Project: Support for design of Guyed Mast.

Client: UK based compnany providing consultancy services in most sectors of civil & structural and infrastructure Engineering including specialist structures.

The client is UK based company providing Civil and Structural Engineering Consultancy services committed to achieve practical and economic solutions in the fields of commercial, industrial, retail, residential and leisure sectors. Their services include Structural Engineering, Infrastructure including highways and drainage, Surveys, Specialist structures, Project management and CDM coordinator services. The client required assistance from a well established, committed and organized structural consultancy capable of providing their services in specialist structures in competitive rates.

Guyed mast

Paradigm's assistance was taken for doing the non linear analysis of 83m tall guyed mast with a triangular foot print of size 60cm side. The wind load on the tall slender structure was taken care by 3x9 guys. Paradigm had to calculate the size of the guys and the reaction at the guy support.

Objective:

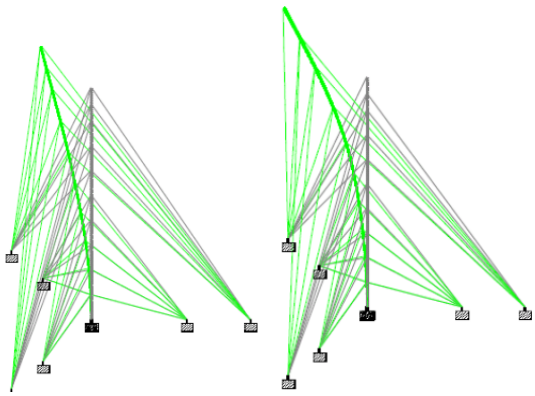
- To do the nonlinear analysis of the structure for ice and wind loads.
- To check the deflection of the structure.
- To advice the size of guy cables and pretension force to be provided in the guys.
- To provide the force for which guy anchors are to be designed.
- To prepare design and drawing document.

Services:

- Carried out the nonlinear analysis of the structure for snow and wind in different angles.
- Provided most economical sizes and pretension forces for guys.
- Checked the deflection when all the guys are intact.
- The adequacy of the guy size provided are checked when to of the guys connected at the top level are broken.

Benefits:

- Economic sizes of the guys provided.
- Expert opinion.
- Timely submission



Guys intact **Two top guys broken**

Deflected Shape

Software Used: STAADProV8i, Bricscad

Technology: 3D-modelling, Nonlinear analysis, cable analysis.

Design Codes Used:
Country : Europe
Codes used : BS 8100-4 1995

Duration : August-Septmber 2011

Team Size : 3 Engineers and 1 Cad Staff