

# **Economic Assessment of Burner Replacement in Various Industries of Iran**

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## **Abstract**

Applying the new efficient burner technology in various industries is a primary subject of interest for reducing the fossil fuel energy consumption as well as reducing the air and noise pollutions. Replacing the old and low-efficiency burners with the new efficient ones seems to have noticeable saving potential in many industrial sections of Iran.

In this paper, the replacing of current running low efficiency burners in 27 studied industries with the new high-efficiency burners was investigated in four industrial groups. The Equivalent Uniform Annual Cost (EUAC) which is a comprehensive economic evaluation method for two competing industrial projects was used for this assessment. The estimation of need for new efficient burners (based on collected statistical data) showed that there was about 570,000 burners presently running in the 27 studied industries in four industrial groups from which 66% (about 380,000 burners) were economical to be replaced with the high-efficiency burners. Furthermore, economic evaluation showed that in most of non-metal mineral industries such as cement, lime, and brick production, and some metal industries such as casting, replacing the old burners with the high efficiency ones was very profitable.

**Key words: "High-efficiency industrial burners", "Industrial groups", Economic evaluation", "Equivalent Uniform Annual Cost method"**

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