عنوان مقاله:

A review of RDF extraction from municipal waste as an innovative solution to waste management in Iran

محل انتشار:

دومین کنفرانس ملی و اولین کنفرانس بین المللی چالش های محیط زیست: صنعت و معدن سبز (سال: 1403)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Mohammadmahdi Nabi – Master of Science Student in Civil & Environmental Engineering, Department of Civil & Environmental Engineering, Amirkabir University of Technology, Tehran, Iran

Taghi Ebadi – Associate Professor, Department of Civil & Environmental Engineering, Amirkabir University of Technology, Tehran, Iran

Reza Maknoon – Associate Professor, Department of Civil & Environmental Engineering, Amirkabir University of Technology, Tehran, Iran

Ghorbanali Dezvareh – Assistant Professor, Department of Environmental Engineering, Mehralborz University, Tehran, Iran

Hamid Zarrabi – Master of Science in Civil & Environmental Engineering, Department of Civil Engineering, K. N. Toosi University of Technology, Tehran, Iran

خلاصه مقاله:

Landfills still dispose of a significant portion of municipal solid waste (MSW), posing environmental concerns. Energy recovery, particularly through refuse-derived fuel (RDF), emerges as a sustainable approach to MSW management. Currently, mechanical and biological treatment processes can convert MSW into refuse-derived fuel (RDF). This study introduces various methods of extracting energy from waste and investigates RDF as an added value to waste management. This study investigated RDF's production method, applications, and standards. Also, according to the results, the global standard for RDF has not yet been determined, and the percentage of its use cannot be clearly determined. This research explores the role of RDF in achieving sustainable development and circular economy goals. This led to the introduction of a set of indicators for sustainable development goals, aimed at advancing RDF production goals. Also, the participation of RDF in the circular economy and transition from the linear economy are evaluated due to its ability to reuse waste.

کلمات کلیدی:

(Municipal solid waste (MSW), Waste-to-energy (WtE), Refuse-derived fuel (RDF), Sustainable Development Goals (SDGs), circular economy (CE