



ISG BANGALORE

**Project: 2X660 MW Talcher Thermal Power Project Stage III****CORRIGENDU  
M NO. – 6 dt.  
17.02.2023****REVERSIBLE STACKER CUM RECLAIMER  
PACKAGE****Tender Ref. No.  
Enquiry No.  
77/22/6128/RRC  
dtd.17.12.2022****Please note the following points**

Sl. No.	Event Description	TO NOTE
1	Techno-commercial	Corrigendum -6 is being issued to Include the following  <b>1. Due date</b> for bid submission is extended up to 11:00AM , <b>24.02.2023</b> <b>2. Due date</b> for bid opening is extended up to 03:00PM , <b>24.02.2023</b> <b>3. Corrigendum for technical changes</b>
2	All other terms & conditions	<b>Remain unchanged.</b>

**Note:**

Also, please note that the full tender document can be downloaded from the website  
<https://eprocurebhel.co.in/nicgep/app>

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All other terms and conditions remain the same as per the original enquiry and it's subsequent amendment / addendum / corrigendum /clarification.

Any further addendum / corrigendum/ clarification/ notice of due date extension such issued shall be part of the bidding documents and this will be available at the web site from where the original documents have been received / downloaded by the bidder.

Hence bidders are requested to visit the web site on regular basis.

## **CORRIGENDUM**

**Package Name: REVERSIBLE STACKER CUM RECLAIMER PACKAGE**

**Indent Ref No : IS-1-22-2003/RSCR dated 06.09.2022**


**Project Name : 2x660MW TALCHERTPS**


**Technical Clarification / Amendment**

<b>Sr. No.</b>	<b>BID Specification</b>	<b>Clarification / Amendment</b>
1	Annexure-7 Mandatory Spares List & Spare Category (Applicable for Electrical and C&I only)	<p>Bidder to consider the <b>revised Annexure-7</b> Mandatory Spares List &amp; Spare Category (Applicable for Electrical and C&amp;I only) attached herewith .</p> <p><b>Note</b> : Mechanical Mandatory Spare list remain unchanged.</p>

**ANNEXURE-7**  
**ELECTRICAL and C&I MANDATORY SPARES**  
( REVISED)

Note :: If any item appears in more than one place for mandatory spares, same shall be considered by the bidder irrespective of duplicity and price shall be considered accordingly.

CLAUSE NO.	SCOPE OF SUPPLY & SERVICES			
1.00.00	<p><b>SPARES</b></p> <p>The Bidder shall include in his scope of supply all the necessary Mandatory spares, start up and commissioning spares and recommended spares and indicate these in the relevant schedules of the Bid Form and Price Schedules. The general requirements pertaining to the supply of these spares is given below:-</p>			
1.01.00	<p><b>MANDATORY SPARES</b></p> <p>(a) The list of mandatory spares considered essential by the Employer is indicated in this chapter. The bidder shall indicate the prices for each and every item in the 'Schedule of mandatory Spares' whether or not he considers it necessary for the Employer to have such spares. If the bidder fails to comply with the above or fails to quote the price of any spare item, the cost of such spares shall be deemed to be included in the contract price. The bidder shall furnish the population per unit of each item in the Bid Forms and Price Schedules. Whenever the quantity is mentioned in "sets" the bidder has to give the item details and prices of each item.</p> <p>(b) The Employer reserves the right to buy any or all the mandatory spares parts.</p> <p>(c) The prices of mandatory spares indicated by the Bidder in the Bid Proposal sheets shall be used for bid evaluation purposes.</p> <p>(d) All mandatory spares shall be delivered at site at least two months before scheduled date of initial operation of the first unit. However, spares shall not be dispatched before dispatch of corresponding main equipments.</p> <p>(e) Wherever quantity is specified both as a percentage and a value, the Bidder has to supply the higher quantity until and unless specified otherwise.</p>			
1.02.00	<p><b>RECOMMENDED SPARES</b></p> <p>(a) In addition to the spare parts mentioned above, the contractor shall also provide a list of recommended spares for 3 years of normal operation of the plant and indicate the list and total prices in relevant schedule of the Bid Form and Price Schedules. This list shall take into consideration the mandatory spares specified in this Section-VI, Part-A and should be independent of the list of the mandatory spares. The Employer reserves the right to buy any or all of the recommended spares. The recommended spares shall be delivered at project site at least two months before the scheduled date of initial operation of first unit. However, the spares shall not be dispatched before the dispatch of the main equipment.</p> <p>(b) Price of recommended spars will not be used for evaluation of the bids. The price of these spares will remain valid upto 6 months after placement of Notification of Award for the main equipment. However, the Contractor shall be liable to provide necessary justification for the quoted prices for these spares as desired by the Employer.</p>			
TALCHER THERMAL POWER STATION STAGE-III (2X660MW) EPC PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-4540-001A-2		SUB SECTION-VI MANDATORY SPARES  Page 1 of 3

CLAUSE NO.	SCOPE OF SUPPLY & SERVICES			
1.03.00	<b>START-UP &amp; COMMISSIONING SPARES</b>  Start-up and commissioning spares are those spares which may be required during the start-up and commissioning of the equipment/system. All spares used till the plant is handed over to the employer shall come under this category. The Contractor shall provide for an adequate stock of such start up and commissioning spares to be brought by him to the site for the plant erection and commissioning. They must be available at site before the equipments are energized. The unused spares, if any, should be removed from there only after the issue of Taking Over certificate. All start up spares which remain unused at the time shall remain the property of the Contractor.			
1.04.00	The Bidder shall include in his scope of supply all the necessary Mandatory spares, start up and commissioning spares and recommended spares and indicate these in the relevant schedules of the Bid Form and Price Schedules. The general requirements pertaining to the supply of these spars is given below.			
2.00.00	The Contractor shall indicate the service expectancy period for the spares parts (both mandatory and recommended) under normal operating conditions before replacement is necessary.			
3.00.00	All spares supplied under this contract shall be strictly inter changeable with the parts for which they are intended for replacements. The spares shall be treated and packed for long storage under the climatic conditions prevailing at the site e.g. small items shall be packed in sealed transparent plastic with desecrator packs as necessary.			
4.00.00	All the spares (both recommended and mandatory) shall be manufactured alongwith the main equipment components as a continuous operation as per same specification and quality plan.			
5.00.00	The contractor will provide Employer with cross-sectional drawings, catalogues, assembly drawings and other relevant documents so as to enable the Employer to identify and finalise order for recommended spares.			
6.00.00	Each spares part shall be clearly marked or labelled on the outside of the packing with its description. When more than one spares part is packed in a single case, a general description of the content shall be shown on the outside of such case and a detailed list enclosed. All cases, containers and other packages must be suitably marked and numbered for the purposes of identification.			
7.00.00	All cases, containers or other packages are to be opened for such examination as may be considered necessary by the Employer.			
8.00.00	The contractor will provide the Employer with all the addresses and particulars of his sub suppliers while placing the order on vendors for items/components/equipments covered under the contract and will further ensure with his vendors that the Employer, if so desires, will have the right to place order for spares directly on them on mutually agreed terms based on offers of such vendors.			
TALCHER THERMAL POWER STATION STAGE-III (2X660MW) EPC PACKAGE		TECHNICAL SPECIFICATION SECTION – VI, PART-A BID DOC. NO.:CS-4540-001A-2	SUB SECTION-VI MANDATORY SPARES	Page 2 of 3

**EPC PACKAGE FOR TALCHER TPP STAGE-III (2x660 MW)**  
**LIST OF MANDATORY SPARES FOR COAL HANDLING PLANT**

SI. NO.	PARTICULARS	QUANTITY
<b>II</b>	<b>"ELECTRICAL"</b>	
<b>H)</b>	<b>BELT WEIGHER</b> (if applicable)	
1	Set of cards	2 nos. of each type
2	Load Cells	2 nos. of each type
3	Display Unit	2 nos. of each type
4	Speed sensor	1 nos. of each type
5	Cables for load cells & speed sensor	2 sets
6	Transducer, if applicable	2 nos. of each type
7	Complete belt weigher assy. with control and display units	1 set
<b>I)</b>	<b>STACKER RECLAIMER</b>	
1	Motor (other than those covered in B)(1) above)	1 no of each type and rating
2	Proximity detectors	5 % of total population min 1 no
3	Level switches	5 % of total population min 1 no
4	Rotation digit emitters (Flashing Beacon)	5 % of total population min 1 no
5	Limit Switch assy	5 % of total population min 1 no
6	Pressure switch assy	5 % of total population min 1 no
7	Temperature switch assy	5 % of total population min 1 no
8	Cable tension switches with loads	2 sets. of each type
9	Flow switches	2 nos. of each type
10	Flexible Trailing cable (power & control)	1 Largest length of each size & rating
	<b>LT drive of Stacker Reclaimer</b>	
11	Transducers of thyristor/VVF/VFD panel	2 nos. of each type
12	Complete converter and inverter unit consisting of Thyristors of thyristor/Main control Transistor (main current carrying components)	1 Set of each type
13	Potentiometers of thyristor / equivalent panel	10 Nos. of each type
14	Set of cards of thyristor/Power Board Gate Drive Board	1 Set complete
15	All type of electronics modules	10 % or 1 no (whichever is more) of each type and model
16	Input and out put chokes	1 set
17	Motor terminal block with studs for all motors	1 set. of each rating and type of motor
18	Coupling relays	10 Nos. of each type
19	Slew Drive Motor	1 no
20	For bucket wheel assy, if hydraulic Solenoid Valves assy, pressure, temp, other switches	2 nos. of each type and rating
<b>J)</b>	<b>AUXILIARY TRANSFORMERS (DRY)</b>	
i)	HT Bushing	3 nos. of each type & rating
ii)	LT Bushing	3 nos. of each type & rating
iii)	Neutral bushing	1 no. of each type & rating
iv)	Neutral CT	1 no. of each type & rating
v)	Winding temp. indicator with alarm & trip contacts	1 no. of each type
<b>K)</b>	<b>HT LOAD BREAK SWITCH AND JUNCTION BOX</b>	
i)	Trip coil	10 no.
ii)	Support Insulators	1 set.
<b>M)</b>	<b>L.T. SWITCHGEAR / MCCs, / DISTRIBUTION BOARDS</b>	
a)	<b>Circuit Breaker Components</b>	

EPC Package of Talcher TPP Stage - III (2x660 MW)

SI. NO.	PARTICULARS	QUANTITY
I)	Spring charging motor	10% no. of each type
ii)	Primary disconnect (power)	1 no. of each type
iii)	Auxiliary contact set	2 set of each type / rating of breaker
iv)	Limit switch	5 nos. of each type
v)	Arc chutes for each rating	10 sets
vi)	Moving contacts of each rating	1 sets
vii)	Fixed contact of each rating	2 sets
viii)	Arcing contact of each type	2 sets
ix)	Closing coils for each type	10 nos.
x)	Tripping coils for each type	10 nos.
xi)	Closing & tripping springs	5 nos. of each type
xii)	Releases, if applicable	2 nos. of each type
xiii)	Carbon brushes for spring charging motor	5 sets of each type
xiv)	All type of protection/aux/relays,timers	1 no of each type and rating
xv)	Coupling relays	10 nos of each type and rating
b)	<b>LT switchgear panel components</b>	
i)	Auxiliary contactor and Power Contactor	10% nos of each type and rating
ii)	Coupling relays without base	10 nos of each type and rating
iii)	Bi-metallic overload relay	2 nos of each type and rating
iv)	Switch fuse unit	10% nos of each type and rating
v)	Control fuse base with carrier	10% nos
vi)	LT module incoming male/female power contacts	3 sets of each type and rating
vii)	LT module outgoing male/female power contacts	3 sets of each type and rating
viii)	Moving/detachable control disconnects contacts of each rating	5 sets of each type and rating
ix)	Power fuse base with carrier	3 Sets (9nos) of each type and rating
x)	Fuses – Power & Control	10% nos. of each type and rating
c)	<b>Instrument Transformer</b>	
	I) Current Transformer	3 nos. of each type & rating
	ii) Voltage Transformer	1 no. of each type & rating
d)	Control supply transformer	1 no. of each type & rating
e)	<b>Meters</b>	
	I) Ammeters	2 nos. of each type & range
	ii) Voltmeters	1 no of each type & range
f)	<b>Contactors</b>	
	i) Power Contactors and aux. Contactors (complete)	10% nos. of each type & rating
	ii) Coil for the Contactors and aux. Contactors	10% nos. of each type & rating
	iii) Main Contacts sets for power. Contactors	10% nos. of each type & rating
g)	Control, isolating & selector switches	1 no. of each type & rating
h)	Push button of Various colours	2 nos. of each type & rating
i)	LED indicators light assy	10% of each type and colour
O)	<b>PLC (STACKER / RECLAIMER)</b>	
i)	PLC cards (Processor, memory and all cards other than I/O cards)	1 no. of each type
ii)	Stabiliser	1 no. of each type
iii)	Power pack	1 no. of each type
iv)	I/O cards	2 nos. of each type & rating
v)	Fuses & Fused terminals	10 nos. of each type & rating
vi)	Set of cards for UPS	1 set
vii)	Modems	1 no. of each type
viii)	Optical fibre cable	10 %

EPC Package of Talcher TPP Stage - III (2x660 MW)

SI. NO.	PARTICULARS	QUANTITY
Q)	<b>DUST SUPPRESSION, SERVICE WATER, POTABLE WATER, COOLING WATER (for hydraulic coupling or any other purpose),DUST EXTRACTION SYSTEM</b> (if applicable)	
i)	Electric motor	1 nos. of each type & rating
ii)	Flow switches	2 nos. of each type
iii)	Pressure switches	2 nos. of each type
iv)	Level switch	2 nos. of each type
	<b>Note:</b>	
	1. Unless stated otherwise a 'set' means items or sub-items required for each type/size range of the assembly/ sub-assembly, required for replacement in one main equipment. It is further intended that the assembly/ sub-assembly which have different orientation (like left hand or right hand, top or bottom), different direction of rotation or mirror image positioning or any other reasons which result in maintaining two different sets of the spares to be used for the subject assembly/ sub-assembly, these shall be considered as different types of assembly/ sub-assembly.	
	2. Wherever quantity has been specified as percentage (%), the quantity of mandatory spares to be provided by contractor shall be the specified percentage (%) of the total population of the plant. In case the quantity so calculated happens to be a fraction, the same shall be rounded off to next higher whole number.	
	3. Whenever the quantities have been indicated for each type, size, thickness, material, radius, range etc., these shall cover all the items supplied and installed and the breakup for these shall be furnished in the bid.	
	4. In case spares indicated in the list are not applicable to the particular design offered by the bidder, the bidder should offer spares applicable to offered design with quantities generally in line with the approach followed in the above list.	
	5. Price of each and every item is to be given separately.	



EPC Package of Talcher TPP Stage - III (2x660 MW)  
**EPC PACKAGE FOR TALCHER TPP STAGE-III (2x660 MW)**  
**LIST OF MANDATORY SPARES FOR PLANT UTILITIES**

SI. NO.	PARTICULARS	QUANTITY
14.0	<b>FIRE DETECTORS</b>	
14.1	Multisensor detectors (Addressable)	1 nos.
14.2	Indicators assembly for smoke detectors provided in false ceiling (Response indicator)	1 nos.
14.5	Manual pull stations	1 Nos. of each type
16.0	<b>PORTABLE EXTINGUISHERS</b>	
16.1	Pressurized water type (9 lit. cap.)	1 Nos.
16.2	Foam type (9 lit. cap. IS: 15683)	1 Nos.
16.3	CO2 type (4.5 kg. Cap. IS: 15683)	1 Nos.
16.4	Dry Chemical powder (6 kg. Cap. IS: 15683)	1 Nos.
20.0	<b>FIRE ALARM PANEL &amp; REPEATER FIRE ALARM PANEL</b>	
20.1	Power supply modules	1 No. of each type & rating
20.2	Processor modules, Control modules, loop cards modules, isolator cards	1 No. of each type
20.3	LCD display of each type unit of panel	1 No.
20.4	Interface unit / modules for non-addressable devices, auxiliary / output relay modules, control modules, supervisory control modules and any other electronic modules	1Nos. of each type
20.5	Power supervision relay	1 Nos. of each type.
20.6	Fire screen / alarm buzzer	1 No. of each type

## LIST OF MANDATORY SPARES FOR ELECTRICAL

SI. NO.	PARTICULARS	QUANTITY
	<b>15.COAL HANDLING PLANT</b>	
<b>Part A</b>	<b>Motors</b>	
<b>II</b>	<b>CONVEYORS</b> (including Boom Conveyor/intermediate conveyor of stacker reclaimers/belt feeders)	
1	Drive Motor	1no. of each type & rating( for population upto 10 Nos)  2 no. of each type & rating( for population more 10 Nos)
	<b>Part B</b>	
<b>II</b>	<b>CONVEYORS</b>	
1	Belt Sway Switches	2 no.s
2	Pull cord switches	2 no.s
3	Zero speed switches	2 no.s
4	Chute Block switches	2 no.s
5	Position switches for trippers, paddle feeders	2 no.s
6	Sensor/probe for zero speed switch	2 no.s of each type and speed range
7	Micro/limit switch of pull cord switch,belt sway switches,chute block switches	2 no.s of each type
8	Motor terminal block with studs for all motors	1 set. of each type and rating of motor
<b>VIII</b>	<b>BELT WEIGHER</b> (if applicable)	
1	Set of cards	2 nos. of each type
2	Load Cells	2 nos. of each type
3	Display Unit	2 nos. of each type
4	Speed sensor	1 nos. of each type
5	Cables for load cells & speed sensor	2 sets
6	Transducer, if applicable	2 nos. of each type
<b>IX A</b>	<b>STACKER RECLAIMER</b>	
1	Motor (other than those covered in B)(1) above)	1 no of each type and rating
2	Proximity detectors	2 no. of each type
3	Level switches	2 no. of each type
4	Rotation digit emitters (Flashing Beacon)	2 no. of each type
5	Limit Switch	2 no. of each type
6	Pressure switch	2 no. of each type
7	Temperature switch	2 no. of each type
8	Cable tension switches with loads	2 sets. of each type
9	Flow switches	2 nos. of each type
10	Flexible Trailing cable (power & control)	1 length of each size & rating
11	VFD drives of Stacker Reclaimer –Long Travel and Slew drive	
a	Input and out put chokes	1 set
b	Motor terminal block with studs for all motors	1 set. of each rating and type of motor
c	Coupling relays	5 Nos. of each type
d	Transducers of thyristor/VVF/VFD panel	2 nos. of each type
e	Complete converter and inverter unit consisting of Thyristors of thyristor/Main control Transistor (main current carrying components)	1 Set of each type
f	Potentiometers of thyristor / equivalent panel	4 Nos. of each type
g	Set of cards of thyristor/Power Board Gate Drive Board	2 Sets complete

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SI. NO.	PARTICULARS	QUANTITY
h	All type of electronics modules	1 no(whichever is more)of each type and model
<b>X</b>	<b>AUXILIARY TRANSFORMERS (DRY)</b>	
1	HT Bushing	3 nos. of each type & rating
2	LT Bushing	3 nos. of each type & rating
3	Neutral bushing	1 no. of each type & rating
4	Neutral CT	1 no. of each type & rating
5	Winding temp. indicator with alarm & trip contacts	1 no. of each type & rating
<b>XI</b>	<b>HT LOAD BREAK SWITCH AND JUNCTION BOX</b>	
1	Trip coil	1 no.
2	Support Insulators	1 set
<b>XV</b>	<b>CONTROL PANEL</b>	
	(Wagon tippler control desk, Stacker/Reclaimer control desk & local control panels of paddle feeders, metal detector, magnetic separator, coal sampling system, belt weigher, hoists, dust suppression system, sump pumps, fluid couplings etc )	
1	Control supply transformers	1 nos. of each type & rating
2	Relays and timer	10 nos. of each type & rating
3	Contactors	1 nos. of each type & rating
4	Ammeters and voltmeters	2 nos. of each type & rating
5	Auxiliary contactors and bimetallic overload relay set for panel	1 nos. of each type & rating
6	Any special meter	1nos. of each type & rating
<b>XVI</b>	<b>DUST SUPPRESSION &amp; SERVICE WATER SYSTEM (if applicable)</b>	
1	Electric motor	1 complete set

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**EPC PACKAGE FOR TALCHER TPP STAGE-III (2x660 MW)**  
**LIST OF MANDATORY SPARES FOR C&I**

SI. NO.	PARTICULARS	QUANTITY
<b>3.00.00</b>	<b>POWER SUPPLY SYSTEM</b>	
3.01.00	<b>Uninterrupted Power supply (UPS) System including Static Switches for Sub Distribution</b>	<b>Quantity per UPS system</b>
(i)	Silicon controlled thyristors, diodes and power transistors.	100 %
(ii)	Capacitors	2 nos. of each type
(iii)	Current transducers, Voltage transducers, chokes, AC/DC isolators, contactors, timers, relays.	2 nos. of each type
(iv)	Fuses of each types and rating	10 nos. of each type and rating.
(v)	Fuse free Circuit breakers	2 nos. of each type and rating
(vi)	Electronic modules	2 nos. of each type
(vii)	Cooling Fans	2 nos. of each type
(viii)	Digital/analog panel meters/ indicators	1 no. of each type
(ix)	Relays of all types including overload relays.	3 nos. of each type
(x)	Static Switch	2 nos. of each type
(xi)	Batteries	2 Nos. of each type and rating.
<b>6.00.00</b>	<b>PUBLIC ADDRESS SYSTEM</b>	
6.01.00	<b>Call Stations &amp; Amplifiers</b>	
(i)	Call station for outdoor area with amplifier	1 no. of each type, make,model etc.
(ii)	Call station for indoor area desktop mounting type with amplifier	1 no. of each type, make,model etc
(iii)	Master Control Unit (MCU)	1 no. each type, make, model etc.
(iv)	Portable Call station with minimum 2 mtrs connecting cable.	1 no. each type, make, model etc.
(v)	Standalone amplifier	1 no. each type, make, model etc.
6.02.00	<b>Loudspeakers</b>	
(i)	Outdoor Industrial horn type loudspeaker	1 no. of each type, make, model etc.
(ii)	Indoor wall mounted cone type loudspeaker	1 no. of each type, make, model etc.
(iii)	Cradle switch	1 no. of each type, make, model etc.
6.03.00	<b>Network devices and accessories</b>	
(i)	Network Switches	10% of each type, make, model etc.
(ii)	Media Converters	1 sets of each type, make, model etc.
(iii)	Complete Server with software & its applicable license	1 set of each type, make, model etc.
(iv)	PC Station with software & its applicable license	1 set of each type, make, model etc.
<b>7.00.00</b>	<b>CCTV</b>	
(i)	PTZ camera	1 nos.
(ii)	Explosion proof camera	1 nos.
(iii)	Fixed Camera	2 nos.
(iv)	Full function keyboard & Joystick	1 no.
(v)	Client Work Stations with monitor	1 no.
(vi)	Camera/Database Server	1 no.
(vii)	Media converter	5 nos.
(viii)	Network Switches	
	Field/edge switches	5 Nos.
	L2 switch	2 Nos.
	L3 switch	1 No
(ix)	I/O module for Fire Alarm interfacing (if applicable)	2 nos. of each type
(vi)	Camera mounting arrangement.	2 nos. of each type
<b>8.00.00</b>	<b>Wireless Instruments &amp; System (if applicable)</b>	
(i)	Transmitters	10% of specified quantity or minimum 2 nos. of each model

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SI. NO.	PARTICULARS	QUANTITY
(ii)	Repeaters / Routers	10% subject to minimum 2 nos. of each type
(iii)	Gateway along with antenna / access point	1 no.
<b>9.00.00</b>	<b>In addition to the mandatory spares of electric actuators indicated in all the chapters of sub section VI, Part-A of technical specification the below clause is also applicable.</b>	
(i)	Electronic PCB of all types	10% of each type & model
(ii)	Absolute Encoder (replaceable part)	5% of each type & model
(iii)	Electronic Torque sensor	5% of each type & model
<b>Note:</b>		
1.	Refer Part-A Sub-Section-VI (Mandatory Spares) for general requirements and interpretation of various terms and conditions.	
2.	In case the main population of any item is only one no., then the spare quantity shall also be one no., overriding requirements indicated in clause 1.00.00 to 11.00.00 above.	
3.	Wherever the quantity is given only in percentage, the spare quantity shall be distributed into various ranges/size/rating/type (as the case may be) in the same proportion of the main population. For the quantities coming less than 1, shall be treated as 1 only.	
4.	C&I mandatory spares if covered under other chapters of sub section VI, Part A of technical specification are not required to be repeated.	