8-22-2015

AP Alternatives Modular Solar Racking

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DOI: 10.5703/1288284315786

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Recommended Citation
http://dx.doi.org/10.5703/1288284315786
AP ALTERNATIVES: MODULAR SOLAR RACKING

THE NEED
Solar panels have been used to generate and supply electricity in various applications such as residential and commercial buildings. Therefore, a need for a quicker approach to installation as well as the need to reduce workmanship to speed up the process is needed.

THE TECHNOLOGY
It is a solar racking system that uses high strength steel for the racking. Solar racks are developed through the use of automated equipment to “preassemble the racking hardware, pre-install the solar modules, and drive helical anchors into the ground rapidly” [1]. So instead of installing one panel at a time, AP Alternatives has created a new method that uses machines to make the process easier. This new automation of the installation reduces the labor required on-site as well as the time needed to complete installation on-site, which provides cost, and time savings.

Figure 1 Solar panels
The Benefits

- **Pre-Penalization**: Solar modules are preinstalled onto the racking system before site delivery.
- **Modular Design**: Only 3 main components—all prefabricated in a quality controlled environment.
- **Installation Rate**: Extremely time and labor efficient utilizing our modular design.
- **Module Grounding**: Modules are all pre-grounded to the racking system.
- **Prewiring**: Module series connections are made and wire management is completed for lead wires.
- **Snap Cap**: APA Proprietary Snap Cap is simple to install and allows for extremely tight connections.
- **Interlocking**: Rows can be constructed to any desired length.
- **Integrated Ballast Tray**: Riser leg doubles as Ballast Tray and holds 8” x 16” pavers.
STATUS
Over 4,200 modular racks have been installed and AP Alternatives expect to install over 40,000 modular racks in 2014.

REFERENCES

REVIEWERS
Peer reviewed as an emerging construction technology

DISCLAIMER
Purdue University does not endorse this technology or represents that the information presented can be relied upon without further investigation.

PUBLISHER
Emerging Construction Technologies, Division of Construction Engineering and Management, Purdue University, West Lafayette, Indiana