

## **Optimum Design of Heat Exchanger in Diesel Engine Cold EGR for Pollutants Reduction**

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**Abstract :** Using of cold EGR method with variable venturi and turbocharger has a very significant affection on the reduction of NOX and grime simultaneously. EGR cooler is one of the most important parts in the cold EGR circuit. In this paper optimum design of cooler for working in different percents of EGR and for determining of optimum temperature of exhausted gases, growth of efficiency, reduction of weight, reduction of dimension and expenditures, and reduction of sediment and optimum performance by using gas oil which has significant amounts of brimstone are investigated and optimized.

**Keywords :** cold EGR, NOX, cooler, gas oil

**Conference Title :** ICAME 2014 : International Conference on Automotive and Mechanical Engineering

**Conference Location :** Paris, France

**Conference Dates :** November 21-22, 2014