

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED

From

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To

The Chief Engineer,
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Lr.No.SE / TEDC / TPR / AEE / GL / AE2 / F.Interruption / D. 1048/ 2021, Dt 04/08/2021

Sir,

Sub: Electricity – Tirupur EDC– Methods adopted in reducing the Fault Trip on Distribution Feeders -submission–Reg.

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In the process of ensuring interruption free and reliable distribution of supply following improvement works are being carried out in Tirupur Circle for reducing the fault trips due to birds and other no visible faults.

It was observed that some of the break downs have occurred due to multiple fault trips on the same feeder which were un noticed and resulted in the jumper cut ,over sag (thermal expansion),Glow etc.

Hence the new improvement works have been carried out after a complete ground patrol and the local observations. After these improvements works the number of fault trips have come down and efforts are being taken to keep at minimum.

Submitted for information please

Yours Faithfully,

s/d 04/08/2021

**Superintending Engineer
Tirupur EDC/Tirupur**

Encl -7 sheets

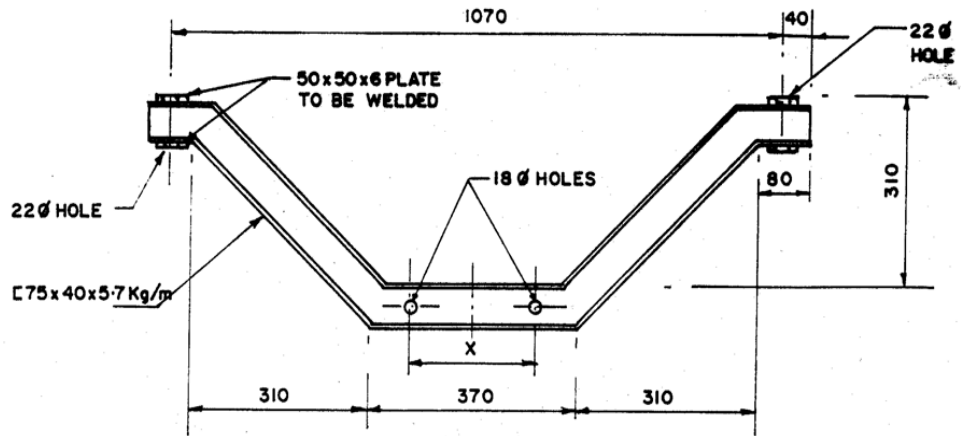
Copy to the Superintending Engineer/ RE & ID/ Chennai

BIRD FAULT MITIGATION

- 1) Bird faults are happening mostly where the HT lines are passing through areas like dumped with Garbage, Food wastage, Poultry and Slaughterhouse wastes. It was observed that the Faults are occurred while the birds are climbing up with the food waste and touch between the lines and electrocuted causing HT feeder to trip. In order to avoid such happenings it was decided to increase the gap between the conductors by using 5.0 ft cross arms (from 3.5 ft) and providing the top middle conductor with compressor air hose pipes as insulation.

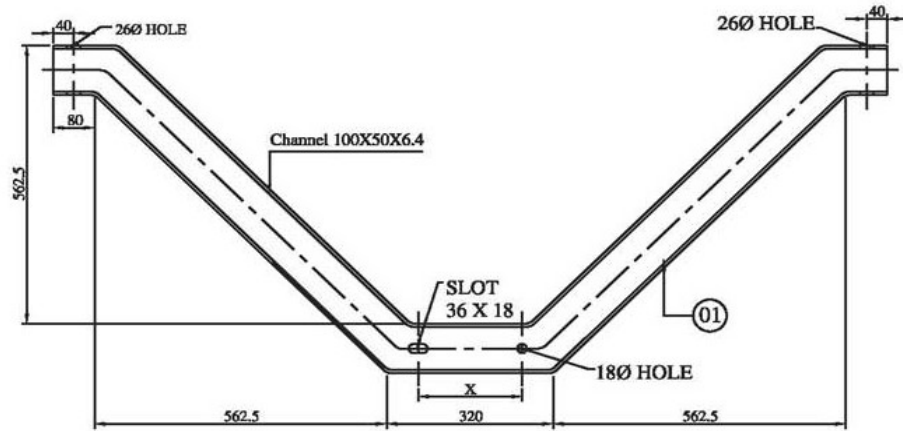


CONSTRUCTION STANDARD
A-6



ELEVATION

33 KV V-CROSS ARMS WITH POLE TOP BRACKET & BACK CLAMPS FOR SINGLE POLE
Cat. No.- CCSP-33



ELEVATION

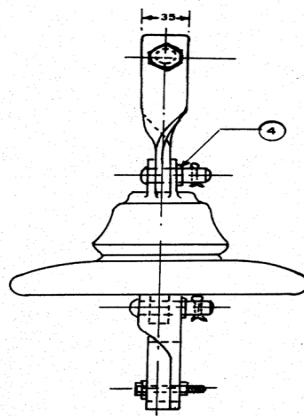


Compressor air hose

- 2) By increasing the creepage distance at the pin point and cut point in the fault prone areas by replacement of conventional porcelain discs by polymer disc which has avoided short circuits with ground by birds, squirrels, cat etc. As the surfaces of the polymer insulators are flexible and highly inconvenient to sit or move along the surface for them. This method has been implemented and so far no further faults have been noticed so far.



CONSTRUCTION STANDARD
C-2



END VIEW

3) Replacement of conventional pin insulator with Polymer pin insulator



- 4) In certain places the loose stay came in contact with the live wire during heavy winds causing fault trips on earth fault since the stay clamps and metal parts on the poles are earthed. In order to avoid such type of faults in future the stay wire was tightened and placed two stay insulator one at the top and another below the lowest conductor to avoid fault trip (EL) due to accidental contact of live wire and result in no visible fault.



Stay provided below lowest conductor in 11KV Ganapathipalayam feeder of 110/11KV Arulpuram SS in Tirupur Circle

Middle phase insulated to prevent bird fault in Tirupur Circle



5) flags



s/d 04/08/2021

Superintending Engineer
Tirupur EDC Tirupur