

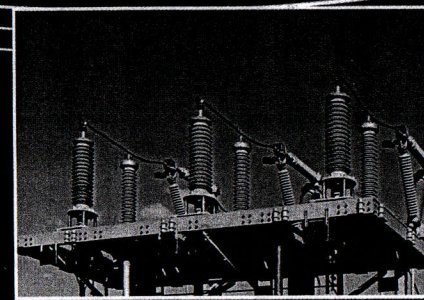
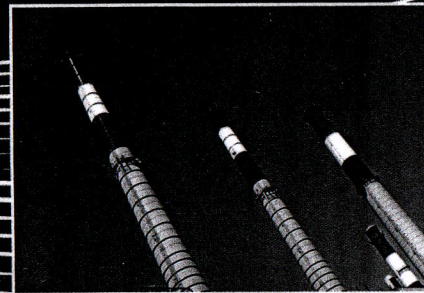
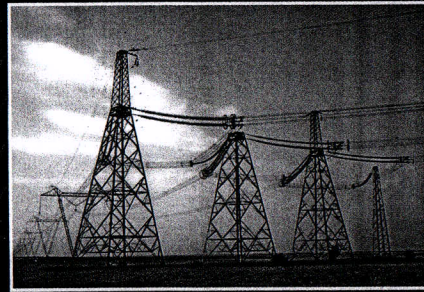
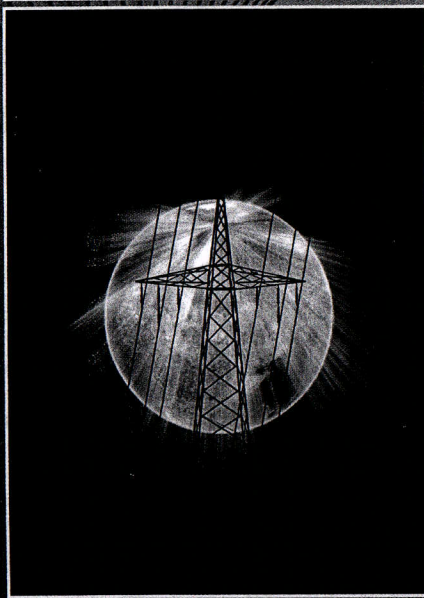
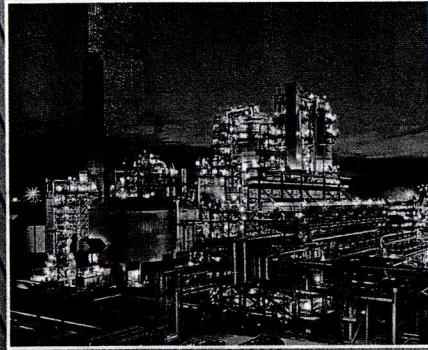
ISSN br. 0354-8651



List Saveza energetičara
Broj 1-2 / Godina XIX / Mart 2017.
UDC 620.9

energija

■ ekonomija ■ ekologija



ENERGETIKA 2017

ENERGETIKA 2017.

XXXIII međunarodno savetovanje



energija



ekonomija



ekologija

ENERGETIKA 2017.

Pokrovitelj savetovanja

**Ministarstvo rudarstva i energetike,
Ministarstvo prosvete, nauke i tehnološkog razvoja,
Ministarstvo poljoprivrede i zaštite životne sredine,
Ministarstvo privrede
PKS, JP EPS, NIS a. d., JP EMS, JP Srbijagas**



SAVEZ ENERGETIČARA

Adresa: 11000 Beograd, Dečanska 5

Telefon: + 381 11 32 26 007

E-mail: savezenergeticara@eunet.rs

www.savezenergeticara.org.rs

ZBORNIK RADOVA

Zlatibor, 28.03. - 31.03.2017

Brankica ŠUTIĆ, Milan MARJANOVIĆ, Snežana DRAGIĆEVIĆ
Univerzitet u Kragujevcu, Fakultet tehničkih nauka u Čačku

UDC: 621.317.38:69

Uticaj izolacionih panela sa IPN-QuadCore ispunom na smanjenje potrošnje energije poslovnog objekta

REZIME

U savremenom građevinarstvu koriste se materijali koji ispunjavaju uslove zahtevanog toplotnog komfora, utiču na smanjenje potrošnje toplotne energije i ekonomski su isplativi. Izgradnja objekata po načinima i standardima koji su u vreme najveće gradnje stambenih objekata važili nisu se pretežno bazirali na količinu potrošnje toplotne energije tokom njihove eksploatacije. Iako se pretežno podigla svest stanovnika o uštedi energije u zgradarstvu, kao i broj rekonstruisanih postojećih objekata sa najnaprednijim izolacionim materijalima, globalno posmatrano stanje energetske efikasnosti objekata još uvek nije na potrebnom nivou. U ovom radu izvršena je analiza potrošnje energije objekta primenom različitih izolacionih materijala. Pored standardnih konstruktivnih sklopova, u radu je izvršena analiza primene novih ventilisanih fasada sa IPN-QuadCore ispunom, kao materijala sa dobrim izolacionim karakteristikama, visokim stepenom otpornosti na požar a čija primena daje estetski zadovoljavajući izgled objekta. Analize su sprovedene za višespratni poslovni objekat koji se nalazi u Beogradu pomoću programa za energetske modelovanje DesignBuilder. Rezultati rada pokazuju značajne mogućnosti za unapređenje energetske efikasnosti analiziranog objekta primenom novih tehnologija ventilisanih fasadnih sistema u odnosu na standardne poliuretanske panele, kao i ostale izolacione materijale.

Ključne reči: izolacioni paneli, dinamičke simulacije, potrošnja energije.

ABSTRACT

Materials which meet the required conditions for thermal comfort, and which serves to reduce heat consumption and that are economically viable are used in modern construction. Construction of buildings according to the methods and standards which were valid at the time of the largest construction of residential buildings have not been mainly based on the heat energy consumption. Even though the population has raised awareness of building energy savings, as well as the number of reconstructed existing buildings with the most advanced insulating materials, generally, the state of energy efficiency in buildings has not yet reached the required level. In this paper, an analysis of the buildings energy consumption using different insulating materials was performed. In addition to standard structural assemblies, the paper analyzes the application of new ventilated facade panels with the IPN-QuadCore filling, as a material with good insulation characteristics, a high degree of resistance to fire and whose application provides an aesthetically pleasing appearance of the building. Using energy modeling software DesignBuilder an analyses for a multi-storey office building located in Belgrade were conducted. The results shows a significant potential for improving energy efficiency of the analysed object using the new technology of the ventilated facade system compared to standard polyurethane panels and other insulation materials.

Key words: insulated panels, dynamic simulation, energy consumption.

