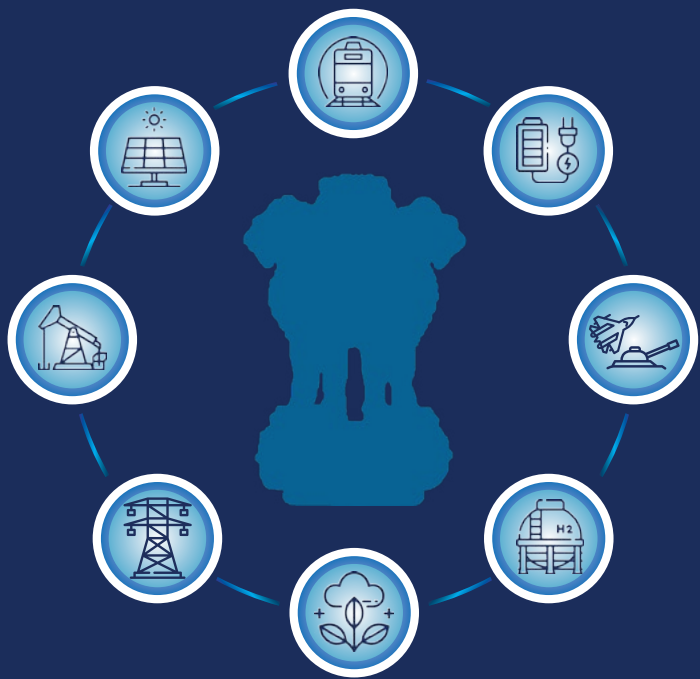


# Additional Information for Stakeholders



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## Financial Performance Trend

Sl. No.	Particulars	Units	2020-21	2019-20	2018-19	2017-18	2016-17
	Orders Received	₹ in crore	<b>13472</b>	23547	23859	40932	23489
	Orders Outstanding	₹ in crore	<b>102090</b>	108443	108680	118000	105200
<b>A.</b>	<b>Operating Results</b>						
<b>I</b>	<b>Total Income</b>						
	Revenue	₹ in crore	<b>16296</b>	20491	29423	27850	27740
	Other operational income	₹ in crore	<b>1013</b>	969	1000	963	859
	<b>Revenue from operations (a)</b>	₹ in crore	<b>17308</b>	21459	30423	28813	28599
	Other income (b)	₹ in crore	<b>370</b>	581	678	694	766
	<b>Total (I= a+b)</b>	₹ in crore	<b>17678</b>	22040	31101	29507	29365
<b>II</b>	<b>Operating expenses</b>						
	Material consumption, erection and engg. expenses	₹ in crore	<b>11360</b>	15080	19249	15793	16542
	Changes in inventories of FG, WIP & scrap	₹ in crore	<b>511</b>	(1042)	(991)	736	994
	Employee benefits expenses	₹ in crore	<b>5372</b>	5427	5502	5911	6360
	Other expenses	₹ in crore	<b>1799</b>	2429	2760	2522	2844
	Exchange variation (gain) / loss (net)	₹ in crore	<b>(66)</b>	(435)	(67)	(520)	270
	Provisions	₹ in crore	<b>1467</b>	233	1837	2438	528
	Depreciation & amortisation expenses	₹ in crore	<b>473</b>	503	475	786	849
	Finance costs	₹ in crore	<b>373</b>	507	287	255	351
	<b>Total (II)</b>	₹ in crore	<b>21290</b>	22702	29053	27922	28737
<b>III</b>	<b>Operating Profit/(loss) (a-II)</b>	₹ in crore	<b>(3982)</b>	(1243)	1370	891	(138)
<b>IV</b>	<b>Profit / (Loss) before tax (I-II)</b>	₹ in crore	<b>(3612)</b>	(662)	2048	1585	628
	Tax expense (Net)	₹ in crore	<b>(894)</b>	811	839	778	132
<b>V</b>	<b>Profit / (Loss) after tax</b>	₹ in crore	<b>(2717)</b>	(1473)	1209	807	496
	<b>Other Comprehensive Income</b>	₹ in crore	<b>20</b>	(274)	(120)	83	(29)
<b>VI</b>	<b>Total comprehensive income</b>	₹ in crore	<b>(2697)</b>	(1747)	1089	890	467
	Dividend payout	₹ in crore	-	-	696	668	387
	Dividend distribution tax	₹ in crore	-	-	143	136	79
	EBIT	₹ in crore	<b>(3239)</b>	(155)	2335	1840	979
	EBITDA	₹ in crore	<b>(2765)</b>	348	2810	2626	1828
	<b>Cash Flow:</b>						
	From Operating Activities	₹ in crore	<b>562</b>	(2892)	(3856)	991	562
	From Investing Activities	₹ in crore	<b>(43)</b>	1877	1915	964	(566)
	From Financing Activities	₹ in crore	<b>(395)</b>	1622	(32)	(671)	(470)

## Financial Performance Trend

Sl. No.	Particulars	Units	2020-21	2019-20	2018-19	2017-18	2016-17
<b>B.</b>	<b>Financial Position (Assets, Equity &amp; Liabilities)</b>						
<b>VII</b>	<b>Assets</b>						
	Property, plant & equipment and intangible assets	₹ in crore	<b>2488</b>	2814	2967	3069	3596
	Capital WIP and intangible assets under development	₹ in crore	<b>420</b>	314	235	203	168
	Non-current investments	₹ in crore	<b>670</b>	670	669	691	661
	Other non current assets	₹ in crore	<b>365</b>	321	362	291	282
	Trade Receivables (Net)	₹ in crore	<b>7213</b>	11641	15796	17303	12779
	Contract Assets (Net)	₹ in crore	<b>24079</b>	23794	22819	18491	19084
	Cash & Bank Balances	₹ in crore	<b>6701</b>	6419	7503	11176	10492
	Inventory	₹ in crore	<b>7191</b>	8905	7797	6025	7372
	Deferred tax assets(Net)	₹ in crore	<b>3660</b>	2756	3497	3605	3841
	Other Current assets	₹ in crore	<b>2913</b>	2601	2784	2911	2954
	<b>Total Assets</b>	₹ in crore	<b>55701</b>	60236	64431	63764	61230
<b>VIII</b>	<b>Equity</b>						
	Equity share capital	₹ in crore	<b>696</b>	696	696	734	490
	Other equity	₹ in crore	<b>25788</b>	28485	30735	31905	31805
	<b>Total Equity</b>	₹ in crore	<b>26484</b>	29181	31432	32640	32294
<b>IX</b>	<b>Liabilities</b>						
	Borrowings	₹ in crore	<b>4834</b>	4933	2432	-	-
	Trade Payables	₹ in crore	<b>8559</b>	9900	12078	11066	9340
	Contract Liabilities	₹ in crore	<b>6864</b>	6718	6839	7573	8245
	Other Non current liabilities	₹ in crore	<b>295</b>	266	225	199	199
	Non current provisions	₹ in crore	<b>3913</b>	4212	5463	4923	5001
	Other Current liabilities	₹ in crore	<b>1589</b>	1943	3477	3574	1958
	Current provisions	₹ in crore	<b>3164</b>	3082	2486	3790	4192
	<b>Total liabilities</b>	₹ in crore	<b>29217</b>	31054	32999	31125	28936
<b>X</b>	<b>Total Equity &amp; Liabilities (VIII+IX)</b>	₹ in crore	<b>55701</b>	60236	64431	63764	61230
	Equity shares (Face Value of ₹ 2 each)	No. in crore	<b>348</b>	348	348	367	245
	Market Capitalisation as at year end	₹ in crore	<b>16975</b>	7243	26081	29885	39920
	Net worth	₹ in crore	<b>26484</b>	29181	31432	32640	32294
	Net worth (excl. OCI)	₹ in crore	<b>26879</b>	29596	31573	32662	32400
	Capital employed	₹ in crore	<b>22405</b>	26111	27699	28832	28285
<b>XI</b>	<b>Human Resources</b>	No.	<b>32131</b>	33752	35471	37540	39821
	Executives	No.	<b>9742</b>	10075	10400	10943	11525
	Non Executives	No.	<b>22389</b>	23677	25071	26597	28296

## Financial Performance Trend

Sl. No.	Particulars	Units	2020-21	2019-20	2018-19	2017-18	2016-17
<b>XII Financial Performance Ratios</b>							
1	Return on Net worth	%	(9.62)	(4.82)	3.76	2.48	1.54
2	Return on capital Employed	%	(14.45)	(0.59)	8.43	6.38	3.46
3	EBIDTA margin	%	(16.97)	1.70	9.55	9.43	6.59
4	Operating Profit margin	%	(23.01)	(5.79)	4.50	3.09	(0.48)
5	Revenue per employee	₹ in lakh	51	61	83	74	70
6	Revenue per rupee of employee benefit expenses	₹	3.03	3.78	5.35	4.71	4.36
<b>XIII Balance Sheet Ratios</b>							
1	Current ratio	Ratio	1.39	1.45	1.67	1.92	2.13
2	Cash Collection as % of Revenue (excl. Advances)	%	123	120	91	85	97
3	% liquidation of current year net billing	%	82	73	59	56	71
4	Trade receivable (no. of days)	Days	134	175	165	192	154
5	Inventory (no. of days)	Days	161	159	97	79	97
6	Assets Turnover	Times	0.29	0.34	0.46	0.44	0.45
<b>XIV Contribution to exchequer</b>							
		₹ in crore	2948	3999	5732	4682	3213
<b>XV Per Share data</b>							
1	Earning per share	(₹)	(7.80)	(4.23)	3.33	2.20	1.35
2	Net worth per share	(₹)	76.06	83.80	90.27	88.90	87.96
3	Market Price per share (BSE) as at year end	(₹)	48.75	20.80	74.90	81.40	163.10
4	Market Price to Book Value	Ratio	0.64	0.25	0.83	0.92	1.24
<b>XVI Segment Revenue</b>							
Power Segment		₹ in crore	11386	14960	23474	22881	22795
Industry Segment		₹ in crore	4910	5530	5949	4969	6046
<b>Total</b>		₹ in crore	16296	20491	29423	27850	28840
<b>Segment Share</b>							
Power Segment		%	70	73	80	82	79
Industry Segment		%	30	27	20	18	21

I Previous year's figures have been regrouped / rearranged, wherever considered necessary.

II Turnover and Revenue from operations excludes Goods & Services Tax.

III Dividend payout is interim dividend and proposed final dividend for the year.

IV Equity share capital at the end of FY 2018-19 is post buyback in January 2019.

V Bonus shares were issued in 2017-18 in the ratio of 1:2. Earning per share & Net worth per share for 2016-17 have been reinstated post bonus issue.

### Notes:

1 EBIT = PBT+Finance cost

2 EBITDA = EBIT+Depreciation & Amortisation

3 Capital employed=Net Worth-capital WIP & Intangible Assets under development -Deferred tax

4 Return on Net worth = (PAT/Average Net Worth excld. OCI)\*100

5 Return on capital Employed = EBIT/Capital Employed\*100

6 EBIDTA Margin % = EBIDTA/Revenue \*100

7 Operating Profit Margin = Operating profit/Revenue from operations\*100

8 Current ratio = Current Assets/Current liabilities

9 Cash Collection as % of Revenue = Cash Collection excl. Advances/ Revenue

10 Trade receivable (no. of days) = Trade receivable \*365/Revenue from operations (incl. GST)

11 Inventory (no. of days) = Inventory \*365/Revenue

12 Assets Turnover = Revenue/Total Assets

## Year-wise Capital Expenditure

(₹ in Crore)

Category of Investment	2020-21	2019-20	2018-19	2017-18	2016-17
Schemes	129	137	112	19	210
Modernisation and Rationalisation, Others	36	136	61	164	51
Customer Project Related Capital Investment	23	63	99	66	33
<b>Total</b>	<b>188</b>	<b>336</b>	<b>272</b>	<b>249</b>	<b>294</b>

## Value Added Statement

(₹ in Crore)

Particulars	2020-21	2019-20
Revenue (incl GST)	18688	23328
Other revenues	1383	1549
Less:		
Cost of Material, Erection & Engineering Expenses	11871	14038
Power & fuel	319	459
Other operational expenses	2882	1769
<b>Total Value Added</b>	<b>4999</b>	<b>8612</b>
<b>Distribution:</b>		
To employees:		
Employee benefits expenses	5372	5427
To Provider of capital		
Finance Cost	373	507
Dividend	-	418
To Government:		
Goods & Services Tax	2392	2837
Income Tax	16	2
Dividend distribution Tax	-	86
Retained in business:		
Depreciation & Amortisation	473	503
Deferred Income Tax (Assets) / Liabilities	(910)	809
Transfer to Other Equity - (Loss) / Profit	(2717)	(1977)
<b>Total</b>	<b>4999</b>	<b>8612</b>

## BHEL's Product Profile

### THERMAL POWER PLANTS

- Capability for manufacture and supply of Steam Generators, Steam Turbines, Turbo Generators with auxiliary systems along with regenerative feed cycle upto 1000 MW capacities for fossil-fuel and upto 350 MW for combined-cycle applications
- Air and water cooled Condensers, Condensate Extraction Pumps, Boiler Feed Pumps, Duplex Heaters, Valves and Heat Exchangers meeting above requirement of TG Sets upto 1000 MW
- Energy Efficient Renovation and Modernisation (EE R&M) and Life Extension (LE) of old thermal power plants and Residual Life Assessment (RLA) studies

### NUCLEAR POWER PLANTS

- Reactor side components like Steam generators, Reactor headers, End shields, special purpose Heat Exchangers, Pressure Vessels, Motors etc. for Nuclear Power plants.
- TG island equipment of PHWRs (Pressurised Heavy Water Reactors), FBRs (Fast Breeder Reactors) and AHWRs (Advanced Heavy Water Reactors) covering Steam Turbine, Turbo Generators, MSRs (Moisture Separator Reheaters), other heat exchangers and pumps including 'EPC' solutions.

### GAS-BASED POWER PLANTS

- Gas turbines and matching generators ranging from 26 MW to 299 MW (ISO) rating with following features:
  - Gas turbine based co-generation and combined-cycle systems for industry and utility applications
  - Capability to burn a variety of fuels (both gaseous and liquids) along with mixed firing in different combinations of fuels
  - Low exhaust emission levels upto 15ppm of NO<sub>x</sub> with Dry Low NO<sub>x</sub> (DLN) combustors & noise requirement.

### HYDRO POWER PLANTS

- Turnkey Contract with custom-built conventional hydro turbines of Kaplan, Francis and Pelton types with matching generators upto 300 MW
- Pump turbines with matching motor-generators upto 250 MW
- Bulb turbine with matching generators upto 10 MW
- High capacity pumps along with matching motors for Lift Irrigation Schemes (upto 150 MW)
- Mini/Micro and small hydro power plants upto 25 MW unit rating
- Microprocessor based Digital Governing system for all types of Hydro Power plants
- Renovation, Modernization and uprating of Hydro power plants
- Spherical (rotary) valves, butterfly valves and auxiliaries for hydro stations
- Balance of Plant & System Integration

### SOLAR POWER SYSTEM

- EPC solutions of Solar PV Power Plants:
  - Grid Interactive systems with & without BESS (Battery Energy Storage System)
  - Standalone systems
  - Roof Top systems
  - Hybrid systems
  - Canal Top Systems
  - Floating Solar power plants
  - Solar PV System feeding to Railway Traction power network
- Solar based water pumping systems

### DG POWER PLANTS

- HSD, LDO, FO, LSHS, natural gas based diesel generator power plants, unit rating of upto 20 MW and voltage upto 11 kV, for emergency, peaking as well as base load operations on turnkey basis.

### DESALINATION AND WATER TREATMENT PLANTS

- Complete Water Management Solutions for Power Plants, Industrial applications and Municipal applications with different treatment technologies:
  - Pre Treatment Plants (PT)
  - Desalination Plants
  - Demineralization Plants (DM)
  - Electro Deionization plants
  - Effluent Treatment Plants (ETP)
  - Sewage Treatment Plants (STP)
  - Zero Liquid Discharge (ZLD) System
  - Cooling water treatment plants
  - Tertiary Treatment Plants
  - Membrane Based Treatment Systems like Ultrafiltration for Pre-treatment (UF), Reverse Osmosis (RO) & Electro Deionisation (EDI).
  - Electro-dialysis plants for Drinking water.

### SYSTEMS AND SERVICES

- Power Generation Systems
  - Turnkey power stations/ EPC contracts
  - Combined-cycle power plants
  - Cogeneration systems
  - Captive power plants
  - Modernization and renovation of power stations and RLA studies.
  - Software packages including simulators for utilities
  - Erection, commissioning, support services, spares management and consultancy services for all the above systems
- Railway Track Electrification

## INDUSTRIAL SYSTEMS

- Coal Handling Plant and Ash Handling Plant including Civil & Structural, Mechanical, Electrical works and Automation systems
- Mine Winder systems
- Electrics, Drives, Controls & Automation Systems for Processing & Compacting of Raw Materials, Iron Making, Primary & Secondary Steel Making, Casters & steel Finishing like Mills & process Lines for both long products & flat products
- Raw Material Handling System including Civil & Structural, Mechanical, Electrical and Automation systems for Steel and other industries
- Electrics & Automation Systems for High Current Rectifiers of Smelters and Processing Mills for Aluminium Plants
- Automated Storage & Retrieval Systems (ASRS)

## BOILERS

- Steam generators for utilities, ranging from 30 to 800 MW capacity, using coal, lignite, oil, natural gas or a combination of these fuels; capability to manufacture boilers with supercritical parameters upto 1000 MW unit size
- Fuel Flexible boilers capable of all combination of blending / co-firing diverse qualities of imported/ indigenised coals, blending of lignite, petcoke, etc
- Steam Generators for Nuclear Power Plant
- Steam generators for industrial applications of the following types ranging from 40 to 450 T/Hour capacity, using coal, natural gas, industrial gases, biomass, lignite, oil, Bagasse or a combination thereof
  - Pulverized coal / lignite fired boilers
  - Stoker fired boilers
  - Bubbling fluidized bed combustion (BFBC)boilers
  - Circulating fluidized bed combustion (CFBC)boilers
  - Heat-recovery steam generators (HRSG)
  - Chemical recovery boilers for paper industry, ranging from capacity of 100 to 1000 T/Day of dry solids
- Gravimetric feeder/ Volumetric feeder
- Acoustic Tube leak Detection systems

## BOILER AUXILIARIES

- **Fans**
  - Axial reaction fans of single stage and double stage for clean air application and dust laden hot gases applications upto 200°C, with capacity ranging from 40 to 1300m<sup>3</sup>/s and pressure ranging from 225 to 1,500 mmwc
  - Axial impulse fans for both clean air and flue gas applications upto 200°C, with capacity ranging from 25 to 300 m<sup>3</sup>/s and pressure from 300 to 700 mmwc
  - Single and double-suction radial fans (plate aerofoil bladed) for clean air and dust-laden hot gases applications upto 400°C, with capacity ranging from 4 to 660m<sup>3</sup>/s and pressure ranging from 200 to 3000 mmwc

- **Air Preheaters**
  - Tubular Air Preheaters for industrial, utility boilers and CFBC boilers
  - Rotary regenerative Air-Preheaters (different types like Bisector, Tri Sector and Quad Sector) for utilities of capacity upto 1000 MW
  - Air PreHeater for boilers with Selective Catalytic Reduction (SCR) for De-NOx application
- **Pulverizers**
  - Bowl mills of slow and medium speed (for both pressurized & suction environment) for coal fired thermal stations with capacity from 10 T /Hr to 120 T/ Hr suitable upto 1000 MW thermal power stations.
  - Ball Tube mills for pulverizing low-grade coal with high ash content from 30 T/ Hr to 110 T/ Hr catering to 110 MW to 500 MW thermal power stations
  - Bowl Mills for Blast Furnace Application with capacity from 15 T /Hr to 120 T/ Hr.
  - Bowl Mills for grinding of Pond Ash, Steel Plant Blast Furnace Slag & Clinker
  - Wet Ball Milling System for grinding of Lime stone for FGD Application with Day Silo and its structure.
- **Electrostatic Precipitators (ESP)**
  - Electrostatic precipitators with outlet emission as low as 17 mg/Nm<sup>3</sup> (efficiency upto 99.97%) for coal fired utility, captive and industrial applications including Bio mass fired boilers, cement plants, steel plants, soda recovery boilers etc
  - Bag Filters for utility and industrial applications
  - Mechanical Dust Collector for SCR application
  - Ammonia Flue Gas Conditioning System
- **Guillotine Gates & Dampers**
  - Guillotine gates with electric/ pneumatic actuator. 100% leak proof with seal air width: 7 m & duct height: 14.5 meters
  - Bi-plane dampers with electric/ pneumatic actuator. 100% leak proof with seal air Type -1: width: 7 m & duct height: 14.5, Type -2 : width 12 m & duct height 10.5 m
  - Louver dampers (open close/ regulating) with electric/ pneumatic actuator: Type -1: width: 7 m & duct height: 14.5, Type -2 : width 12 m & duct height 10.5 m
  - Control dampers (regulating) with electric/ pneumatic actuator Type -1: width: 7 m & duct height: 14.5, Type -2: width 12 m & duct height 10.5 m
- **Flue Gas Desulphurization (FGD) systems**
  - Wet Limestone & Seawater based FGD systems to Power plants and any other Industrial applications
- **Steel Chimneys**
  - Steel Chimneys for Heat Recovery Steam Generators (HRSG), Industrial Boilers, auxiliary boilers and other flue gas exhaust applications
- **Selective Catalytic Reduction (SCR) systems**



- SCR System (Honeycomb & Plate type) with anhydrous Ammonia/ Aqueous Ammonia/ Urea reagent for NOx emission control
- Selective Non-Catalytic Reduction (SNCR) systems
  - Selective Non- Catalytic Reduction (SNCR) systems with Urea & Ammonia handling systems

## SOOT BLOWERS

- Long retractable soot blowers (LRSB) for travel upto 12.2m
- Furnace temperature probe (FTP) for travel length 10 m
- Long retractable Non-rotating (LRNR) soot blowers with forward blowing for Air heaters
- Ash discharge valve for CFBC boiler application
- Soot blowers with sequential PLC, control panel and integral starter
  - Rack type Long retractable soot blowers
  - Rotary soot blowers
- Wall blowers

## VALVES

- High and Low-pressure Turbines Bypass Valves & hydraulic system for utilities and industrial application
- High and medium-pressure Valves, Cast and Forged Steel Valves of Gate, Globe, Non-Return (Swing-Check and Piston Lift-Check) types for steam, oil and gas duties upto 950 mm diameter, maximum pressure class 4500 (791 kg/cm<sup>2</sup>) and 650°C temperature
- Hot reheat and cold reheat Isolating Devices upto 900 mm pipe size class 1500 and steam temp upto 650°C
- High capacity Spring Loaded Safety Valves for set pressure upto 372 kg/cm<sup>2</sup> and temperature upto 630°C,
- Automatic electrically operated pressure relief valves for set pressure upto 210 kg/cm<sup>2</sup> and temperature upto 593°C
- Safety relief valves for applications in power, process and other industries for set pressure upto 421 kg/cm<sup>2</sup> and temperature upto 537°C
- Reactive cum absorptive type vent Silencers maximum diameter of 2700 mm.
- Direct Water Level Gauges
- Angle Drain Valves - Single & Multi Stage for Turbine Drain Application
- Severe Service Control Valves for RH & SH Spray Lines
- Quick Closing Non return Valves for Extraction lines and Cold Reheat Non Return valves, upto 800 mm diameter, 158 kg/cm<sup>2</sup> pressure and 540°C temperature
- Butterfly valves upto 2800 NB for water application

## PIPING SYSTEMS

- Power cycle piping, Constant load Hangers, Variable spring Hangers, Hanger components, Low Pressure piping including circulating water piping for power stations upto 1000 MW capacity including Super Critical sets

- Piping systems for Nuclear Power Stations, Combined Cycle Power Plants & Industrial boilers and process industries
- Prefabricated piping/ duck spools to cater to refinery segment complying with National Association of Corrosion Engineers (NACE) requirements

## SEAMLESS STEEL TUBES

- Hot-finished and cold-drawn seamless steel tubes with a range varying from outer diameter of 21 to 133 mm and wall thickness of 2 to 12.5 mm, in carbon steel and low-alloy steels to suit ASTM/ASME and other international specifications.
- Rifled tubes (ribbed) with a range varying from tube outer diameter of 38.1 to 63.5 mm and wall thickness of 5.6mm to 7.1mm, in carbon steel and low-alloy steels to suit ASME and other international specifications.
- Spiral finned Tubes with a range varying from tube outer diameter of 31.8 to 114.3 mm and wall thickness of 2.4mm to 9.5mm and with fin height of 12.5mm to 21mm and fin density ranges from 40 to 240 fins per metre, in carbon steel and alloy steels to suit ASME standards.

## STEAM TURBINES

- Steam Turbines upto 1000 MW rating for thermal sets and upto 700 MW ratings for Nuclear Power Plants.

## TURBOGENERATORS

- Turbogenerators of higher rating upto 1000 MW for Thermal and Nuclear Power Plants and upto 195 MW for Combined Cycle plant.

## INDUSTRIAL SETS

- Steam Turbine based Captive Power Plants
  - STGSTG/Boilers/BTG/EPC: Unit rating upto 200 MW
  - Non Reheat upto 120 MW unit rating
  - Reheat upto 200 MW unit rating
  - Single Stage Drive Turbines for Pump and other Industrial Drives
  - Marine Turbines for marine propulsion upto 36MW.
- Gas Turbine based Captive Power Plants GTG/HRSG/EPC: Fr-5 (26 MW) to Fr-9E (126 MW)

## CASTINGS AND FORGINGS

- Heavy castings and forgings of creep resistant alloy steels, stainless steel and other grades of alloy steels meeting stringent international specifications for components of sub critical, supercritical and Ultra-super critical technology.

## CONDENSER AND HEAT EXCHANGERS

- Surface Condenser:
  - For thermal power plants upto 800 MW
  - For Nuclear power plants
  - 12.5 MW Marine applications
  - Industrial Condensers



- Condensers for defence application
- Feed Water Heaters (HP Heaters, LP Heaters, Drain Coolers, Duplex Heater, De-Super Heaters, etc.)
  - Thermal : 7 to 500 MW (sub-critical) & 300-800 MW (super critical with single stream)
  - Moisture Separator & Reheater (MSR) and other Feed Water Heaters for Nuclear Power Plants (236 MW, 500 MW & 700 MW Nuclear sets).
  - Replacement feed water heaters for Non BHEL sets
- Live Steam Reheater (LSR):
  - 500 MW Fast Breeder Reactor (FBR) Nuclear sets
- Auxiliary Heat Exchangers for Turbo and Hydro Generators :
  - Air Coolers (Frame & Tube Type)
  - Oil Coolers (Shell & Tube Type and Plug in Type)
  - Hydrogen Coolers (Frame & Tube Type)
- Auxiliary Heat Exchangers for Transformers :
  - Oil Coolers (Shell & Tube Type Single Tube or Concentric Double Tube Type) (Frame & Tube Type)
- Auxiliary Heat Exchangers for general application
  - Water - Water Coolers (Shell & Tube Type)
- Gland steam condensers
  - Industrial applications upto 7 MW to 150 MW
  - Thermal Plants upto 500 MW
  - Nuclear Plants upto 700 MW
- Air-cooled heat exchangers for GTG upto Fr-9E, and Compressor applications of all ratings
- Steam jet air ejectors for condensers upto 150 MW
- Deaerators from 7 MW to 800 MW
- Gas coolers for compressor applications
- Oil coolers- STG upto 150 MW, GTG upto Fr-9E
- Generator Air coolers upto 150 MW STG and GTG upto 9 FA
- D2O and Moderator Heat Exchangers for Nuclear primary cycle
- Air cooled Lube oil cooler for refinery application
- Heat exchangers for downstream Oil and Gas application.

## PUMPS

- Pumps for various utility power plant applications upto a capacity of 1000 MW:
  - Boiler feed pumps (motor or steam turbine driven) and Boiler feed booster pumps.
  - Condensate extraction pumps including Drip Pumps
  - Circulating water pumps (also known as Cooling water Pumps)
  - Concrete Volute Cooling Water Pumps
  - Pumps for Secondary Side of Nuclear Power Plants

## COMPRESSORS

- Multi stage Centrifugal compressors along with Drives (Steam Turbine, Electric Motor and Gas Turbine) and auxiliary system with capacity upto 300000 m<sup>3</sup>/hr for various gases (Air, CO<sub>2</sub>, N<sub>2</sub>, H<sub>2</sub>, NH<sub>3</sub>, Natural Gas, Wet Gas, Propylene etc.) for applications in Refineries, Fertilizers, Petrochemicals, Oil & Gas, Steel, Power

& Natural Gas Transportation sectors and oxidation blowers for FGD applications in power plants.

- Horizontally split type upto 40 bar design pressure
- Vertically split type upto 350 bar design pressure

## SOLAR PHOTOVOLTAICS

- Mono/ Multi Crystalline Solar cells
- Mono/ Multi Crystalline PV Modules (upto 330 Wp)
- Power Conditioning Unit (upto 1.25 MW)
- Single phase Power Conditioning Unit for Traction Grid application (0.85 MW)
- Outdoor, Dry type 1 MVA/25kV Single Phase Inverter Transformer
- Power Transformers (15 MVA and above)
- Passive Solar Tracking System
- Space grade solar panels

## AUTOMATION AND CONTROL SYSTEMS

- Automation and Control Systems for
  - Steam Generator/ Boiler Controls including Boiler Protection
  - Steam Turbine Controls
  - Boiler Feed Pump (BFP) Drive Turbine Control
  - Station Control and Instrumentation/ DCS
  - Offsite/Off base controls/ Balance of Plant Controls
    - Ash Handling Plant (AHP)
    - Coal Handling Plant(CHP)
    - Water System for power plant
    - Mill Reject System (MRS)
    - Condensate On-Load Tube Cleaning system (COLTCS)
    - Gas Booster Compressor (GBC)
    - Condensate Polishing Unit (CPU)
    - Heating, Ventilation & Air conditioning (HVAC)
    - Fuel Oil Unloading System (FOUS)
  - Hydro Power Plant Control System
  - Gas Turbine Control System
  - Nuclear Power Plant Primary Cycle Control Centre Instrumentation Package (CCIP)
  - Nuclear Power Plant Turbine & Secondary Cycle control system
  - Power block of solar thermal power plant
  - Industrial Automation
  - Sub-Station Automation (SAS)
  - Non-FST HVDC control panels
  - Electrical Control System (ECS) for Refineries
  - Energy Management System (EMS) for Power Plant
  - Electrical Interface System for MV/LV Switchgear

## TRANSMISSION SYSTEMS CONTROL

- EHV & UHV Sub-stations/switchyards both AIS & GIS type ranging from 33kV to 765kV.
- HVDC transmission systems.
- Flexible AC Transmission system (FACTS) solutions

- Fixed Series Compensation(FSC)
- Static VAR Compensation (SVC)
- STATCOM
- Controlled Shunt Reactor (CSR)
- Phase Shifting Transformer (PST)
- Converter Valves and controls for HVDC & FACTS.

## SOFTWARE SYSTEM SOLUTION

- Merit Order Rating
- Performance Analysis, Diagnostics & Optimization (PADO) for Thermal Utilities
- Performance Calculation & Optimization system and Real Time Performance Data Monitoring system
- OPC connectivity from DCS to third party systems
- Enterprise Asset Management System (EAMS)
- Operator Training Simulator

## SWITCHGEAR

Medium Voltage Vacuum Switchgear for indoor and outdoor applications for voltage ratings upto 36 kV and Gas insulated switchgears upto 420kV.

- Indoor switchgears
  - Upto 12 kV, 50 kA, 4000 Amp for thermal, nuclear, hydro and combined cycle Power Plant Projects
  - Upto 36 kV, 31.5 kA, 2500 Amp for Industries, solar power plants and refineries
  - Compact switchgear 12 kV, 25 kA, 2000 Amp for distribution system
- Outdoor Vacuum circuit breakers
  - 12 kV, 25 kA, 1250 Amp for distribution segment
  - 36 kV, 25 kA, 1600 Amp for transmission and distribution segment
  - Upto 25 kV, 20 kA, 2000Amp for track side railway application
  - 36 kV, 31.5 kA, 2500 Amp Outdoor Metalclad switchgear for Solar Power Plants
- Gas insulated switchgears
  - 36 kV, 40kA, 2000 Amp for Refineries, Urban Sector
  - 145 kV, 31.5 kA, 2500 Amp for transmission & distribution network
  - 420 kV, 40kA, 3150 Amp for transmission sector (hydro station / EHV SS).

## ON LOAD TAP CHANGERS (OLTC)

- On Load Tap Changer upto 765 kV class Transformer & Off Circuit Tap Switch upto 765 kV class Transformer for various application like Power Transformer, Furnace Transformer, Station Transformer, Rectifier Transformer etc.

## LT SWITCHGEAR & BUS DUCTS

- Bus-ducts with associated equipment to suit generator power output of utilities of upto 800 MW capacity.
- 415 V LT Switchgear for Thermal Power Plant, Hydro, Nuclear, CPP & Steel industry.

## TRANSFORMERS & REACTORS

- Power transformers for voltage upto 1200 kV
  - Generator transformers (upto 600 MVA, 420 kV, 3 Ph / 400 MVA, 765 kV, 1 Ph/500 MVA, 420 kV, 1 Ph)
  - Auto transformers (upto 1000 MVA, 400 kV, 3 Ph / 600 MVA, 400 kV, 1 Ph / 500 MVA, 765 kV, 1 Ph / 1000 MVA, 1200 kV, 1 Ph)
- Converter Transformers / Smoothing Reactors (upto 600 MVA,  $\pm 800$  kV) / (upto 254 MVA,  $\pm 500$  kV) for HVDC transmission.
- Shunt Reactors (upto 150 MVA, 420 kV, 3 Ph / 110 MVA, 765 kV, 1 Ph)
- Controlled Shunt Reactors (upto 200 MVA, 420 kV, 3 Ph/ 200 MVA, 420 kV, 1 Ph / 200 MVA, 765 kV, 1 Ph) for Flexible AC Transmission system applications.
- Phase Shifting Transformers (upto 500 MVA, 400 kV, 3 Ph/ Upto 500 MVA 400 kV 1 Ph) for transmission lines
- Instrument transformers
  - Current transformers upto 400 kV
  - Electro-magnetic voltage transformers upto 220 kV
  - Capacitor voltage transformers ( 33kV to 1200 kV)
  - 24kV PR class Current Transformer for HVDC Projects
- Special Transformers
  - Rectifier transformer (upto 120 kA, 132 kV)
  - Furnace transformer (upto 33 kV, 60 MVA)
- ESP transformers upto 95 kv, 1600 mA
- Smoothing reactors upto 3.3 mH , 2700 Amp.
- Dry Type reactor upto 300 mH , 120 Amp.
- DC Choke upto 0.5 mH , 4600 Amp.
- Dry type transformers upto 15 MVA 33 kV.
- Composite Monitoring System for Power Transformers & Reactors

## CAPACITORS

- H.T. Capacitors
  - Motors Capacitors for Power factor correction (3.3 to 11 kV delta connected Capacitor banks)
  - Shunt, Series & SVC (Static VAR compensation), Harmonic filter & HVDC applications (3.3 kV to 500 kV, 1 Ph/ 3 Ph capacitor banks)
- Capacitor Divider for CVT
- Coupling Capacitor (33 kV to 800 kV, 4400 pF to 13200 pF) for transmission lines
- Surge Capacitor for protection of Generators & Transformers (11kV to 40 kV)
- Roof Capacitor for traction locomotive
  - Capacitor Divider for CVT upto 1200 kV
  - Coupling Capacitor for PLCC upto 400kV
  - Fuse-less capacitor

## BUSHINGS

- Oil Impregnated Paper (OIP) condenser bushings 52 to 525 kV for transformer applications

- 25 kV Locomotive bushings

## CONTROL GEAR

- Electronic controllers for ESPs in industries/ power plants
- Digital Static Excitation control system (2000 A, 400 V DC with redundant thyristor stacks & DC field breaker)
- Large current rectifiers with PLC Based digital controls
- Control & Protection Panels (upto 400 kV) For EHV Transmission projects
- SCAP, Thyristor, RAPCON and STATCON Panels.

## INSULATORS

- Porcelain Insulators
  - High-tension Porcelain Disc insulators for AC/DC applications, ranging from 70kN to 420 kN electro-mechanical strength, for clean and polluted atmospheres, Suitable for application upto 1200kV AC &  $\pm$ 800kV HVDC transmission line & Sub-stations.
  - Hollow insulators upto 765 kV for Transformers & SF<sub>6</sub> circuit breakers.
  - Solid core insulators upto 400 kV for Bus Post & Isolators for substation applications.
- Composite Long Rod Insulators
  - Upto  $\pm$ 800kV, 420kN for HVDC application
  - Upto 765kV, 210kN for HVAC application.
  - Traction Insulators Stayarm, Bracket & 9 Tonne Insulators for Indian railways.
- Ceramic Lining (CERALIN) wear resistant material for Thermal Power Plant & Ash Slurry Application.
- Industrial and Special Ceramics
  - EWLI –Electronic Water Level Indicators used in Boiler Drum Water Level Monitoring (BHELVISION system)
  - Ceramic and Tungsten Carbide Flow Beans for Christmas tree valves.
  - Grinding Media for Pulverizing in Thermal Power Plant.

## ELECTRICAL MACHINES

- AC Machines for Safe Area Application
  - Squirrel cage induction motors - 150 kW to 22000 kW
  - Slip ring induction motors - 150 kW to 10000 kW
  - Synchronous motors- 1000 kW to 25000 kW
  - Variable speed Motors- 150 kW to 22000 kW (Squirrel cage motors)
  - Variable speed Motors- 1000 kW to 25000 kW (Synchronous motors)
- AC Machines for Hazardous Area Application (Fixed speed or with VFD)
  - Flame-proof squirrel cage Induction motors (Ex 'd') (150 kW to 1500 kW)
  - Non-sparking squirrel cage Induction motors (Ex 'n') (150 kW to 4000 kW (higher ratings on request))

- Increased safety squirrel cage Induction motors (Ex 'e') (150 kW to 4000 kW (higher ratings on request))
- Pressurized Squirrel cage induction motors (Ex 'p') (150 kW to 22000 kW)
- Pressurized Synchronous motors (Ex 'p') (1000 kW to 25000 kW)
- Industrial Alternators (Steam turbine, Gas turbine and Diesel engine driven) (3000 kVA to 25000 kVA)
- Vertical Motors for Primary Coolant Pumps for nuclear power plants
- Induction Generators (300 kVA to 6000 kVA) for mini/ micro hydro plant.
- 2 Pole Air cooled Steam/ Gas Turbine driven Generators (3 MW to 160 MW)
- 4 Pole Air cooled Steam/ Gas Turbine driven Generators (3 MW to 40 MW)
- 2 Pole Hydrogen cooled Steam/ Gas Turbine driven Generators from 36 MW to 270 MW
- Permanent Magnet Based Generators upto 5 MW.
- Gas Turbine generators upto 270 MW.
- Alternators for industrial applications with single bearing upto 2 MW.

## RAIL TRANSPORTATION

### Transportation Systems

- AC electric locomotives (upto 6000 HP, 25 kV AC)
- AC-DC dual voltage electric locomotives
- ACEMU Coaches
- Metro Coaches
- Traction Propulsion Systems for:
  - 9000 HP IGBT based AC Locomotives
  - 6000 HP IGBT based AC Locomotives
  - IGBT based Composite Propulsion Systems for 6000-HP Locomotives
  - 3-phase IGBT based AC Electrical Multiple Units (EMUs)
  - Air-conditioned ACEMU
  - ACEMU electrics for DC drives
  - 1600HP IGBT based DEMU
  - 3-phase IGBT based MEMU
  - 1600HP Multi-Genset Locomotive
- Regeneration system for DC Propulsion system of WAG7 Locomotive
- Diesel Electric Tower Car
- Diesel-Electric Shunting Locomotives (upto 1400 HP)
- Battery powered Locomotive
- OHE recording-cum-test car
- Battery Powered Road Vehicles
- Dynamic track stabilizers
- Rail cum Road vehicle

## TRANSPORTATION EQUIPMENT

- Traction Converter & Auxiliary Converter
- Vehicle Control Electronics
- Hotel Load Converter
- Composite Converter comprising Traction Converter and Hotel Load Converter
- Traction Transformer
  - Upto 5400 kVA for conventional locomotives
  - Upto 7775 KVA for 3 phase drive locomotives.
  - Upto 1050 KVA conventional AC EMU/ MEMUs
  - Upto 1578 kVA for 3 phase EMU
- 3- phase AC Traction Motors (upto 1200 kW) for Locomotives & EMUs
- DC Traction Motors (upto 630 kW) for Locomotives & EMUs
- AC Traction Alternators (upto 3860 kW) for Locomotives & EMUs
- DC Traction Generators upto 2000 kW
- DC Blower motors (upto 50kW) for dynamic braking system
- Motor Generator sets (upto 25 kW) for auxiliary requirements
- Traction gears and pinions for Locomotives & EMUs
- Wagon (upto 28 axle, 296 Tonne)

## DEFENCE AND AEROSPACE

- Super Rapid Gun Mount (SRGM) 76/62 gun for naval ships
- Integrated Platform Management system (IPMS) for naval ships
- Integrated Bridge System (IBS)
- Static Main Motor Generator (SMMG)
- Rotary Main Motor Generator with Controls (RMMG)
- Training Simulator for Vehicles, platforms, radars, weapons, missiles and Computer Based Training (CBT) for all defence and para-military forces
- Turret Casting for T-72 Tanks
- Casting and Forgings for ships
- Compact Heat Exchangers for various aircraft platforms
- Permanent Magnet Frequency converters with drive unit
- Reserve Propulsion motor with drive unit
- Compact Brushless Alternators
- Fuel Tanks and other components for Launch Vehicles and Satellites.
- Space grade Batteries for launch vehicles and Satellites
- Space grade Solar panels

## ENERGY STORAGE SYSTEM & E- MOBILITY

- Electric Bus
- Powertrains for Electric Vehicles including motors
- Charging Infrastructure for Electric Vehicles
- Battery Energy Storage System including Power conditioning unit (PCU) and SCADA

## OIL FIELD EQUIPMENT

- Oil Rigs – On-shore drilling rigs with AC-VFD and AC-SCR

technology for drilling upto depths of 9,000 metres, work-over rigs for servicing upto depths of 6,100 metres, mobile rigs for drilling upto depths of 3,000 metres, complete with matching draw-works and hoisting equipment including:

- Mast and substructure
- Rotating equipment : Draw works ; Rotary ; Swivels; Travelling Blocks
- Independent Rotary drive unit
- Mud storage and handling Systems, Mud agitators
- Triplex Mud pumps
- Air Utility Systems (Utility House), Water system and Fuel systems
- Dead line anchors
- Vacuum Degassers, Mud gas separators
- Refurbishment and up gradation of BHEL and Non BHEL make Oil Rigs
- 3-phase Oil rig motor upto 1150 HP
- DC Oil rig motors upto 1000 HP (Draw works, mud pump, drilling)
- Oil rig alternators upto 1750 KVa
- AC/ DC Power Control Room for E760, E1400, E2000 & E3000 Rig
- AC Acoustic Power Pack upto 1430 kVA Rating as per applicable CPCB Norms
  - AC Control Module
  - DC Control Module
- Driller's Console upto 3 mud pumps, IRD & draw work control & monitoring, load rating (0-1800 A, 0-1000V)
- Mobile lightning Tower, Rig Lightning Tower
- AC- VFD Controls for AC Rigs
- STATCOM for power Factor improvement in AC SCR Rigs
- Well heads and X-mas Trees upto 10,000 psi, Mud Line Suspension, Choke and Kill manifold, CBM Wellheads, DSPM H- Manifold Assembly, Mud valves.

## FABRICATED EQUIPMENT AND MECHANICAL PACKAGES

- Cryogenic Air Separation Units
- Cryogenic storage tanks, Mounded storage systems and storage spheres
- Pressure Vessels, Columns, Reactors/Separators, Heat Exchangers
- Fired Heaters
- Purge Gas Recovery Unit

## Glossary

ACS	Auxiliary Control System	KPCL	Karnataka Power Corporation Limited
APGENCO	Andhra Pradesh Power Generation Corporation	LCA	Light Combat Aircraft
ARAI	Automotive Research Association of India	LIS	Lift Irrigation Scheme
AUSC	Advanced Ultra Super Critical	LP Turbine	Low Pressure Turbine
BPCL	Bharat Petroleum Corporation Limited	LSTK	Lump sum turnkey
BRBCL	Bhartiya Rail Bijlee Company Ltd	M&A	Merger & Acquisitions
BSE	Bombay Stock Exchange	MEIL	Megha Engineering & Infrastructures Limited
BTG	Boiler Turbine Generator	MEMU	Mainline Electric Multiple Unit
C&I	Control & Instrumentation	MHI&PE	Ministry of Heavy Industries & Public Enterprises
CEA	Central Electricity Authority	MoU	Memorandum of Understanding
CPP	Captive Power Plant	MUs	Manufacturing Units
CFBC	Circulating Fluidised Bed Combustion	MSME	Micro, Small and Medium Enterprises
CLW	Chittaranjan Locomotive Works	MSR	Molten Salt Reactor
CMIE	Centre for Monitoring Indian Economy	NIT	National Institute of Technology
CPSE	Central Public Sector Enterprise	NPCIL	Nuclear Power Corporation of India Limited
CSIR	Council of Scientific & Industrial Research	NPGCL	Nabinagar Power Generating Company Private Limited
CSPGCL	Chhattisgarh State Power Generation Company	NSE	National Stock Exchange
CSR	Corporate Social Responsibility	OEM	Original Equipment Manufacturer
CVC	Central Vigilance Commission	ONGC	Oil and Natural Gas Corporation Limited
DEMU	Diesel Electric Multiple Unit	PCU	Power Conditioning Unit
DETC	Diesel Electric Tower Car	PCP	Power Cycle Piping
DHI	Department of Heavy Industries	PGCIL	Power Grid Corporation of India Limited
DLW	Diesel Locomotive Works	PLM	Product Lifecycle Management
DMW	Diesel-Loco Modernisation Works	PPGCL	Prayagraj Power Generation Co. Ltd
DPE	Department of Public Enterprises	PSEs	Public Sector Enterprises
DSIR	Department of Scientific and Industrial Research	R&D	Research & Development
ED	Executive Director	R&M	Renovation & Modernisation
EHV	Extra High Voltage	RDSO	Research Designs & Standards Organisation
EMU	Electric Multiple Unit	RPCL	Raichur Power Company Limited
EPC	Engineering, Procurement & Construction	SCADA	Supervisory Control and Data Acquisition
ESP	Electrostatic Precipitator	SCCL	Singareni Collieries Company Limited
EV	Electric Vehicle	SCOPE	Standing Conference of Public Enterprises
FACTS	Flexible Alternating Current Transmission System	SCR	Selective Catalytic Reduction
FGD	Flue Gas Desulphurization	SD	Sustainable Development
GIS	Gas Insulated Substation	SEBI	Securities and Exchange Board of India
GTG	Gas Turbine Generator	SG	Steam Generator
GTO	Gate turn-off Thyristor	SOP	Standard Operating Procedure
GSECL	Gujarat State Electricity Corporation Limited	SPV	Solar Photo Voltaic
GST	Goods & Services Tax	SRGM	Super Rapid Gun Mount
HEP	Hydro Electric Plant	STG	Steam Turbine Generator
HP Turbine	High Pressure Turbine	STPP	Super Thermal Power Plant
HRSR	Heat Recovery Steam Generator	TANGEDCO	Tamil Nadu Generation and Distribution Corporation
HVDC	High Voltage Direct Current	TCMS	Train Control & Management system
ICAI	The Institute of Chartered Accountants of India	TETV	Totally Enclosed Tube Ventilated
ICF	Integral Coach Factory	TEFC	Totally Enclosed Fan Cooled
IGBT	Insulated-Gate Bipolar Transistor	TG	Turbine & Generator
IGCAR	Indira Gandhi Centre for Atomic Research	TPS	Thermal Power Station
IIT	Indian Institute of Technology	UB	Utility Boiler
IOCL	Indian Oil Corporation Ltd	UHV	Ultra High Voltage
IPMS	Integrated Platform Management system	UHVAC	Ultra High Voltage AC
IPR	Intellectual Property Right	UPRVUNL	Uttar Pradesh Rajya Vidyut Utpadan Nigam
IR	Indian Railway	VC	Video Conference
ISMS	Information Security Management System	VCU	Vehicle Control Unit
ISO	International Organization for Standardization	VFD	Variable Frequency Drive
ISRO	Indian Space Research Organisation	WAG	W (broad gauge), A (AC traction), G (goods duty)
KBUNL	Kanti Bijlee Utpadan Nigam Limited	WBPDCL	West Bengal Power Development Corporation Limited



## Glossary (Financial Terms)

**Accounting policies:** Accounting policies are the specific accounting principles and the method of applying those principles adopted by the company in preparation and presentation of the financial statements.

**Accrual:** Financial statement is prepared on mercantile system. The effects of transaction and other events are recognised when they occur and they are recorded in the accounting records and reported in the financial statement of that period to which they relate.

**Amortization:** Amortisation is the systematic allocation of the depreciable amount of an intangible asset over its useful life.

**Balance sheet:** A balance sheet is a statement of the financial position of an entity which states the assets, liabilities, and owners' equity at a particular point of time

**Bonus shares:** Bonus shares are additional shares given to the shareholders without any additional cost out of free reserves, based upon the number of shares that a shareholder owns.

**Book value:** The amount at which an item appears in the books of account or in financial statements.

**Buy back of shares :** A buyback, also known as a share repurchase, is when a company buys its own outstanding shares to reduce the number of shares available in the open market.

**Capital employed** is calculated by subtracting Capital WIP, Intangible assets under development and Deferred tax assets from the entity's net worth.

**Capital reserve:** A reserve of an entity which is not available for distribution as dividend.

**Capital redemption reserve:** The Company has recognised Capital Redemption Reserve on buy back of equity shares from its general reserve. The amount in capital redemption reserve is equal to nominal amount of equity shares bought back.

**Cash & cash equivalent:** Cash comprises cash in hand and demand deposits. Cash equivalents are short term, highly liquid investments that are readily convertible to known amount of cash and which are subject to an insignificant risk of change in value.

**Contract assets :** Contract assets (deferred debts and unbilled revenue) represent the amount not yet due for payment as per contract terms / agreed schedule with customers. The same will be contractually due on completion of related activities / milestones.

**Contract liability:** An entity's obligation to transfer goods or services to a customer for which the entity has received consideration (or the amount is due) from the customer.

**Contingent liability** is:

- (a) possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non occurrence of one or more uncertain future events not wholly within the control of the entity; or
- (b) a present obligation that arises from past events but is not recognised because:
  - (i) it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or
  - (ii) the amount of the obligation cannot be measured with sufficient reliability.

**Consolidated financial statements (CFS):** Consolidated financial statements - are the "Financial statements of a group in which the assets, liabilities, equity, income, expenses and cash flows of the parent company and its subsidiaries are presented as those of a single economic entity.

**Credit risk:** The risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation.

**Current ratio:** The current ratio is a liquidity ratio that measure ability to pay short term obligation or dues within one year. It is calculated by dividing current assets to current liabilities.

**Current asset:** An asset shall be classified as current when:

- a) it is expected to realise the asset, or intended to sell or consume it, in its normal operating cycle;
- b) it is held primarily for the purpose of trading;
- c) it is expected to realise the asset within twelve months after the reporting period; or
- d) the asset is cash or a cash equivalent unless the asset is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period

**Current liability:** A liability shall be classified as current when:

- a) it is expected to settle the liability in its normal operating cycle;
- b) it is held primarily for the purpose of trading;
- c) the liability is due to be settled within twelve months after the reporting period; or
- d) it does not have an unconditional right to defer settlement of the liability for at least twelve months after the reporting period.



**Current tax expense:** Current tax is the amount of income taxes payable (recoverable) in respect of the taxable profit (tax loss) for a period.

**Deferred debts:** Deferred debts are those debts which will become payable on completion of identified milestone like trial operation, PG test, etc. in terms of the contract.

**Deferred tax:** Deferred tax is calculated using the rates and tax laws that have been enacted or substantively enacted by the balance sheet date.

**Deferred tax asset:** Deferred tax assets are the amounts of income taxes recoverable in future periods in respect of deductible temporary differences, the carry forward of unused tax losses and the carry forward of unused tax credits.

**Deferred tax liability:** Deferred tax liabilities are the amounts of income taxes payable in future periods in respect of taxable temporary differences.

**Defined benefits plans:** Defined benefit plans are post-employment benefit plans other than defined contribution plans. Defined contribution plans are post-employment benefit plans under which an entity pays fixed contributions into a separate entity (a fund) and will have no legal or constructive obligation to pay further contributions if the fund does not hold sufficient assets to pay all employee benefits relating to employee service in the current and prior periods.

**Dividend per share :** It is calculated by dividing the total dividend (excl. dividend distribution tax) for the year to total number of outstanding equity shares.

**Depreciation:** Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life.

**Dividend distribution tax:** This is an additional income tax paid by the company on any amount declared, distributed or paid by the company by way of dividends.

**EBIDTA** means Earnings before interest, taxes, depreciation and amortization. Operational EBIDTA is determined after excluding other income from EBIDTA.

**Earnings per share (EPS):** It represent profit earned during the year to each share, calculated by dividing profit after tax to total number of outstanding equity shares.

**Equity method:** The equity method of accounting is used to determine the net income generated from the joint venture in proportion to the size of a company's investment in the venture. The equity method is a method of accounting whereby the investment is initially recognised at cost and adjusted thereafter for the post-acquisition change in the investor's share of the investee's net assets.

**Expected credit loss:** The difference between all contractual cash flows that are due to an entity in accordance with the contract and all the cash flows that the entity expects to receive, discounted at the original effective interest rate.

**Fair value:** Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

**Financial asset:** Any asset that is (a) cash, (b) equity instrument of another entity, (c) a contractual right to receive cash or another financial asset from another entity or to exchange financial assets or financial liability with another entity (d) a contract that will or may be settled in the entity's own equity instruments.

**Financial liability:** Any liability that is (a) contractual obligation to deliver cash or another financial asset to another entity or exchange financial assets or financial liabilities with another entity or (b) a contract that will or may be settled in the entity's own equity instruments.

**Financial instrument:** Any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

**Financing activities:** Activities that result in changes in the size and composition of the contributed equity and borrowings of the entity.

**General reserves:** General reserves are the retained earnings of a company which are kept aside out of company's profits to meet future (known or unknown) obligations.

**Going concern:** It means that entity has no intention for discontinuing the operation in foreseeable future.

**Holding company:** "holding company", in relation to one or more other companies, means a company of which such companies are subsidiary companies.

**Impairment loss:** An impairment loss is the amount by which the carrying amount of an asset or a cash-generating unit exceeds its recoverable amount. The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs of disposal and its value in use.

**Indian Accounting Standard** (abbreviated as Ind-AS): Ind AS is the applicable accounting standard for preparation of financial statements as notified by Ministry of Corporate Affairs.

**Intangible assets:** An intangible asset is an identifiable non-monetary asset without physical substance.

**Inventory in number of days :** It is calculated by dividing inventory to revenue multiplying by number of days in a year.

**Investing activities:** Investing activities are the acquisition and

disposal of long-term assets and other investments not included in cash equivalents.

**Joint venture:** A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

**Liquidity risk:** The risks that an entity may encounter in meeting obligation associated with financial liabilities as an when due.

**Market risk:** The risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: currency risk, interest rate risk and other price risk.

**Net profit/(loss) margin (%):** It represents profit generated as a percentage to revenue from operations, calculated by dividing profit after tax (PAT) to revenue operations.

**Net realisable value:** Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

**Net worth:** The excess of the book value of total assets of an entity over its liabilities. This is also referred to as shareholders' funds.

**Net worth per share :** Net worth per share is calculated by dividing net worth with total number of outstanding equity shares.

**Non-controlling interest (NCI):** is the portion of equity ownership in a subsidiary not attributable to the parent company, who has a controlling interest (greater than 50% but less than 100%) and consolidates the subsidiary's financial results with its own.

**Non-current asset:** A non-current asset is an asset that is not likely to turn to unrestricted cash within one year of the balance sheet date.

**Non-current liability:** Non-current liabilities are those obligations not due for settlement within one year.

**Other comprehensive income (OCI):** Other comprehensive income comprises items of income and expense (including reclassification adjustments) that are not recognised in profit or loss as required or permitted by other Ind ASs.

**Operating activities:** Operating activities are the principal revenue-producing activities of the entity and other activities that are not investing or financing activities.

**Operating profit margin (%):** Profitability performance ratio used to calculate the percentage of profit generated by Company from its operations. It is calculated by dividing earnings before tax (PBT) excluding other income to revenue from operations.

**Property, plant and equipment (PPE):** Property, plant and equipment are tangible items that:

- (a) are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and
- (b) are expected to be used during more than one period.

**Revenue from operations:** Gross inflow of economic benefits during the period arising in the course of ordinary activities of an entity when those inflows result in increases in equity, other than increases relating to contributions from equity participants.

**Return on net worth (%):** Return on net worth is a measure of profitability of a Company, calculated by dividing net profit to average net worth (excl. OCI).

**Right of Use Assets:** An asset that represents a lessee's right to use an underlying asset for the lease term.

**Subsidiary:** Subsidiary company is a company that is owned or controlled by another company, which is called the parent company or holding company.

**Trade receivables:** A receivable is an entity's right to consideration that is unconditional. A right to consideration is unconditional if only the passage of time is required before payment of that consideration is due.

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### Cautionary Statement

Statement in the Annual Report, describing the Company objective, expectation or estimates are forward looking within the meaning of applicable laws and regulations. Actual results may differ materially from those expressed or implied, depending upon economic development, government policies and other incidental factors.

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