عنوان مقاله:

PROPOSING NEW REGRESSION MODELS FOR PREDICTION OF SOLAR RADIATION IN TEHRAN

محل انتشار:

اولین کنفرانس و نمایشگاه بین المللی انرژی خورشیدی (سال: 1393)

تعداد صفحات اصل مقاله: 7

نویسندگان:

Ahmad Razeghi - *Department of Mechanical Engineering, Islamic Azad University Science & Research Branch, Tehran, Iran*

Mohammad Hosein Daneshfar - *Corporate Planning Department of Iranian Offshore Oil Company, Tehran, Iran*

Saeed Akbarzadeh - *Corporate Planning Department of Iranian Offshore Oil Company, Tehran, Iran*

Masoud Moadel - *Corporate Planning Department of Iranian Offshore Oil Company, Tehran, Iran*

خلاصه مقاله:

Solar radiation is known as fundamental information for many different research subjects. Regarding the fact that measuring the exact amount of direct solar radiation is not applicable, the estimation models can provide acceptable results. In this research, solar radiation estimating methods are surveyed, and regression models are introduced as simple and effective methods. Therefore, a number of new regression models which use meteorological parameters as input data are proposed and the error of each model are calculated. Amount of solar radiation, solar hours, minimum temperature, maximum temperature and relative humidity which had measured from 2009 to 2011 in Aghdasieh - Tehran synoptic weather station are used in regression models. Results of this research indicate that using the amount of difference between maximum and minimum (ambient) temperature accompany by the number of day, propose minimum amount of mean square error as 3.9741. Evaluations show that applying all different parameters in regression models simultaneously, is the cause of estimation error augment.

کلمات کلیدی:

Regression, radiation, solar, prediction

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/254632