



ENGINEERING DESIGN BUREAU
Consulting Engineers, Planners & Architects

TRANSMISSION

Lines

Overview

Engineering Design Bureau has also designed, supervised, fabricated and offered consultation of transmission lines for various clients, since our founding in 1989. Our firm is primarily an Engineering based company, which has always stressed upon the highest standards of technical quality. We have an independent Design Group composed of highly qualified Engineers who are up to date and well conversant in the latest design techniques. A number of Engineers trained by EDB form the nucleus of many companies working on transmission line construction.

In continued search for technical excellence, EDB was amongst the first few companies in Pakistan to introduce Computer Technology for Construction Design and Project Management.



Services & Specifications

List of Services EDB Provides

EDB has design capabilities in the following fields:

1. Soil Investigation:

Design of foundation is based on soil test report of construction site. Soil tests for construction of lattice towers or any structure is the first step in construction planning to understand the suitability of

soil for proposed construction work. Our expert field team can collect accurate information for physical properties of soil at construction site and collect samples from soil and rock strata at excavated depth.

2. Civil Works:

This part of work normally tackles foundation design which is the base of all structural design work. Our engineers have expert experience in foundation design that are subjected to vibratory loads. EDB's expert engineers make this design by taking into consideration soil condition via soil investigation/testing and overall load and/or forces the towering structure will bear.

3. Tower Design:

Tower design is one of EDB's mainstay and therefore have expert experience in this area of work. This is possible through first soil tests for construction of transmission line towers, the structures own weight and the overall load and/or forces the towering structure will bear such as wind and load placed on the tower (transmission lines).

4. Profile & Tower spotting:

Engineer Design Bureau provide a celluloid template, shaped to the form of the suspended conductor, is used to scale the distance from the conductor to the ground and to adjust structure locations and heights to (1) provide proper clearance to the ground; (2) equalize spans; and (3) grade the line.

5. Conductor Size Configuration:

Engineer Design Bureau designs the transmission line tower which depends on how much power is going to be transferred. EBD provides calculations of conductor size configurations depending the power to be transferred. EDB designs foundation, lattice tower structure, cross arms that holds the insulators which holds the conductor, spacers, earthing and dampers.

6. Sag & Tension Calculation:

EDB also provides calculations of sagging of transmission lines. The sag & tension calculations are used for allocating the position and height of the supports correctly on the profile. The sag & tension calculations highlight the limitations of vertical and wind load. It also limits the minimum clearance angle between the sag and the ground for safety purpose.

Standards EDB Uses

The following Standards are currently being implemented by EDB:

RS-222, RS-222-A, RS-222-B, EIA-222-C, EIA-222-D, EIA-222-E, TIA/EIA-222-F, ANSI/TIA-222-G (including TIA-222-G-1 and TIA-222-G-2), ANSI/TIA-222-H, and CSA S37-01.

Designing & Supervision by EDB

Based on testing and analysis EDB's expert engineers provide designs as well as supervision services in the following areas as per client's needs:

- Structure design
- Architecture design
- Public Health
- HVSE
- Electrical design
- Fire Fighting
- Tower 3D Modeling
- Tower construction Supervision.

Result Output

Any of the outputs mentioned below can be provided depending of the scope and specifications as per client's requirements:

- Extensive, customizable output reports, viewable directly in Microsoft Word or Microsoft Word Viewer
- Finite Element Analysis results for detailed solution diagnostics
- DXF export of model geometry.
- Structure Feasibility report.
- Structure Stability certificate.

For more information call on our landline given below:

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