Homogeneous Charge Compression Ignition Market Research Report – Global Forecast till 2023

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Description:

Homogeneous Charge Compression Ignition (HCCI) Market Research Report: Information by Product Type (Two-Stroke HCCI Engine and Four-Stroke HCCI Engine), by Vehicle Type (Passenger Cars and Commercial Vehicles), and by Region - Global Forecast till 2025

Market Synopsis

Homogeneous charge compression ignition (HCCI) is a type of an internal combustion engine, where a homogeneous mixture of fuel and air is injected into the combustion chamber with a high air-fuel (a/f) ratio, the injected mixture is compressed until it auto-ignites, without the use of spark plug unlike spark ignition (SI) engines. HCCI has a very lean combustion process, which offers simultaneous reductions in both NOx and soot emissions from internal combustion engines. In the automotive industry, HCCI is considered as an alternative to conventional diesel combustion due to increasingly stringent diesel emissions limits, globally. HCCI plays an important role to enhance engine performance and reduce vehicle emissions.

The improving automotive infrastructure in emerging nations, increasing production and sales of vehicles, stringent environmental norms, growing concern over environment safety, and vehicle emissions are some of the factors that are responsible for the growth of this market. This growth, however, is restrained by the lack of skilled workers, increasing electric vehicle sales, and initiatives taken by major countries to phase out all internal combustion vehicles by 2040. The growing commercial vehicles market, improving economy, growing population, and rising purchasing power of individuals in developing countries, such as China and India, are some of the factors providing growth opportunities.

The global homogeneous charge compression ignition (HCCI) market is projected to witness significant growth during the study period. The growing need for vehicle safety and improved engine performance is accelerating the growth of the global homogeneous charge compression ignition (HCCI) market. The growing competition among homogeneous charge compression ignition (HCCI) manufacturers, such as Daimler, Mazda, and General Motors, and the increasing support from government to reduce carbon emissions, has prompted manufacturers to design the product as per the guidelines set by governing bodies, such as automotive engine manufacturers associations (EMA) and automobile manufacturers association.

Segmentation: Homogeneous Charge Compression Ignition (HCCI) Market
The global Homogeneous Charge Compression Ignition (HCCI) market is segmented on the basis of product type, vehicle type, and region. On the basis of product type, the market has been divided into two-stroke HCCI engine and four-stroke HCCI engine. On the basis of vehicle type, the market has been divided into passenger cars and commercial vehicles.

Geographically, the global homogeneous charge compression ignition (HCCI) market has been segmented into four major regions, which are North America, Europe, Asia-Pacific, and the Rest of the World. Asia-Pacific is estimated to hold the largest market share during the forecast period owing to the growing automotive infrastructure and increasing government efforts to curb vehicle emissions across the region. Moreover, the growing disposable income in India and China is expected to boost the demand for HCCI engines. North America is expected to witness significant growth during the forecast period due to the growing sales of passenger cars across the US, Mexico, and Canada.

Some of the prominent players in the global Homogeneous Charge Compression Ignition (HCCI) market include BMW (Germany), Daimler AG (Germany), General Motors (US), Honda Motor Company, Ltd. (Japan), Hyundai Motor Company (South Korea), Mazda Motor Corporation (Japan), Volkswagen of America, Inc. (Germany), Nissan Motor Co., Ltd. (Japan), Audi AG (Germany), and Mercedes-Benz USA, LLC, (Germany).

The report for the global homogeneous charge compression ignition (HCCI) market by Market Research Future covers extensive primary research. This is accompanied by a detailed analysis of qualitative and quantitative aspects by various industry experts and key opinion leaders to gain deeper insights into the market and industry performance. The report gives a clear picture of the current market scenario, which includes the historical and forecasted market size, in terms of value and volume, technological advancement, macroeconomic, and governing factors of the market. The report provides comprehensive information about the strategies of the top companies in the industry, along with a broad study of the different market segments and regions.
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