

Technologic Information about Photovoltaic Applied in Urban Residences

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Abstract : Among renewable energy sources, solar energy is the one that has stood out. Solar radiation can be used as a thermal energy source and can also be converted into electricity by means of effects on certain materials, such as thermoelectric and photovoltaic panels. These panels are often used to generate energy in homes, buildings, arenas, etc., and have low pollution emissions. Thus, a technological prospecting was performed to find patents related to the use of photovoltaic plates in urban residences. The patent search was based on ESPACENET, associating the keywords photovoltaic and home, where we found 136 patent documents in the period of 1994-2015 in the fields title and abstract. Note that the years 2009, 2010, 2011, 2012, 2013 and 2014 had the highest number of applicants, with respectively, 11, 13, 23, 29, 15 and 21. Regarding the country that deposited about this technology, it is clear that China leads with 67 patent deposits, followed by Japan with 38 patents applications. It is important to note that most depositors, 50% are companies, 44% are individual inventors and only 6% are universities. On the International Patent classification (IPC) codes, we noted that the most present classification in results was H02J3/38, which represents provisions in parallel to feed a single network by two or more generators, converters or transformers. Among all categories, there is the H session, which means Electricity, with 70% of the patents.

Keywords : photovoltaic, urban residences, technology forecasting, prospecting

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