IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 6, June 2022
Impact Factor: 6.252

Influence of Wind Characteristics and Other Parameters on Module Mounting Structures

Anantharam T[1] and Dr. R. Manju[2]
PG Student, Department of Civil Engineering[1]
Associate Professor, Department of Civil Engineering[2]
Kumaraguru College of Technology, Coimbatore, Tamil Nadu, India
anantharam22@gmail.com[1] and manju.r.ce@kct.ac.in[2]

Abstract: *As one of the most common and imperative contributing factors to clean energy aspect, solar energy takes a significant role around the whole world. Among neighbouring countries regarding the energy sources India has a relatively more potential for solar energy to decrease its energy dependence to the other countries and to increase awareness for sustainable, easily reachable, economical and continuous energy use. In the photovoltaic (PV) solar power plant projects, PV solar panel (SP) support structure is one of the main elements and limited numerical studies exist on PVSP ground mounting steel frames to be a research gap that has not be addressed adequately in the literature. In this paper, aiming to provide a contribution to this gap, a PVSP steel support structure and its key design parameters are described to obtain actual demand of environmental effect like loads wind, snow, and seismic loads.*

Keywords: Photovoltaic (PV), Solar Panel (SP), Steel, Support Structure, Ground-mounted Solar PV Plant, steel structure

REFERENCES

[1]. A, Mihailidis, K. Panagiotidis, K. Agouridas, "Analysis of Solar Panel Support Structures", 3rd ANSA &µETA International Conference, 2011.
[2]. Jinxin Cao, Akihito Yoshida, Proshit Kumar Saha, Yukio Tamura, "Wind loading characteristics of solar arrays mounted on flat roofs," Journal of Wind Engineering and Industrial Aerodynamics. Vol.3, Page No. 214-255,2013.
[3]. Chih-Kuang Lin, Chen-Yu Dai, Jiunn-Chi Wu, "Analysis of structural deformation and deformation induced solar radiation misalignment in a tracking photovoltaic system" Renewable Energy vol.-59, Page No. 59-64, 2013.
[4]. Sayana M. and MeghaVijayan," Buckling Analysis of Solar Panel Supporting Structures", SSRG International Journal of civil Engineering, Vol.3, August 2018.