MOUDA SUPER THERMAL POWER PROJECT STAGE-II (2x660MW)

SL. NO.	ATTRIBUTES	UNIT	VALUE
CYCLE PARAMETERS:			
1.	MAIN STEAM PRESSURE	Kg/cm2(a)	247
2.	MAIN STEAM TEMPERATURE	Deg.C	565
3.	REHEAT STEAM TEMPERATURE	Deg.C	593
4.	NO. OF REHEATS		01
5.	DESIGN BACK PRESSURE	mmHg (a)	77
6.	FINAL FEED WATER TEMPERATURE	Deg.C	290
7.	GURANTEED HEAT RATE AT TMCR	Kcal/KWH	1834.5
8.	GURANTEED HEAT RATE AT TMCR 105% OF TMCR	Kcal/KWH	1832.9
9.	GURANTEED VACUUM	mmHg (a)	77
10.	COLD START UP PARAMETERS (MS Pr. /MS Temp. /HRH Temp.)	ata/Deg.C/ Deg.C	100/390/390
11.	TOTAL COLD START UP TIME	min	555
MAIN TURBINE			
1.	MAKE		SIEMENS, GERMANY
2.	COMBINED HP-IP		NO
3.	DOUBLE LP TURBINE		NO
4.	NO. OF TURBINE CYLINDERS		03
5.	NO. OF CASING IN HPT		02
6.	NO. OF CASING IN HP-IP		NA
7.	NO. OF CASING IN IPT		02
8.	NO. OF CASING IN LPT		02
9.	TYPE OF TURBINE INSULATION		SPRAY AS WELL AS ROCK WOOL PADS/BLANKET
10.	ACOUSTIC ENCLOSURE PROVIDED OR NOT		YES
11.	LPT EXHAUST DOWNWARD /AXIAL		DOWNWARD
12.	NO. OF EXTRACTION		8
13.	TYPE OF HPT (SINGLE/DOUBLE FLOW)		SINGLE
14.	TYPE OF IPT (SINGLE/DOUBLE FLOW)		DOUBLE
15.	TYPE OF LPT (SINGLE/DOUBLE FLOW)		DOUBLE
16.	COMPOUNDING (TANDEM/CROSS)		TANDEM
17.	BEARING SPAN (HP/HIP/IP/LP)	mm	4865/-/6075/8000
18.	ROTOR DESIGN (WELDED/ONE PIECE FORGED)		HP- ONE PIECE FORGED IP- ONE PIECE FORGED LP- ONE PIECE FORGED
19.	BLADE FIXING TYPE: a) HPT b) IPT c) LPT		FIRTREE
20.	TYPE OF GLAND SEALS		SPRING BACKED LABYRINTH TYPE
21.	HPT MODULE NO.		HP70-V4
22.	HIP MODULE NO.		NA
23.	IPT MODULE NO.		I60-V2
24.	LPT MODULE NO.		-
25.	NO. AND TYPE OF TURBINE BEARING		01 NO. TILTING PAD TYPE THRUST BEARING 07 NOS JOURNAL BEARING
26.	NO. OF HP TURBINE BLADES		18 (ALL REACTION TYPE)
27.	NO. OF HIP TURBINE BLADES		NA
28.	NO. OF IP TURBINE BLADES		15x2 (ALL REACTION TYPE)
29.	NO. OF LP TURBINE BLADES		7x2x2 (ALL REACTION TYPE)

30.	LPT LAST STAGE BLADE TYPE		FREE STANDING
31.	LPT LAST TWO STAGE BLADE DETAILS: a) BLADE HEIGHT b) ROOT DIAMETER c) PITCH DIAMTER d) TIP DIAMETER	 mm mm mm mm	**LAST STAGE** **LAST BUT ONE STAGE** 1021.4 644.75 1630 1660 2538.8 2244 3458.4 2178.4
32.	RADIAL CLEARANCE OF EACH BEARING	mm	1# 0.35, 2# 0.54, 3#0.68, 4#0.75, 5#0.75 (VERTICAL) 1# 0.40, 2# 0.61, 3#0.46, 4#0.51, 5#0.50 (HORIZONTAL)
33.	TYPE OF BARRING GEAR (HYDRAULIC/MOTORISED)		HYDRAULIC
34.	BARRING SPEED	rpm	60
35.	CRITICAL SPEED	rpm	HPT-1602 IPT-1962 LPTA-1620 LPTB-1572 GEN-750
36.	STEAM ADMISSION FULL OR PARTIAL ARC TYPE		FULL ARC
37.	NO. OF MSV		02
38.	NO. OF MCV		02
39.	NO. OF OLV		01
40.	NO. OF IPSV		02
41.	NO. OF ICV		02
42.	HP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		BARREL TYPE
43.	HIP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		NA
44.	IP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		HORIZONTALLY SPLIT
45.	LP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		HORIZONTALLY SPLIT
46.	LP TURBINE BURSTING DIAPHRAGM *a) Number* *b) Diameter* *c) Material* d) *Bursting Set Pressure*	 mm Kg/cm2(a)	 01 per CASING 800 1.4301+TEFLON+1.4301 1.4
47.	WHETHER LPT LAST STAGE BLADE VIBRATION MONITORING SYSTEM PROVIDED.		NO
TURBINE LUBE OIL SYSTEM			
1.	MAIN OIL PUMP (MOTOR/SHAFT DRIVEN)		MOTOR DRIVEN
2.	NO. OF MOP & CAPACITY		2x100% & 59 lps
3.	MOP DIS. PR. AND SPEED		6.2 bar (g) & 3000rpm
4.	NO. OF AOP		NA
5.	NO. OF EOP & CAPACITY		1x100% & 59 lps
6.	EOP DIS. PR. AND SPEED		2.6 bar (g) & 3000rpm
7.	NO. OF JOP(AC/DC)		1x100% AC & 1x100% DC
8.	JOP (BOTH DC &AC) CAPACITY, DIS. PR. AND SPEED		3.07 lps, 175 bar (g), 1470rpm (AC) & 1750rpm (DC)
9.	TYPE OF LUBE OIL		ISO VG 46
10.	TYPE OF COOLER		SHELL & TUBE TYPE
11.	LUBE OIL TANK CAPACITY (NORMAL/MAXIMUM)	Lit	32000/45000
12.	NORMAL TANK LEVEL	mm	510 from Top of Tank

13.	TANK LEVEL HI/LO	mm	470/550 From Top of Tank
14.	TYPE OF PURIFIER PROVIDED		CENTRIFUGE TYPE
15.	NORMAL LUBE OIL TEMPERATURE	Deg.C	50
GOVERNING SYSTEM & CONTROL OIL SYSTEM			
1.	TYPE OF GOVERNING		D-EHC TYPE THROTTLE GOVERNING (HP GOV.)
2.	GOVERNING OIL PRESSURE	Kg/cm2(g)	160
3.	MAKE		SIEMENS, GERMANY
4.	DEAD BAND OF THE GOVERNOR		0.06%
5.	RANGE OF REGULATION		5% (ADJUSTABLE BETWEEN 3% - 8%)
6.	TYPE OF GOVERNING OIL		TRIXYLENYL PHOSPHATE ESTER
7.	CONTROL OIL TANK CAPACITY (NORMAL)	lit	1000
8.	DIFFERENT TANK LEVELS (NORMAL/HI/LO)	mm	150/80/265 from Tank Top
9.	NO. OF OIL PUMP AND TYPE		2x100% AXIAL PISTON TYPE
10.	PUMP CAPACITY, DIS. PR. & SPEED		62 l/min,160 bar (g) & 1500rpm
11.	CONTROL OIL PURIFIER DETAILS		MAKE: Amberlist A21 Molecular Sieve A1/8 TYPE: REGENERATING UNIT
12.	PURIFIER PUMP DETAILS		NO. – 2x100% CAPACITY – 0.021-0.024 m3/h

MEJA THERMAL POWER PROJECT (2x660MW)

SL. NO.	ATTRIBUTES	UNIT	VALUE
CYCLE PARAMETERS:			
1.	MAIN STEAM PRESSURE	Kg/cm2(a)	247
2.	MAIN STEAM TEMPERATURE	Deg.C	565
3.	REHEAT STEAM TEMPERATURE	Deg.C	593
4.	NO. OF REHEATS		01
5.	DESIGN BACK PRESSURE	mmHg (a)	77
6.	FINAL FEED WATER TEMPERATURE	Deg.C	290
7.	GURANTEED HEAT RATE AT TMCR	Kcal/KWH	1842
8.	GURANTEED HEAT RATE AT TMCR 105% OF TMCR	Kcal/KWH	1839
9.	GURANTEED VACUUM	mmHg (a)	77
10.	COLD START UP PARAMETERS (MS Pr. /MS Temp. /HRH Temp.)	ata/Deg.C/ Deg.C	96.1/380/380
11.	TOTAL COLD START UP TIME	min	140
MAIN TURBINE			
1.	MAKE		TOSHIBA CORPORATION, JAPAN
2.	COMBINED HP-IP		NO
3.	DOUBLE LP TURBINE		NO
4.	NO. OF TURBINE CYLINDERS		03
5.	NO. OF CASING IN HPT		02
6.	NO. OF CASING IN HP-IP		NA
7.	NO. OF CASING IN IPT		02
8.	NO. OF CASING IN LPT		02
9.	TYPE OF TURBINE INSULATION		CERAMIC FIBRE AND MINERAL WOOL PADS/BLANKET
10.	ACOUSTIC ENCLOSURE PROVIDED OR NOT		YES
11.	LPT EXHAUST DOWNWARD /AXIAL		DOWNWARD
12.	NO. OF EXTRACTION		8
13.	TYPE OF HPT (SINGLE/DOUBLE FLOW)		SINGLE
14.	TYPE OF IPT (SINGLE/DOUBLE FLOW)		SINGLE
15.	TYPE OF LPT (SINGLE/DOUBLE FLOW)		DOUBLE
16.	COMPOUNDING (TANDEM/CROSS)		TANDEM
17.	BEARING SPAN (HP/HIP/IP/LP)	mm	5580/-/5450/7500
18.	ROTOR DESIGN (WELDED/ONE PIECE FORGED)		HP- ONE PIECE FORGED IP- ONE PIECE FORGED LP- ONE PIECE FORGED
19.	BLADE FIXING TYPE: a) HPT b) IPT c) LPT		FIRTREE
20.	TYPE OF GLAND SEALS		SPRING BACKED LABYRINTH TYPE
21.	HPT MODULE NO.		-
22.	HIP MODULE NO.		NA
23.	IPT MODULE NO.		-
24.	LPT MODULE NO.		TCDF-48
25.	NO. AND TYPE OF TURBINE BEARING		01 NO. TILTING PAD TYPE THRUST BEARING 08 NOS JOURNAL BEARING
26.	NO. OF HP TURBINE BLADES		19 (ALL REACTION TYPE)
27.	NO. OF HIP TURBINE BLADES		NA
28.	NO. OF IP TURBINE BLADES		11 (1 IMPULSE AND 10 REACTION TYPE)

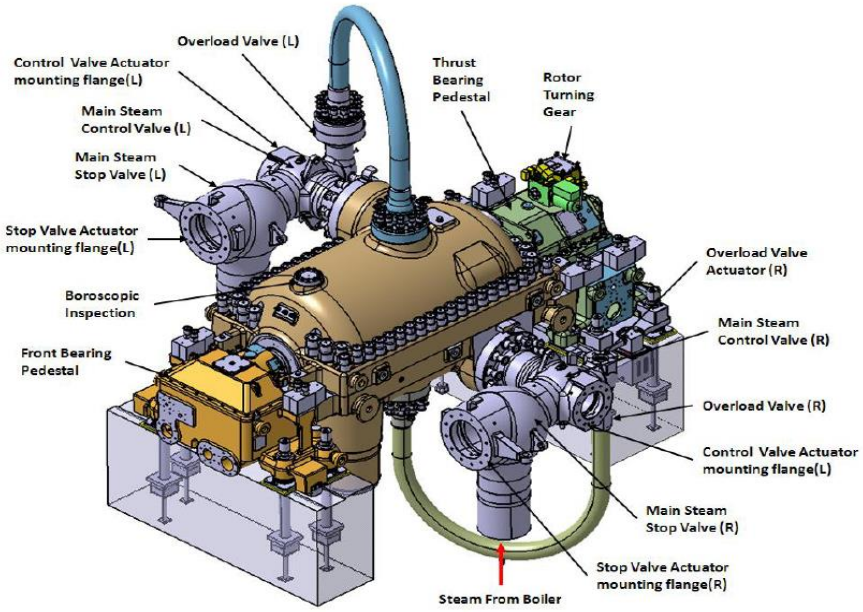
29.	NO. OF LP TURBINE BLADES		7x2 (ALL REACTION TYPE)
30.	LPT LAST STAGE BLADE TYPE		SHROUDED (WITH SNUBBER)
31.	LPT LAST TWO STAGE BLADE DETAILS: a) BLADE HEIGHT b) ROOT DIAMETER c) PITCH DIAMTER d) TIP DIAMETER	 mm mm mm mm	**LAST STAGE** **LAST BUT ONE STAGE** 1219.2 637.03 1879.6 1956.72 3098.8 2587.75 4318 3224.78
32.	RADIAL CLEARANCE OF EACH BEARING	mm	BRG.DIA.x1.3/1000
33.	TYPE OF BARRING GEAR (HYDRAULIC/MOTORISED)		MOTORISED
34.	BARRING SPEED	rpm	4
35.	CRITICAL SPEED	rpm	HPT-2010 IPT-1940 LPT-1260
36.	STEAM ADMISSION FULL OR PARTIAL ARC TYPE		FULL ARC
37.	NO. OF MSV AND TYPE		04 & POPET TYPE
38.	NO. OF MCV AND TYPE		04 & VENTURI TYPE
39.	NO. OF IPSV AND TYPE		02 & POPET TYPE
40.	NO. OF ICV AND TYPE		02 & VENTURI TYPE
41.	HP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		HORIZONTALLY SPLIT
42.	HIP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		NA
43.	IP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		HORIZONTALLY SPLIT
44.	LP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		HORIZONTALLY SPLIT
45.	LP TURBINE BURSTING DIAPHRAGM *a) Number* *b) Diameter* *c) Material* *d) Reliving Capacity* e) *Bursting Set Pressure*	 mm t/h Kg/cm2(a)	 04 1007 COPPER 340 1.38
46.	WHETHER LPT LAST STAGE BLADE VIBRATION MONITORING SYSTEM PROVIDED.		NO
TURBINE LUBE OIL SYSTEM			
1.	MAIN OIL PUMP (MOTOR/SHAFT DRIVEN)		MOTOR DRIVEN
2.	NO. OF MOP & CAPACITY		2x100% & 4640 l/min
3.	MOP DIS. PR. AND SPEED		7.75 Kg/cm2 (g) & 3000rpm
4.	NO. OF AOP		NA
5.	NO. OF EOP & CAPACITY		1x100% & 3789 l/min
6.	EOP DIS. PR. AND SPEED		2.97 Kg/cm2 (g) & 1750rpm
7.	LUBE OIL PRESSURE (AT TURBINE C/L)	Kg/cm2(a)	1.8
8.	NO. OF JOP(AC/DC)		1x100% AC & 1x100% DC
9.	JOP (BOTH DC &AC) CAPACITY, DIS. PR. AND SPEED		22.8 l/min, 246Kg/cm2 (g), 1500rpm (AC) & 1750rpm (DC)
10.	TYPE OF LUBE OIL		ISO VG 32
11.	TYPE OF COOLER		PHE TYPE
12.	LUBE OIL TANK CAPACITY (NORMAL/MAXIMUM)	Lit	40000/64000
13.	NORMAL TANK LEVEL	mm	920 from Top of Tank
14.	TANK LEVEL HI/LO	mm	820/1020 From Top of Tank
15.	TYPE OF PURIFIER PROVIDED		COALESCER TYPE
16.	NORMAL LUBE OIL TEMPERATURE	Deg.C	43-49

GOVERNING SYSTEM & CONTROL OIL SYSTEM			
1.	TYPE OF GOVERNING		D-EHC TYPE THROTTLE GOVERNING (HP GOV.)
2.	GOVERNING OIL PRESSURE	Kg/cm2(g)	167
3.	MAKE		TOSHIBA CORPORATION, JAPAN
4.	DEAD BAND OF THE GOVERNOR		0%
5.	RANGE OF REGULATION		5% (ADJUSTABLE BETWEEN 3% - 8%)
6.	TYPE OF GOVERNING OIL		QUINTOLUBRIC 888-46
7.	CONTROL OIL TANK CAPACITY (NORMA/MAXIMUM)	lit	1000/2000
8.	DIFFERENT TANK LEVELS (NORMAL/HI/LO)	mm	500/600/400/ from Tank Bottom
9.	NO. OF OIL PUMP AND TYPE		2x100% AXIAL PISTON TYPE
10.	PUMP CAPACITY, DIS. PR. & SPEED		160 l/min,169 Kg/cm2(g) & 970rpm
11.	CONTROL OIL PURIFIER DETAILS		MAKE: PALL (HOUSING) & PARKER (ELEMENT) TYPE: COALESCER TYPE
12.	PURIFIER PUMP DETAILS		NO. – 2x100% TYPE –Gear Type CAPACITY – 45 l/min DIS. PR.-5.1 Kg/cm2 (g)

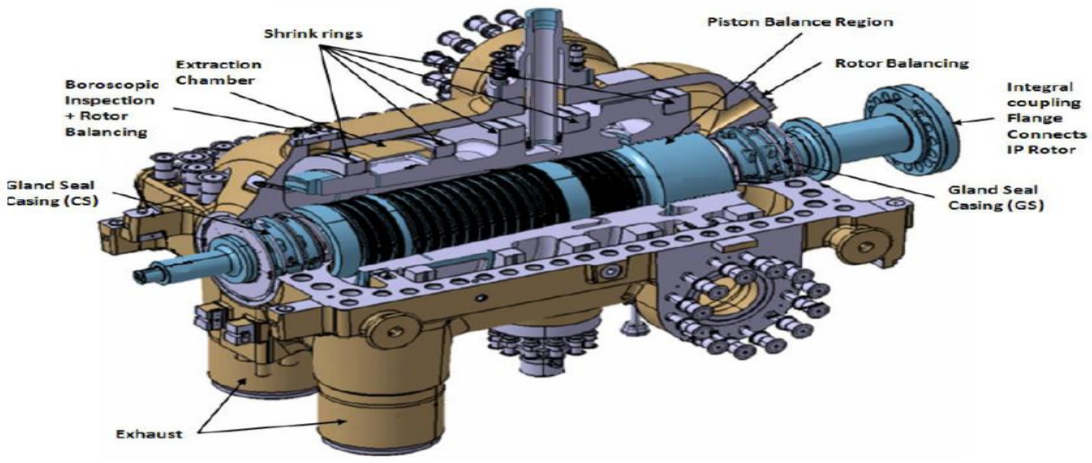
NPGCL NABINAGAR SUPER THERMAL POWER PROJECT STAGE-I (3x660MW)

SL. NO.	ATTRIBUTES	UNIT	VALUE
CYCLE PARAMETERS:			
1.	MAIN STEAM PRESSURE	Kg/cm2(a)	247
2.	MAIN STEAM TEMPERATURE	Deg.C	565
3.	REHEAT STEAM TEMPERATURE	Deg.C	593
4.	NO. OF REHEATS		01
5.	DESIGN BACK PRESSURE	mmHg (a)	77
6.	FINAL FEED WATER TEMPERATURE	Deg.C	290
7.	GURANTEED HEAT RATE AT TMCR	Kcal/KWH	1832
8.	GURANTEED HEAT RATE AT TMCR 105% OF TMCR	Kcal/KWH	1832
9.	GURANTEED VACUUM	mmHg (a)	77
10.	COLD START UP PARAMETERS (MS Pr. /MS Temp. /HRH Temp.)	ata/Deg.C/ Deg.C	102/390/390
11.	TOTAL COLD START UP TIME	min	260
MAIN TURBINE			
1.	MAKE		ALSTOM
2.	COMBINED HP-IP		NO
3.	DOUBLE LP TURBINE		NO
4.	NO. OF TURBINE CYLINDERS		03
5.	NO. OF CASING IN HPT		02
6.	NO. OF CASING IN HP-IP		NA
7.	NO. OF CASING IN IPT		02
8.	NO. OF CASING IN LPT		02
9.	TYPE OF TURBINE INSULATION		CERAMIC FIBRE PADS/BLANKET AND MINERAL WOOL SPRAY
10.	ACOUSTIC ENCLOSURE PROVIDED OR NOT		YES
11.	LPT EXHAUST DOWNWARD /AXIAL		DOWNWARD
12.	NO. OF EXTRACTION		8
13.	TYPE OF HPT (SINGLE/DOUBLE FLOW)		SINGLE
14.	TYPE OF IPT (SINGLE/DOUBLE FLOW)		DOUBLE
15.	TYPE OF LPT (SINGLE/DOUBLE FLOW)		DOUBLE
16.	COMPOUNDING (TANDEM/CROSS)		TANDEM
17.	BEARING SPAN (HP/HIP/IP/LP)	mm	4677/-/6516/7102
18.	ROTOR DESIGN (WELDED/ONE PIECE FORGED)		HP- TWO FORGED PIECES WELDED TOGETHER IP- TWO FORGED PIECES WELDED TOGETHER LP- TWO FORGED PIECES WELDED TOGETHER
19.	BLADE FIXING TYPE: a) HPT b) IPT c) LPT		FIRTREE
20.	TYPE OF GLAND SEALS		SPRING BACKED LABYRINTH TYPE
21.	HPT MODULE NO.		HD4
22.	HIP MODULE NO.		NA
23.	IPT MODULE NO.		MD4
24.	LPT MODULE NO.		ND41
25.	NO. AND TYPE OF TURBINE BEARING		01 NO. TILTING PAD TYPE THRUST BEARING 06 NOS JOURNAL BEARING
26.	NO. OF HP TURBINE BLADES		20 (ALL REACTION TYPE)
27.	NO. OF HIP TURBINE BLADES		NA
28.	NO. OF IP TURBINE BLADES		20x2 (ALL REACTION TYPE)
29.	NO. OF LP TURBINE BLADES		5x2 ((ALL REACTION TYPE)

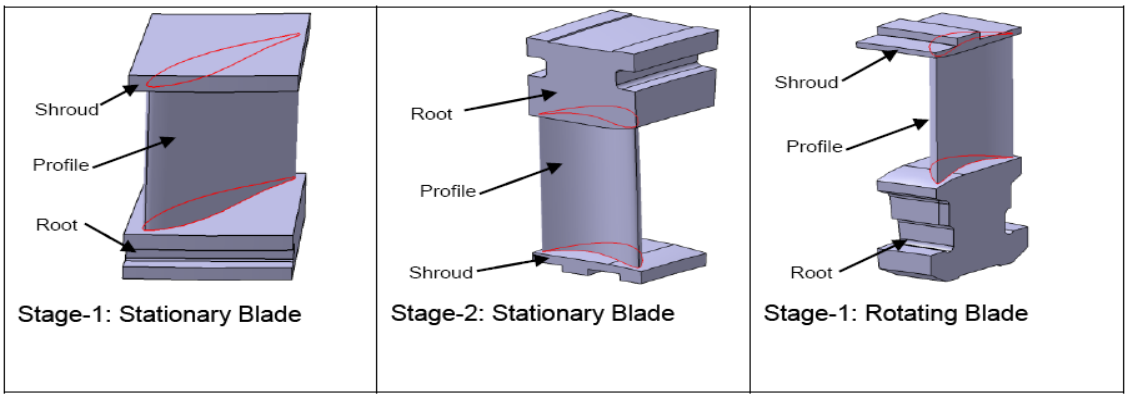
30.	LPT LAST STAGE BLADE TYPE		SHROUDED (WITH SNUBBER)
31.	LPT LAST TWO STAGE BLADE DETAILS: a) BLADE HEIGHT b) ROOT DIAMETER c) PITCH DIAMTER d) TIP DIAMETER	 mm mm mm mm	**LAST STAGE** **LAST BUT ONE STAGE** 1051 608 1705 1842 2756 2450 3806 3056
32.	RADIAL CLEARANCE OF EACH BEARING	mm	0.25 TO 1.484
33.	TYPE OF BARRING GEAR (HYDRAULIC/MOTORISED)		MOTORISED
34.	BARRING SPEED	rpm	16
35.	CRITICAL SPEED	rpm	HPT-2405 IPT-1700 LPT-1573
36.	STEAM ADMISSION FULL OR PARTIAL ARC TYPE		FULL ARC
37.	NO. OF MSV		02
38.	NO. OF MCV		02
39.	NO. OF OLV		02
40.	NO. OF IPSV		02
41.	NO. OF ICV		02
42.	HP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		HORIZONTALLY SPLIT
43.	HIP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		NA
44.	IP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		HORIZONTALLY SPLIT
45.	LP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		HORIZONTALLY SPLIT
46.	LP TURBINE BURSTING DIAPHRAGM *a) Number* *b) Diameter* *c) Material* *d) Reliving Capacity* e) *Bursting Set Pressure*	 mm Kg/s Kg/cm2(a)	 01 DN600 PTFE embedded between Inconel 600 alloy 31 1.5
47.	WHETHER LPT LAST STAGE BLADE VIBRATION MONITORING SYSTEM PROVIDED.		NO
TURBINE LUBE OIL SYSTEM			
1.	MAIN OIL PUMP (MOTOR/SHAFT DRIVEN)		SHAFT DRIVEN
2.	AOP OIL PUMP (MOTOR/SHAFT DRIVEN)		MOTOR DRIVEN
3.	NO. OF MOP & CAPACITY		2x100% & 200m3/h
4.	MOP DIS. PR. AND SPEED		54.1m & 2970rpm
5.	NO. OF EOP & CAPACITY		1x100% & 66.6m3/h
6.	EOP DIS. PR. AND SPEED		1.3bar(g) & 1500rpm
7.	NO. OF JOP(AC/DC)		1x100% AC & 1x100% DC
8.	JOP (BOTH DC &AC) CAPACITY, DIS. PR. AND SPEED		60 l/min, 260Kg/cm2 (g), 1500rpm
9.	TYPE OF LUBE OIL		ISO VG 46
10.	TYPE OF COOLER		PHE TYPE
GOVERNING SYSTEM & CONTROL OIL SYSTEM			
1.	TYPE OF GOVERNING		D-EHC TYPE THROTTLE GOVERNING
2.	GOVERNING OIL PRESSURE	bar(g)	42
3.	MAKE		ALSPA
4.	DEAD BAND OF THE GOVERNOR		+/-3%
5.	RANGE OF REGULATION		3% -8%



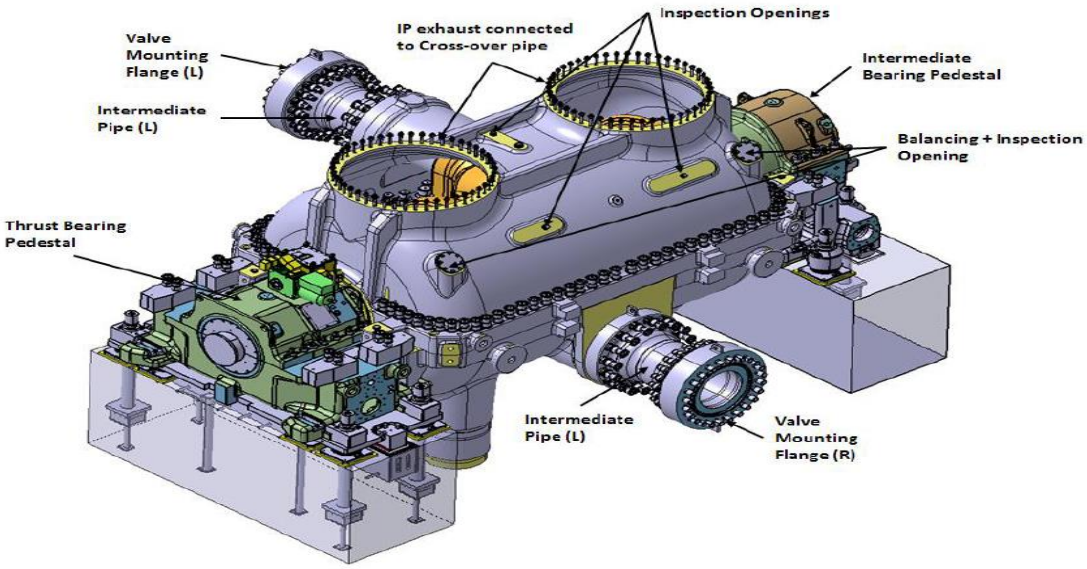
Typical HP turbine arrangement



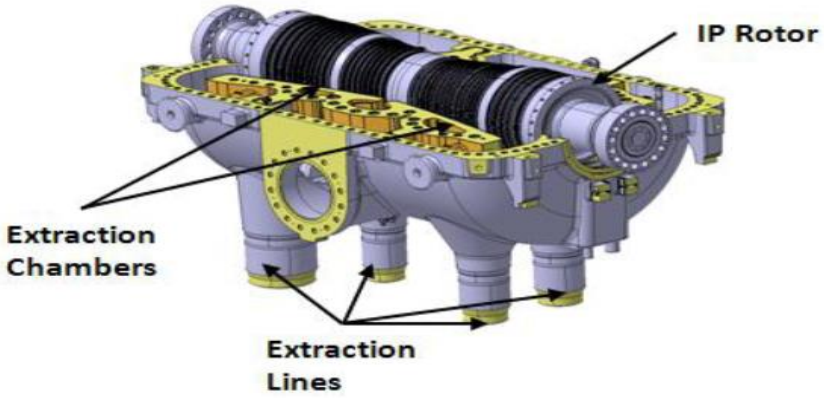
Typical section of HP Turbine



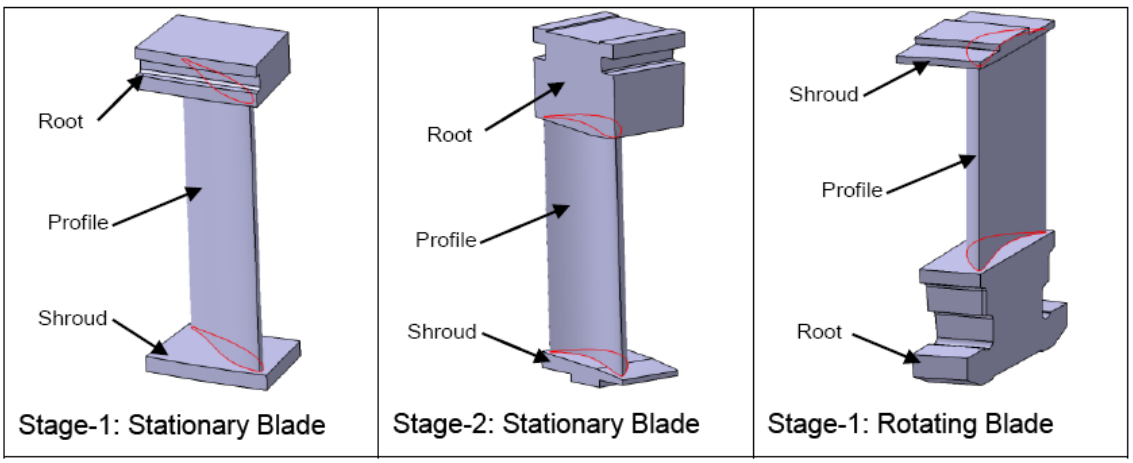
HP Turbine stationary and rotating blades



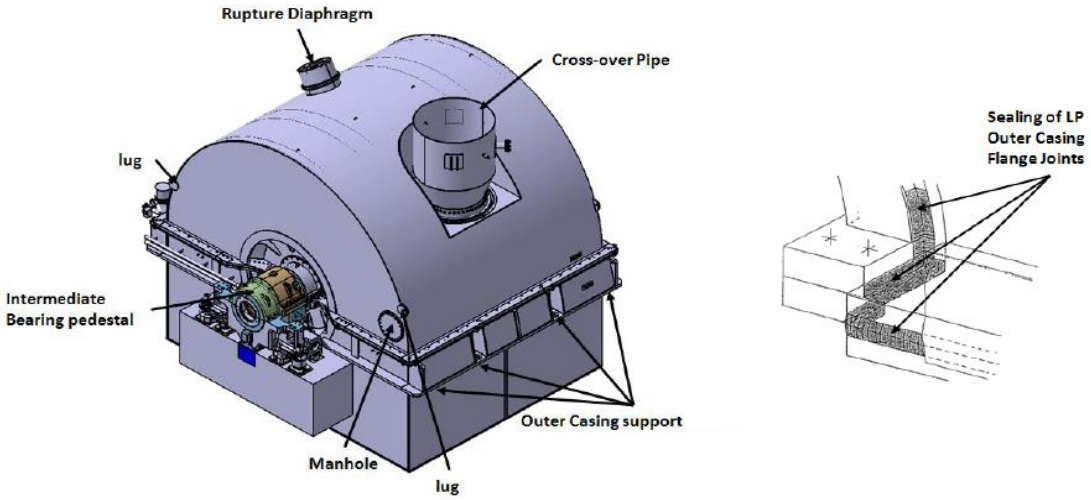
Typical IP turbine assembly



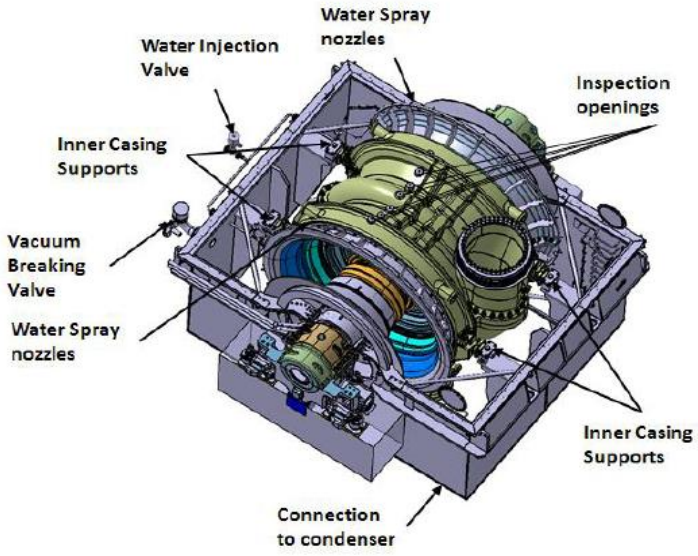
Typical IP turbine extraction lines



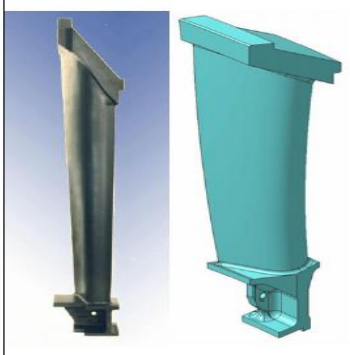
IP turbine blades



Typical LP turbine assembly



Typical LP turbine assembly (Outer Casing UH removed)



Stationary blade
(penultimate and last stage)

Rotating blade
(Penultimate stage)

Typical Rotating
blade (Last Stages)

Typical LP last stage blades

Stationary Blades (Front Stages)

Rotating Blades (Front Stages)

Typical LP front stage blades

KHARGONE SUPER THERMAL POWER PROJECT (2x660MW)

SL. NO.	ATTRIBUTES	UNIT	VALUE
CYCLE PARAMETERS:			
1.	MAIN STEAM PRESSURE	Kg/cm2(a)	270
2.	MAIN STEAM TEMPERATURE	Deg.C	660
3.	REHEAT STEAM TEMPERATURE	Deg.C	660
4.	NO. OF REHEATS		01
5.	DESIGN BACK PRESSURE	mmHg (a)	Avg.77
6.	FINAL FEED WATER TEMPERATURE	Deg.C	290
7.	GURANTEED HEAT RATE AT TMCR	Kcal/KWH	1780.8
8.	GURANTEED HEAT RATE AT TMCR 105% OF TMCR	Kcal/KWH	1776.1
9.	GURANTEED VACUUM	mmHg (a)	59.25
10.	COLD START UP PARAMETERS (MS Pr. /MS Temp. /HRH Temp.)	ata/Deg.C/ Deg.C	108/380/380
11.	TOTAL COLD START UP TIME	min	420
MAIN TURBINE			
1.	MAKE		LMTG, HAZIRA
2.	COMBINED HP-IP		NO
3.	DOUBLE LP TURBINE		YES
4.	NO. OF TURBINE CYLINDERS		4
5.	NO. OF CASING IN HPT		02
6.	NO. OF CASING IN HP-IP		NA
7.	NO. OF CASING IN IPT		02
8.	NO. OF CASING IN LPT		02
9.	TYPE OF TURBINE INSULATION		CERAMIC PADS/BLANKET AND MINERAL WOOL
10.	ACOUSTIC ENCLOSURE PROVIDED OR NOT		YES
11.	LPT EXHAUST DOWNWARD /AXIAL		DOWNWARD
12.	NO. OF EXTRACTION		9
13.	TYPE OF HPT (SINGLE/DOUBLE FLOW)		SINGLE
14.	TYPE OF IPT (SINGLE/DOUBLE FLOW)		SINGLE
15.	TYPE OF LPT (SINGLE/DOUBLE FLOW)		DOUBLE
16.	COMPOUNDING (TANDEM/CROSS)		TANDEM
17.	BEARING SPAN (HP/HIP/IP/LP)	mm	5300/-/6250/8060/8060
18.	ROTOR DESIGN (WELDED/ONE PIECE FORGED)		HP- ONE PIECE FORGED IP- TWO FORGED PIECES WELDED TOGETHER LP- ONE PIECE FORGED
19.	BLADE FIXING TYPE: a) HPT b) IPT c) LPT		FIRTREE
20.	TYPE OF GLAND SEALS		SPRING BACKED LABYRINTH TYPE
21.	HPT MODULE NO.		-
22.	HIP MODULE NO.		NA
23.	IPT MODULE NO.		-
24.	LPT MODULE NO.		TC4F40.5
25.	NO. AND TYPE OF TURBINE BEARING		01 NO. TILTING PAD TYPE THRUST BEARING 08 NOS JOURNAL BEARING
26.	NO. OF HP TURBINE BLADES		16 (ALL REACTION TYPE)
27.	NO. OF HIP TURBINE BLADES		NA
28.	NO. OF IP TURBINE BLADES		12 (ALL REACTION TYPE)

29.	NO. OF LP TURBINE BLADES		7x2x2 (ALL REACTION TYPE)
30.	LPT LAST STAGE BLADE TYPE		SHROUDED (WITH SNUBBER)
31.	LPT LAST TWO STAGE BLADE DETAILS: a) BLADE HEIGHT b) ROOT DIAMETER c) PITCH d) TIP DIAMETER	 mm mm mm mm	**LAST STAGE** **LAST BUT ONE STAGE** 1029 648 1458 1680 114.9 130.6 3516 2976
32.	TYPE OF BARRING GEAR (HYDRAULIC/MOTORISED)		MOTORISED
33.	BARRING SPEED	rpm	3
34.	CRITICAL SPEED	rpm	HPT-2115 IPT-2008 LPTA-1060 LPTB-1064 GEN-709
35.	STEAM ADMISSION FULL OR PARTIAL ARC TYPE		FULL ARC
36.	NO. OF MSV		02
37.	NO. OF MCV		02
38.	NO. OF OLV		02
39.	NO. OF IPSV		02
40.	NO. OF ICV		02
41.	HP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		HORIZONTALLY SPLIT
42.	HIP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		NA
43.	IP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		HORIZONTALLY SPLIT
44.	LP CASING TYPE (BARREL TYPE OR HORIZONTALLY SPLIT)		HORIZONTALLY SPLIT
45.	LP TURBINE BURSTING DIAPHRAGM *a) Number* *b) Diameter* *c) Material* *d) Reliving Capacity* e) *Bursting Set Pressure*	 mm m3/s Kg/cm2(a)	 04 per CASING 990 LEAD 61.1 1.3
46.	WHETHER LPT LAST STAGE BLADE VIBRATION MONITORING SYSTEM PROVIDED.		NO
TURBINE LUBE OIL SYSTEM			
1.	MAIN OIL PUMP (MOTOR/SHAFT DRIVEN)		MOTOR DRIVEN
2.	NO. OF MOP & CAPACITY		2x100% & 5400 l/min
3.	MOP DIS. PR. AND SPEED		3.6 Kg/cm2 (g) & 1500rpm
4.	NO. OF AOP		NA
5.	NO. OF EOP & CAPACITY		1x100% & 5000 l/min
6.	EOP DIS. PR. AND SPEED		3.6 Kg/cm2 (g) & 1500rpm
7.	NO. OF JOP(AC/DC)		1x100% AC & 1x100% DC
8.	JOP (BOTH DC &AC) CAPACITY, DIS. PR. AND SPEED		120 l/min, 160Kg/cm2 (g), 1000rpm (AC) & 1000rpm (DC)
9.	TYPE OF LUBE OIL		ISO VG 32XL
10.	TYPE OF COOLER		PHE TYPE
11.	LUBE OIL TANK CAPACITY (NORMAL/MAXIMUM)	Lit	40500/43813
12.	NORMAL TANK LEVEL	mm	1833 from Bottom of Tank
13.	TANK LEVEL HI/LO	mm	1983/1673 From Bottom of Tank
14.	TYPE OF PURIFIER PROVIDED		COALESCER TYPE

15.	NORMAL LUBE OIL TEMPERATURE	Deg.C	Less than 50
GOVERNING SYSTEM & CONTROL OIL SYSTEM			
1.	TYPE OF GOVERNING		D-EHC TYPE THROTTLE GOVERNING (HP GOV.)
2.	GOVERNING OIL PRESSURE	Kg/cm2(g)	140
3.	MAKE		MHPS, JAPAN
4.	DEAD BAND OF THE GOVERNOR		0%
5.	RANGE OF REGULATION		4%
6.	TYPE OF GOVERNING OIL		FRF (FYRQUELL)
7.	CONTROL OIL TANK CAPACITY (NORMAL)	lit	1300
8.	DIFFERENT TANK LEVELS (NORMAL/HI/LO)	mm	484/170/798 from Tank Top
9.	NO. OF OIL PUMP AND TYPE		2x100% AXIAL PISTON TYPE
10.	PUMP CAPACITY, DIS. PR. & SPEED		133 l/min,140 Kg/cm2(g) & 1000rpm
11.	CONTROL OIL PURIFIER DETAILS		Fuller's Earth Type
12.	PURIFIER PUMP DETAILS		NO. – 2x100% TYPE –Screw Type CAPACITY – 48 l/min DIS. PR.-5.1 Kg/cm2 (g) SPEED:1000rpm