

Diseño de estructura modular para la instalación de un sistema fotovoltaico

Abstract:

In the present project the design of a modular structure that supports a pair of solar panels is considered. Design parameters were taken into account for the design of structure; as the weight of panels, the weight of structure itself, the weight of a cabinet containing a battery, an inverter and a converter, in addition to the wind pressure, assuming a maximum speed of 110 km / hr. In order to offer a structural validation it was calculated under a safety factor of 200%. In the present proposal, commercial tubular profiles are used, which makes it possible to attend to aesthetics without neglecting their resistance. In the proposed design, its modularity and easy assembly stand out, and it will be aimed at offering simple manufacturing, rapid installation and economic maintenance, which makes it an ideal proposal for communities with difficult access. Using software for its structural validation, a von Misses stress analysis and a total deformation analysis are proposed.

Keywords:

Structural design, proposal, modular

Article Outline:

1. *Introducción.*
2. *Metodología*
3. *Montaje*
4. *Análisis estructural*
5. *Resultados*
5. *Agradecimiento.*
6. *Conclusiones.*
7. *Referencias.*

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