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GREEN TRANSFORMATION OF SCRAP METAL. MCDA AND SWOT ANALYSIS OF METAL MELTING METHODS: CASE STUDY OF LATVIA

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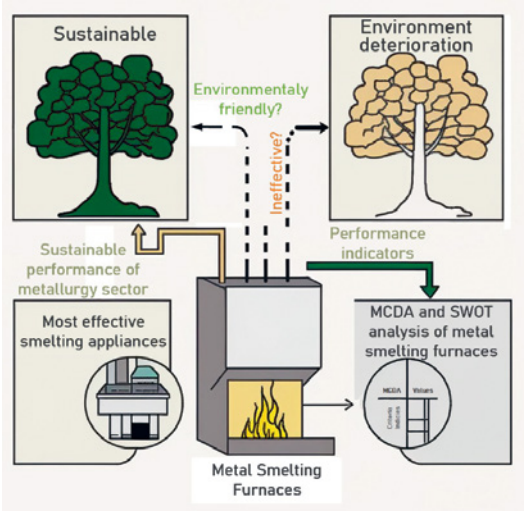
Abstract – Metal is one of the most used materials in the world. It was an important impetus in technological development during the industrial age and is still pushing us forward to this day. Along with the growth of metal consumption, the amount of scrap metal also increases. The correct use of this kind of waste plays an important role in reducing the negative impact of the metalworking industry on the environment. Replacing raw metal with scrap metal can reduce the amount of electricity consumed by up to 10 times and the amount of CO_2 emissions created by up to 30 times. The choice of the optimal scrap metal processing technology also plays an important role. The metal melting furnace can be considered the backbone of the industry, and the environmental indicators of the entire scrap metal melting process depend on its efficiency. In this paper, 8 metal melting furnaces are analysed according to 11 natural criteria. In addition, a SWOT analysis is carried out to determine the efficiency of the metal smelting process in Latvian metalworking enterprises and the possibility of expanding enterprises in the future.

Keywords – Emissions; Latvia; metallurgy; MCDA; scrap metal; smelting; SWOT



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