GUJARAT ENERGY TRANSMISSION CORPORATION LTD.

SARADAR PATEL VIDYUT BHAVAN,
RACE COURSE, VADODARA - 390 007

TECHNICAL SPECIFICATIONS

FOR WEDGE CONNECTORS

GETCO / E / TS – WEDGE CONNECTOR/R1 July, 2022

SPECIFICATIONS FOR WEDGE CONNECTORS

(1) Wedge connector should be FIRED - ON or powder actuated only.

(2) The power booster should be colour coded for proper installation of the wedge connectors.

(3) Wedge connector members - tapered 'C' shaped spring member and wedge should be made from special aluminium alloy of high ductility and electrical conductivity. When installed, it will provide a tenable electrical and mechanical connection for solid or stranded conductor combination including ACSR conductor.

(4) The dimensions for the wedge shall be manufactured to close tolerances to ensure repeatability and reliability of the connection.

(5) All sharp edges and burrs shall be removed.

(6) The wedges shall be burnished to achieve optimum surface roughness for electrical contact.

(7) The wedge connector shall meet the current cycle test requirements as per ANSI, C 119.4-1998 Class AA. When connected as specified, samples shall indicate electrical stability for terminated connectors. The resistance of connection, when measured as specified shall be stable through out test. The samples shall be tested to 500 on/off current cycles with the control conductor raised between 175 C to 180 C above ambient.

(8) The wedge connector shall meet the mechanical requirements as per ANSI C 119.4-1998 Class 3, minimum tension. When tested as specified or 5% of the rated cable strength of the weaker conductor.

(9) The wedge connector shall meet the following thermal shock / salt spray test.

a) Hours at 150 C.
b) 15 minutes at 0 C water, immediately from the oven
c) 30 minutes at 150 C.
d) 20.75 hours at room temperature

(10) Salt spray corrosion, samples shall be subjected to a 30 day salt spray corrosion test. Each daily exposure shall consist of:

a) 15 hours in 5% salt spray atmosphere
b) 1 hour in drying over at 100 C.
c) 8 hours at room temperature.

(11) During installation, the wedge of wedge tap shall be driven inside the "C" member at high velocity between the run & tap conductor so as to spread the "C" member to ensure high retentive force on the conductors. A locking tab, formed balance on the tool should prevent the wedge from loosening once it has been driven into position.

(12) The wedge terminal shall have back up conductor cleaning capability during application. The Wedge Terminals should ensure stable & low contact resistance under varying load conditions & the thermal cycling effects.

(13) An oxide inhibiting compound placed in the wedge & "C" member groove of Wedge Terminals.

(14) All acceptance tests as per IS 5561 1970 shall be carried out during inspection by GETCO inspector.

(15) Type tests shall be considered valid for the period of Ten (10) years & shall be valid as on last date of submission of bid.