 MW  
Inlet Steam pressure : 60 kg/cm²  
Inlet Steam temperature : 475 Deg. C  
Steam flow (HP/LP) : 130 TPH  
Condenser vacuum : 0.1 kg/cm²  
HP blading : 34 (Reaction type)  
LP blading : 17 (Reaction type)

ALTERNATOR DETAILS:

Make : BHEL  
Capacity : 37090 kW  
Speed : 3000 RPM  
Voltage : 11000V  
P.F. : 0.8  
Frequency : 50 Hz  
No. of Phase : 3  
Connection : Y  
Year of Make : 1998  
Insulation Class : F  
No. of Poles : 2

LUBE OIL SYSTEM : Main Lube Oil Tank
Capacity : 18 m³
Rundown Tank Capacity : 10 m³
Overhead Tank Capacity : 10 m³

**MAIN OIL PUMP DETAILS:**

<table>
<thead>
<tr>
<th>Make</th>
<th>KSB Pumps Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>RPK EM-80-315</td>
</tr>
<tr>
<td>Serial no</td>
<td>9850260-751-1999</td>
</tr>
<tr>
<td>EX</td>
<td>5892/99, 5891/99</td>
</tr>
<tr>
<td>Flow</td>
<td>138m³/h</td>
</tr>
<tr>
<td>Head</td>
<td>113.6 m</td>
</tr>
</tbody>
</table>

**AUXILIARY OIL PUMP DETAILS:**

<table>
<thead>
<tr>
<th>Make</th>
<th>KSB Pumps</th>
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</thead>
<tbody>
<tr>
<td>Type</td>
<td>RPK EM-80-315</td>
</tr>
<tr>
<td>Serial no</td>
<td>9850261-751-1999</td>
</tr>
<tr>
<td>EX</td>
<td>5892/99, 5891/99</td>
</tr>
<tr>
<td>Flow</td>
<td>138 m³/h</td>
</tr>
<tr>
<td>Head</td>
<td>113.6 m</td>
</tr>
</tbody>
</table>

**EMERGENCY OIL PUMP DETAILS:**

<table>
<thead>
<tr>
<th>Make</th>
<th>KSB Pumps Ltd</th>
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</thead>
<tbody>
<tr>
<td>Type</td>
<td>RPK-EV-150-200</td>
</tr>
<tr>
<td>Serial No</td>
<td>9850266-751-1998</td>
</tr>
<tr>
<td>Exl</td>
<td>5903/99</td>
</tr>
<tr>
<td>Flow</td>
<td>40m³/h</td>
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<tr>
<td>Head</td>
<td>45.45 m</td>
</tr>
<tr>
<td>N</td>
<td>2900 rpm</td>
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</table>

**JACKING OIL PUMPS DETAILS:**

<table>
<thead>
<tr>
<th>Make</th>
<th>Tushaco Pumps</th>
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<tbody>
<tr>
<td>Type</td>
<td>High pressure gear pump</td>
</tr>
<tr>
<td>Model</td>
<td>HPG 3E</td>
</tr>
<tr>
<td>Flow</td>
<td>50 Lpm</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>120kg/cm²</td>
</tr>
<tr>
<td>Rpm</td>
<td>1500</td>
</tr>
<tr>
<td>HP</td>
<td>25</td>
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</tbody>
</table>

**OIL COOLER DETAILS:**

<table>
<thead>
<tr>
<th>Make</th>
<th>BHEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial No</td>
<td>0227, 0228</td>
</tr>
<tr>
<td>Shield</td>
<td>10 THK 700 X 12</td>
</tr>
<tr>
<td>No of coolers</td>
<td>2 X 100</td>
</tr>
<tr>
<td>Quantity of oil</td>
<td>48.4 cu m/hr</td>
</tr>
<tr>
<td>Inlet temp of oil</td>
<td>55 deg C</td>
</tr>
<tr>
<td>Outlet temp of oil</td>
<td>45 deg C</td>
</tr>
<tr>
<td>Pressure drop in oil side</td>
<td>0.25 kg/cm²</td>
</tr>
</tbody>
</table>
Quantity of cooling water : 100 cu m/hr
Inlet temp of water : 33 deg C
Outlet temp of water : 35 deg C
Pressure drop in water side : 0.6 kg/cm²
Cooling surface area : 238 m²
Size of tubes (OD x THK) : 15.875 X 1.65
Total no of tubes : 776
No of water passes : 4
Water side design pressure : 6 Atg
Oil side design pressure : 9 Atg
Water side design temp : 100 deg C
Oil side design temp : 100 deg C
Water side test pressure : 9
Oil side test pressure : 13.5
Test temp : Ambient

L. O. CENTRIFUGE DETAILS:
Make : Alfa Laval
Type : MAB -103
Rpm : 1400
Kw : 0.75

BOOSTER PUMP DETAILS:
Type : Gear pump
Motor : Crompton Greaves Ltd
Kw : 0.75
Rpm : 1400

LUBE OIL TANK VAPOR EXHAUST FAN DETAILS:
Make : Radiant
Model : 190 AWS
Air discharge : 396 m³/hr
Sp : 100 wgm
Rpm : 2880

L.O. DUPLEX FILTER DETAILS:
Make : EPE Process Filters & Accumulator Pvt. Ltd
Model : 25DI80IG25 CEG M 04-08
Size : 25 microns
Capacity : 960Lpm

OIL ACCUMULATOR DETAILS:
Make : EPE Germany
Model : CFOAS-55P30

ST CONDENSATE SYSTEM DETAILS:
Surface condenser Shape : Circular
Type : Shell and Tube
Quantity of steam : 134000 Kg/hr
Enthalpy of condensing steam : 549.3 Kcal/kg
Condenser vacuum : 0.1 ata
Cleanliness factor : 0.85
Size of tubes (OD X THK) : 19.05 X 0.711mm
Total no of tubes : 7750
Free oxygen in condensate : 20 ppb
Cooling surface area : 3483 m²
Quantity of cooling water : 7500 m³/hr
Cooling water inlet temp : 33
Cooling water outlet temp : 42
Resistance on water side : 7.6 MWCL
Velocity of cooling water : 2.2 m/sec
No of water side passes : 2
Water chambers : Divided
Water chamber design pressure : 4 atg
Bolt leak tightness pressure : 6 atg
Steam side design pressure : 1.1 atg & vacuum
Steam side test pressure : Hyd fill
Water side design temp : 65 deg C
Steam side design temp : 100 deg C
Test temp : Ambient
Hot well capacity : 3 min

CONDENSATE EXTRACTION PUMP DETAILS:
Make : KSB Pumps
Type : WKT - 150 - 4
Serial No : 9819048 – 751 / 9819049-751
Ex No : 6923/99, 6922-99
Flow : 198.35 TPH
Head : 106
N : 1480

STARTING EJECTOR DETAILS
Make : BHEL
Working steam pr/temp : 10 ATA/350
Steam consumption : 1250 kg/hr
Suction pressure : 0.35 ata
Working steam temp : 350 deg C
Capacity of dry air : 220 kg/hr

MAIN EJECTOR DETAILS:
Make : BHEL
Type : SJAE 107350
Standard no : HEI/ BHEL
Working steam pr/temp : 10 ATA/350°C
Steam consumption : 1000kg/hr
Suction pr. (I stage) : 0.035 ATA
Surface Area of inter condenser : 40m²
Surface Area of after condenser : 18m²
No. of tubes in inter condenser : 300
No. of tubes in after condenser : 300
Size of tube (OD x THK) : 19.05 x 0.889 mm²
Number of passes : 2
Inter / after condenser tube length : 855 / 1000 mm
Condensate quantity (100% capacity) : 134000 kg/hr
Condensate inlet temp : 45.45 deg C
Tube side design pressure : 20 atg
Tube side test pressure : 30 atg
Tube side design temp : 100 deg C
Shell side design pressure : 3.5 atg & vacuum
Shell side test pressure : 5.3 atg
Shell side design temp : 200
Test temp : Ambient

GLAND STEAM CONDENSER DETAILS:
Make : BHEL
Type : Shell & tube, 2 pass
Serial No : 05620
Drawing no : 1-16010-00671
Shape : Circular
Qty of steam : 134000 kg/hr
Condenser vacuum : 0.1 ATA
Total no. Of tubes : 7750
Size of tube (OD x THK) : 19.05 x 0.711
Free oxygen in condenser : 20 ppb
Cooling surface area : 3483 m²
Qty of cooling water : 7500 m³/hr
Cooling water inlet temp : 33°C
Cooling water outlet temp : 42°C

GLAND STEAM CONDENSER EXHAUST FAN DETAILS:
Make : Pat fans
Capacity : 11 m³/sec
Spr : 500wg
Rpm : 2850

GLAND STEAM SURFACE CONDENSER DETAILS:
Make : BHEL
Serial No : 02386
Std no : HEI/BHEL
PHOTOGRAPHS:
NITIN CORPORATION,
INDIA

1 No. – 37 MW BHEL make Condensing Steam Turbine Generator set