Mercedes-Benz: ecology programmes and future technologies

Author: Ţurcan Iurie
Ling. cons.: E. Cuşnir

This article is about innovations and ecological technologies elaborated by Mercedes-Benz and applied in their recent car models.

Mercedes-Benz cars are the main part of the automobile history. Mercedes-Benz were first to build a diesel-powered car in 1930, the first to build a car with fuel injection in the 1950s and the first to offer antilock brakes in the 1970s. Their cars have also been important in auto racing history.

A new joint-venture model produced is the *mid-engine P8 sports car*. It has carbon-ceramic brake discs and so much pushing power that it stops the car from 200 km/h in just 60 seconds. Mercedes-Benz claims that these discs provide better stopping power and better fade resistance (up to 1,200 C) than steel discs when operating under an ideal working temperature. The front discs are internally vented, 370 mm in diameter and 8 piston calipers are used. Rear discs are 360 mm in diameter with 4 piston calipers. Under wet weather conditions the calipers automatically skim the surface of the discs to keep them dry. This car was not built to be economical, nor ecological, it was built to be fast.

If you want to see what technologies your car will have in about 10 years, first look at S-Class. The Mercedes-Benz *S 400 BlueHYBRID* featuring a pioneering technology of lithium-ion battery, will have its European market launch in mid-2009 [1]. A crucial element in this car's and company's success will be its groundbraking integration of a lithium-ion battery into the vehicle's air-conditioning circuit. As a result, the battery unit is able to operate at optimum system temperatures between 15-35 C° at all times, thus achieving a long service life for use in passenger cars (10 calendar years, 600,000 charging cycles) coupled with maximum efficiency.

The combination of the V6 petrol engine with the compact hybrid module will make the S 400 BlueHYBRID the world's most economic petrol-engined luxury saloon. Fuel consumption amounts to just 7.9 litres per 100 kilometres, giving world-best figures for CO2 emissions of just 186 grammes per kilometre for this category of vehicle and output [2]. In conjunction with an intelligent energy management system, the new model offers a comprehensive range of hybrid characteristics, including a user-friendly stop/start function for the petrol engine, boost effect and regenerative braking.

The advantage of the lithium-ion battery over conventional nickel-metal hybrid batteries lies principally in its compact dimensions combined with much greater efficiency and long service life. Lithium-ion batteries also have the lowest environmental impact of all battery technologies and guarantee a sustainable and cost-effective feedstock.

You can't be amazed by the basics of this car, but you will be amazed by some of its features. For example, braking assist: you just have to touch the brake pedal and it works out how much braking power you need. Also, there is something called radar guided cruise control, which makes possible setting to the car in front of you, so when they slow down, your car slows down, they speed up, you speed up. Then, it has a very useful technology – infrared headlamps for the night, so you can see much further than with ordinary headlamps. It has even a DVD player and surround sound and it is the first car in the world that can receive satellite TV.

Experts say that in Mercedes your heart beats fewer than in another car, so, if you buy one of these cars you will live longer and so will our precious planet.

Bibliography:

1. http://www.hybridcars.com/vehicle/mercedes-benz-s400-hybrid.html
2. http://en.wikipedia.org/wiki/Mercedes-Benz_S_Class