

REPLIES TO PRE BID QUERIES LOT 3 DATED 07.02.2024

NIT NO : PNMM/PC 183/E 4024/NCB DATED 12.01.2024

SUB : CONSTRUCTION OF 220 KV LILO GIS AT TALCHER FERTILIZERS LIMITED

Sr. No	Reference of Tender Document				Clarification	Reply								
	Sec. No.	Page No.	Clause No.	Subject										
1	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	76	1.4	Ambient temperature 50°C	At 50 Deg C., the rated current carrying capacity shall be derated to below values. 1. Busbar : 2746 A & 2. other switchgear components : 2670 A in order to meet the temperature rise requirements at higher ambient temperature as per IEC 62271-203. The same design is type tested in line with the latest standard of IEC 62271-203.	Provision of Tender Document shall prevail.								
2	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	78	4.3 4.4	The switchgear, which shall be of modular design, shall have complete phase segregation. The bus enclosure should be sectionalized in a manner that maintenance work on any bus disconnector (when bus and bus disconnector are enclosed in a single/three enclosure) can be carried out by isolating and evacuating the small effected section and not the entire bus.	This is additional clarification we have provided. Offered GIS type 8DN9 (220 kV) is having separate busbar and busbar disconnector compartments. Thus, the tender clause is not applicable to the offered design. Accordingly, we shall provide the three phase encapsulated continuous type passive busbar design.	Provision of Tender Document shall prevail. Any specific requirement on design shall be dealt during detailed engineering & approval.								
3	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	79	4.5	The material and thickness of the enclosures shall be such as to withstand an internal flash over without burn through for a period of 300ms at rated short time withstands current.	As per table 4 of IEC 62271-203 (2022), burn through is allowed in the enclosure. We confirm to the requirements of IEC.	Provision of Tender Document shall prevail.								
4	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	79	4.7	All the conductors shall be fabricated of copper tubes of cross sectional area suitable to meet the normal and short circuit current rating requirements.	<table border="1" data-bbox="1086 638 1332 678"> <tr> <td>300 kV min.</td> <td>1</td> <td>0.1%</td> <td>By separate alarm (for the enclosure)</td> </tr> <tr> <td></td> <td>2</td> <td>0.3%</td> <td>By separate alarm (for through 5 enclosure)</td> </tr> </table> The conductors shall be made up aluminum alloy as per our type tested design. The same is sufficient to meet the rated current requirements and short circuit current requirements as proven by our type test reports.	300 kV min.	1	0.1%	By separate alarm (for the enclosure)		2	0.3%	By separate alarm (for through 5 enclosure)	Provision of Tender Document shall prevail. Any specific requirement on design shall be dealt during detailed engineering & approval of Valid Type Test Report & Design.
300 kV min.	1	0.1%	By separate alarm (for the enclosure)											
	2	0.3%	By separate alarm (for through 5 enclosure)											
5	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	81	4.27 ii)	Any other alarm necessary to indicate deterioration of the gas insulating system.	Alarms shall be visible in case of leakage of the gas and fall in pressure based on the standard product operating pressures. However, in case the quality of the gas is to be measured then it can be done with the help of a separate portable gas analyzer kit.	Provision of Tender Document shall prevail.								
6	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	83	4.36	Extension of GIS:	Noted. However, for the offered GIS type, no future extension module is required. Extension of the GIS is possible in any direction with meeting the service continuity req. as per specs.	Provision of Tender Document shall prevail. Further, the side of Future Extension shall be decided during Detailed Design Engineering and finalization of the Layout.								
7	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	92	6.2.12	The Disconnectors and safety grounding switches shall have a mechanical and electrical interlocks to prevent closing of the grounding switches when isolator switches are in the closed position	Considering the design of the offered GIS, electrical interlock between the DS and the ES is provided. The same design is type tested as per the latest IEC 62271-203. In addition to this, we shall provide the mechanical padlocking facility for the drives.	Provision of Tender Document shall prevail.								
8	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	98	II	CT parameters	Transformer bay CT parameters cannot be met considering the limited space available in the GIS CT. The, offered parameters are enclosed for your reference.	Provision of Tender Document shall prevail. Also, any specific requirement on design shall be dealt during detailed engineering.								
9	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	107	13.2.10	Electrical bolt interlocks shall be energized only when the operating handle of the mechanism is brought to the working position	electrical bolt interlock is not applicable for the 220 kV GIS level. We shall provide padlocking facility for the drives.	Provision of Tender Document shall prevail.								
10	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	112	19	All transport packages containing critical units viz, Circuit breakers and Voltage transformers shall be provided with sufficient number of electronic impact recorders	As per manufacturer's philosophy and experience and in line with the previously executed projects, Shock indicators shall be provided only for VT and Surge arrester. For other GIS packages no such device is required.	Provision of Tender Document shall prevail.								
11	TECHNICAL SPECIFICATION FOR 33kV VACUUM CIRCUIT BREAKER	Clause No. 9.3	Page No. 822	Motors shall be of self ventilated type having TEFC (totally enclosed fan cooled) enclosure.	Our type tested design and offered Motor shall be Universal type suitable for operation in AC & DC supply. Please Confirm	Provision of Tender Document shall prevail. Any specific requirement on design shall be dealt during detailed engineering & approval of Valid Type Test Report & Design.								
12	TECHNICAL SPECIFICATION FOR 33kV VACUUM CIRCUIT BREAKER	Clause No. 15.0 (21)	Page No. 826	Pressure Gauge for N2 Pressure	Whether Pressure Gauge for N2 Pressure is not applicable. Please Confirm	Provision of Tender Document shall prevail. Any specific requirement on design shall be dealt during detailed engineering & approval.								

13	TECHNICAL SPECIFICATION FOR 33kV VACUUM CIRCUIT BREAKER	Clause No. 19.0		Type Tests	<p>Type Tests</p> <p>a) Dielectric tests (with closing resistor)</p> <p>b) Tightness Test</p> <p>c) Humidity Test</p> <p>d) Critical Current Test</p> <p>e) Evolving Fault Test</p> <p>f) Shunt reactor current – switching test</p> <p>g) X – Radiation test for Vacuum Interrupter</p> <p>These type tests are not applicable for offered 36kV VCB as per IEC. Please consider</p>	Provision of Tender Document, to be read along with IEC 62271-100, shall prevail.
14	TECHNICAL SPECIFICATION FOR 33kV VACUUM CIRCUIT BREAKER	Clause No. 26.4		Control Cabinets	<p>Control Cabinets</p> <p>a) Hot dip galvanized sheet steel construction – Powder coated enclosure shall be provided.</p> <p>b) Motors up to 5kW, contactors shall be direct-on-line, air break, single throw type</p> <p>c) Contactors shall be provided with a three element, positive acting, ambient temperature compensated, time lagged, hand reset type thermal overload relay with adjustable setting alternatively MCB for motor protection</p> <p>a) Please confirm</p> <p>b) – Not Applicable.</p> <p>C) – Not Applicable.</p>	Provision of Tender Document shall prevail. Any specific requirement on design shall be dealt during detailed engineering & approval.
15	TECHNICAL SPECIFICATION FOR 33kV VACUUM CIRCUIT BREAKER	Annexure – 1		Minimum Clearance Between Phases	<p>Minimum Clearance Between Phases – 505mm</p> <p>We will be supplying as per type test design.</p>	Provision of Tender Document shall prevail. Any specific requirement on design shall be dealt during detailed engineering & approval of Valid Type Test Report & Design.