Meghalaya Power Transmission Corporation Limited
Office of the Chief Engineer (Transmission)
Lumjingshai :Shillong – 793001
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CORRIGENDUM

No. MePTCL/CE(T)/TT-139/KH-PAN/2021-22/ 14 Dated: 10th November 2021.

In line with the clause 1.2.3 Volume – I section – I, Instruction to Bidders of the bid documents for the following works:-

1. Re-conductoring and strengthening of the 132 kV S/C line from Khliehriat to Panchgram by HTLS conductor and Related Services under Power System Development Fund (PSDF), invited vide NIT No: MePTCL/CE(T)/TT-139/KH-PAN/2021-22/03 Dated: 22nd October, 2021.
2. Re-conductoring and strengthening of the 132 KV D/C line from Umiam Stage I to Umiam Stage III Power Station by HTLS conductor and Related Services under PSDF , invited vide NIT No: MePTCL/CE(T)/TT-139/USTI-STIII/2021-22/03 Dated: 22nd October, 2021.

Certain clauses to the Bid Documents as per annexure enclosed are hereby amendment and notified for information to all the prospective bidders for preparing and submission of the bid proposals.

All other terms and conditions of the NIT shall remain the same.

(A.Kharpan)
Chief Engineer (Transmission)

Memo. No.MePTCL/CE(T)/TT-139/KH-PAN/2021-22/ 14(a) Dated: 10th November 2021.

Copy to:

1. The Director (Transmission), MePTCL, Shillong.
2. The Chief Accounts Officer, MeECL, Shillong.
3. The Company Secretary, MeECL, Shillong.
4. The Additional Chief Engineer (T&T), MePTCL, Shillong.
5. The Additional Chief Engineer (P&D), MeECL, Shillong.
6. The Senior Accounts Officer, MePTCL, Shillong.
7. The Executive Engineer (MIS), MePDCL, Shillong with a request to upload the Corrigendum in www.meghalayatenders.gov.in., www.tender.gov.in, and www.meecl.nic.in websites .
8. TT-139/USTG-I-STGIII/ file
9. Notice Board.

Chief Engineer (Transmission)

1). Amendment to the Bid Document 1. Re-conductoring and strengthening of the 132 kV S/C line from Khliehriat to Panchgram by HTLS conductor and Related Services.

2). Amendment to the Bid Document for Re-conductoring and strengthening of the 132 kV D/C line from Umiam Stage I to Umiam Stage III Power Station by HTLS conductor and Related Services.

Sl No	Clause No	Existing	Amendment
1	Volume II Section-2 Clause 2.5.3	Maximum permissible conductor sag for 320 m span at steady state conductor temperature and nil wind corresponding to 50 Hz alternating current of 437 A per conductor under ambient conditions specified above = 6.73 m	Maximum permissible conductor sag for 320 m span at steady state conductor temperature and nil wind corresponding to 50 Hz alternating current of 875 A per conductor under ambient conditions specified above = 6.73 m
2	Volume II Section-2 Clause 2.5.8.2	Hybrid carbon and glass fiber composite core There shall be no joint of any kind in the finished core entering into the manufacture of the strand. There shall also be no joints or splices in any length of the completed core	Hybrid carbon and glass fiber composite core There shall be no joint of any kind in the finished core entering into the manufacture of the strand. There shall also be no joints or splices in any length of the completed core. However, during the production run, splicing of the galvanic protection barrier is allowed provided diameter specifications are maintained
3	Volume II Section-2 Clause 2.6.2	The circuit on which the existing AAAC Panther is strung shall be kept under charged condition during the execution	The circuit on which the existing ACSR Panther is strung shall be kept under charged condition during the execution
4	Volume II Section-2 Clause 2.6.3	Necessary calculations shall be carried out by the bidder to ensure that by replacing the existing AAAC PANTHER conductor with the HTLS conductor, the loadings on the towers due to conductor tensions as well as loads on account of the re-conductoring activities shall be within specified limits. These calculations shall be submitted by the bidder along with bid	Necessary calculations shall be carried out by the bidder to ensure that by replacing the existing ACSR PANTHER conductor with the HTLS conductor, the loadings on the towers due to conductor tensions as well as loads on account of the re-conductoring activities shall be within specified limits. These calculations shall be submitted by the bidder along with bid
5	Volume II Section-2 Clause 2.7.1	Type tests specified under clause no. 3.7.0 shall not be required to be carried out if a valid test certificate is available for the offered design, i.e., tests conducted earlier (not more than 5 years old at the time of bid opening) should have been conducted in accredited laboratory (accredited based on ISO/IEC guide 25/17025 or EN 45001 by the National Accreditation body of the country where laboratory is located) or witnessed by the representative (s) of CTU or State Transmission Utility	Type tests specified under clause no. 3.7.0 shall not be required to be carried out if a valid test certificate is available for the offered design, i.e., tests conducted earlier (not more than 7 years old at the time of bid opening) should have been conducted in accredited laboratory (accredited based on ISO/IEC guide 25/17025 or EN 45001 by the National Accreditation body of the country where laboratory is located) or witnessed by the representative (s) of CTU or State Transmission Utility. In the case of composite core conductor the test specified under Clause"On Conductor Strand/core shall be carried out before stranding on as manufactured samples

1). Amendment to the Bid Document 1. Re-conductoring and strengthening of the 132 kV S/C line from Khliehriat to Panchgram by HTLS conductor and Related Services.

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6	Volume II Section-2 Clause 2.7.2		p) Galvanic Protection Barrier LayerThickness test for polymer composite core only as per ASTM B987
7	Volume II Section-2 Clause 2.11	19. Design Validation Tests on Composite Core	19. Carbon Fiber Thermoset Polymer Matrix Composite Core (CFC) for use in Overhead Electrical Conductors
8	Volume II Section-2 Annexure A Clause 1.13	Heat Resistance test on Aluminium Alloy wire	Heat Resistance test on Aluminium Alloy wire (if applicable)
9	Volume II Section-2 Annexure A Clause 1.24	II. Torsion Test: The purpose of the test is to determine the resilience of the composite core to twisting and to show that after the composite core has experienced the prescribed twisting, it will not crack or have a loss in tensile strength due to thetwisting. A sample length that is 170 times the diameter of the composite core being tested is mounted in the gripping fixtures. One grip shall then be fixed so that it does not twist and the other end shall be twisted a full 360 degrees and then fixed in this position for 2 minutes. Once the twist time is completed, the core is untwisted an inspected for any crazing or other damage. If no damage is observed, the composite core is then tensile tested to failure and the final load recorded. For the test to be accepted, the composite core must withstand at least 100% of its rated tensile strength. Two samples need to be completed in order to satisfy the testing requirement.	II. Torsion Test: The purpose of the test is to determine the resilience of the composite core to twisting and to show that after the composite core has experienced the prescribed twisting, it will not crack or have a loss in tensile strength due to the twisting. For Standard and High Strength Grade composite cores as per ASTM B987 Table 2, samples should be long enough to have gauge length between the gripping fixturees 170 times the diameter of the composite core being tested. For core lengths less than 170 times the core OD rotate the core to maintain the same rotataion to length ratio. For Extra High Strength Grade composite core as per ASTM B987 Table 2 , samples should be long enough to have gauge length between the gripping fictures that is 340 times the diameter of the composite core being tested. For core lengths less than 340 times the core OD rotate the core to maintain the same rotation to length ratio. However, the gauge length shall not be more than 4 m, One grip shall then be fixed so that it does not twist and the other end shall be twisted a full 360 degrees and then fixed in this position for 2 minutes. is mounted in the gripping fixtures. One grip shall then be fixed so that it does not twist and the other end shall be twisted a full 360 degrees and then fixed in this position for 2 minutes. Once the twist time is completed, the core is untwisted an inspected for any crazing or other damage. If no damage is observed, the composite core is then tensile tested to failure and the final load recorded. For the test to be accepted, the composite core must withstand at least 100% of its rated tensile strength. Two samples need to be completed in order to satisfy the testing requirement.

1). Amendment to the Bid Document 1. Re-conductoring and strengthening of the 132 kV S/C line from Khliehriat to Panchgram by HTLS conductor and Related Services.

2). Amendment to the Bid Document for Re-conductoring and strengthening of the 132 kV D/C line from Umiam Stage I to Umiam Stage III Power Station by HTLS conductor and Related Services.

10	Volume II Section-2 Annexure A Clause 1.25	Breaking load test on Aluminium/ Aluminium Alloy & Composite core and D.C Resistance test on Aluminium/ Aluminium Alloywire The above tests shall be carried out as per IEC: 888/889 and the results shall meet the requirements of the specification.	Breaking load test on Aluminium/ Aluminium Alloy & Composite core and D.C Resistance test on Aluminium/ Aluminium Alloywire The above tests shall be carried out as per IEC: 888/889 and the results shall meet the requirements of the specification. For composite cores, the breaking load shall be performed as decribed in Section 9 of ASTM B987
11	Volume II Section-2 Annexure A Clause 1.31	Glass Transition Temperature Test (for polymer composite core only) Test method shall be as per ASTM D7028, A Standard Test Method for Glass Transition Temperature of Polymer Matrix Composites by Dynamic Mechanical Analysis. The glass transition temperature shall be greater than the maximum continuous operating temperature of the offered Composite Carbon Core HTLS Conductor+ 35 deg C.	Glass Transition Temperature Test (for polymer composite core only) Test method shall be as per ASTM D7028, A Standard Test Method for Glass Transition Temperature of Polymer Matrix Composites by Dynamic Mechanical Analysis. The glass transition temperature shall be greater than the maximum continuous operating temperature of the offered Composite Carbon Core HTLS Conductor+ 25 deg C. and Tg measured as the peak in Loss Modulus curve as per ASTM B987
12	Volume II Section-2 Annexure A Clause 1.34	Chemical Analysis of Aluminium/ Aluminium Alloy and Composite core/ INVAR CoreWires	Chemical Analysis of core strands/ composite core
13	Volume II Section-3 Annexure A Clause 1.7	i)Temperature of conductor during each cycle: 40 deg. C above designed maximum operating temperature of the conductor	i)Temperature of conductor during each cycle: 40 deg. C above designed maximum operating temperature of the conductor but not exceeding the emergency temperature of the conductor
14	Volume II Section-3 Annexure A Clause 2.1 (b)	i) Temperature of conductor during each cycle: 40 deg. C above designed maximum operating temperature of the conductor	i)Temperature of conductor during each cycle: 40 deg. C above designed maximum operating temperature of the conductor but not exceeding the emergency temperature of the conductor
15	Volume II Section-5.5.3 Annexure A Clause 1.34	. If any special tools and tackles other than those generally used for stringing of AAAC conductors are deployed for stringing of HTLS Conductor by the contractor, a set of those tools & tackles shall be supplied by the contractor to the Employer, on completion of the project, at no extra cost	. If any special tools and tackles other than those generally used for stringing of ACSR conductors are deployed for stringing of HTLS Conductor by the contractor, a set of those tools & tackles shall be supplied by the contractor to the Employer, on completion of the project, at no extra cost
16	Volume II Section-6 Schedule -1 Sl. No. 7.9	Transition temperature (corresponding to m ruling span and tension at ruling condition) Unit - 32 Deg C	Transition temperature (corresponding to 320 m ruling span and tension at ruling condition) Unit - Deg C

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17	Volume II Section-6 Schedule -1 Sl. No. 7.13	Steady state conductor temperature at conductor current of 875A and under Ambient conditions detailed in Section-1	Steady state conductor temperature at conductor current of 875A and under Ambient conditions detailed in Section-2
18	Volume II Section-6 Schedule -1 Sl. No. 7.14	AC resistance at maximum continuous operating temperature corresponding to specified maximum operating current (875 A under ambient condition enclosed as per relevant clause under Section-1)	AC resistance at maximum continuous operating temperature corresponding to specified maximum operating current (875 A under ambient condition enclosed as per relevant clause under Section-2)
19	Volume II Section-6 Schedule -1 Sl. No. 7.15	AC resistance at continuous operating temperature corresponding to specified operating current of 437 A (under ambient condition enclosed as per relevant Clause of Section-1 of Bid document)	AC resistance at continuous operating temperature corresponding to specified operating current of 437 A (under ambient condition enclosed as per relevant Clause of Section-2 of Bid document)
20	Volume II Section-6 Schedule -1 Sl. No. 7.16	Details of Creep characteristic for HTLS conductor enclosed (as per Clause 1.5.5 of Section-3 of the bid document)	Details of Creep characteristic for HTLS conductor enclosed (as per Clause 2.5.5 of Section-2 of the bid document)
21	Volume II Section-6 Schedule -1 Sl. No. 7.17.1	Sag Tension Calculation enclosed (as per Clause 1.5.5 of Section-1 of the bid document)	Sag Tension Calculation enclosed (as per Clause 2.5.5 of Section-2 of the bid document)
22	Volume II Section-6 Schedule -1 Sl. No. 7.17.3	Sag & tension at maximum continuous operating temperature (corresponding to current of 875 A and Ambient conditions detailed in Clause 1.5.5 of Section-3 of the bid document.	Sag & tension at maximum continuous operating temperature (corresponding to current of 875 A and Ambient conditions detailed in Clause 2.5.5 of Section-2 of the bid document.
23	Volume II Section-6 Schedule -1 Sl. No. 7.17.3 i) a	Wind Pressure : 50 kg/m2	Wind Pressure : 52 kg/m2
24	Volume II Section-6 Schedule -1 Sl. No. 7.17.3 ii)	Tension at 0 deg. C ,2/3 wind pressure: 34.7 kg/m2	Tension at 5 deg. C ,2/3 wind pressure: 34.7 kg/m2