

S. #	Description	Qty.
1.	Runner Blades along with set of Torque Pins (16 Nos.) for 23MW Bulb Type Kaplan Turbines Inlet diameter 6.3 meter Material Composition= Stainless Steel 13% Cr-4Ni or superior material Detail Drawing attached.	01 Set (04 Nos.)
2.	Complete set of all types of Runner Blade Oil Seals of One Turbine Packing NBR	01 Set

Inspection and Tests to be carried out

Following Factory Acceptance Tests will be carried out by the Manufacturer at his manufacturing premises for performance evaluation of new Spare parts in the presence of Purchaser representative:

S. #	Description	Test Procedure & Acceptance Standard
1	MT	JIS
2	UT of Stem Parts after Rough Machining	KS277-3, Level 2
3	PT of Defect Opening	KS279-1
4	MP of Vane after Polish	KS276-1, Level 2 & 3
5	PT of Vane after Polish	KS279-1, Level 2 & 3
6	Profile Check	IEC
7	Dimensional check	As per Drawing
8	Visual Inspection	As per Drawing
9	Other related Tests	recommended by the manufacturer

Characteristics of Turbines and Generators:

Main features of Turbines are tabulated as under:

Units No.	Main Characteristics of Turbine	Main Characteristics of Generator & Exciter	Year of commissioning
Unit # 1~8	Type: HK-1RT (Kaplan) Maximum Output: 23700 KW Speed: 85.7 r/min Net Head Range: 3.0 m to 13.8 m Runaway Speed: 300r/min Normal Discharge: 250m ³ /S Sr. No: K1X69031H10 Manufacturer: M/s Fuji Electric Co. Japan	Type: GDH7146T-35 Voltage: 11 KV, Frequency: 50Hz Power Factor: 0.9, Speed: 85.7rpm Ex. Voltage: 275 V, EX. Current: 688A Exciter Type: GJG728F-18 (Dynamic Brushless) Ex. Voltage: 170 V, Ex. Current: (42) A Speed: 85.7rpm Manufactured: M/s Fuji Electric Co. Japan	2000 ~ 2001