

عنوان مقاله:

Integrated Exhaust Manifold into Cylinder Head and Cooling It

محل انتشار:

هفتمین همایش بین المللی موتور های درونسوز (سال: 1390)

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خلاصه مقاله:

In recent years, reducing in fuel consumption and decreasing in air pollution have been possessed special important in automotive industry. Reduction in automobile pollutant is so important that environmental standard laws forced the manufacturers to follow the rules. Carbon dioxide gas influence on making the earth warm, made the European Union to decide a special policy which says, each automobile must produce CO₂ gas in 2015 [1]. The only method to decrease the CO₂ gas emission in automobiles is following the optimum fuel consumption theory. Integrated exhaust manifold into cylinder head, by downsizing the engine, avoiding of over-fuelling at full load condition and reduction of fuel consumption has a significant role on reducing the emission pollutant, especially CO₂ gas. Integrating exhaust manifold into cylinder head has other benefits such as suitable operation in catalyst, making the engine lighter, reducing manufacture costs and suitable location of engine. Plenty of benefits which come by integrated exhaust manifold into cylinder head, causes the conditions which are benefit for manufacturers and customers, so the tendency for producing it, is increased. On this paper a new water jacket is designed for integrated exhaust manifold into cylinder head to cool the exhaust manifold. On this condition Cast Iron exhaust manifold could be replaced with Aluminum one.

کلمات کلیدی:

Integrated Exhaust Manifold, Downsizing, Cooled Exhaust Manifold, Over-Fuelling, Economic Fuel Consumption, Aluminum Exhaust Manifold, IEM

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