



## Gujarat Power Research & Development Cell

(A Govt. of Gujarat Initiative)

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# Redesigning of Transformer Center Structure Dimension

**Title of the Research:** Redesigning of Transformer Center Structure Dimension

**Present System:** Our DISCOM spend lots of money on fabrication material. As per DISCOM practice, transformer structure is key structure for the DISCOM. For all category of transformer, we are using same kind of 9 Feet transformer Structure. As per our field experience, we are facing many issue for installing TC structure, like space problem in urban/Rural areas, not follow same design of all structure, life of fabrication material, more cost etc., which is esthetically not good



**Limitations of the present system:**

- Space Problem particular in Urban, Industries, villages areas;
- Life of Fabrication material low in particularly Costal and Chemical Industries areas;
- Minimum 21 nos. of items used in one structure so what happen many material is missing due to non availability of materials;
- Asthetic look is not good.

### **Detail report of Innovation/solution:**

- The redesigning transformer center structure has the specific applications and would be more beneficial to the existing structure, for the various reasons.
- Structure have a features for require less space, better quality, better strength at low cost.
- Transformer centre fabrication design is approx. 7 feet structure. Particularly structure have divided in to five parts. (1) Channel for Shackle insulator and lighting arrestor (2) Projected DO fuse Channel with the bracing angel and flat (3) Transformer support channel with base mounting channel (4) Misc Channel for installation of LTDB, Meter etc. (5) Side clamp, Stay Clamp, nut bolts etc. All the material shall be pass through 80 micron hot deep galvanised process. In channel/Angel shall be providing eye slot for better option for nut bolts fittings.



### **Field study report :**

- Structure installed on dated 04.03.18 at Pramukh Corporate, Raysan under Kudasan Sub-Division, Gandhinagar Division.
- After some minor modification and suggestion comes for bolts in structure are incorporate and develop final specification, drawing and GTP accordingly.

### **How does new innovation help to overcome Limitations of the present system:**

Benefits of Redesigning of Transformer Center Structure over the present system following:

- Aesthetic look;
- Cost Effective Solution;
- Long life;
- Adopt proper installation method by line staff;
- Output of staff and contractor increased;
- Easy to material management;
- Easy to Material handling;