heat2power

Stand 5444

Company profile

Heat2power, a young and innovative company based in Paris, France was established in 2007 to develop and commercialize waste heat regeneration technologies with the aim to save fuel and reduce CO_2 emissions of tomorrow's cars, trucks, and ships and power generation.

Several years of research and development have been invested before patenting a new variant of the old hot air engine. Low cost, simplicity, ease of operation and maintenance, robustness, good controllability, high regeneration efficiency and high specific power have finally been combined in one single concept and represent therefore a new and major opportunity to improve fuel efficiency of vehicle powertrains. The founders' experience in the automotive industry was a major asset for the engineering of a system that is well adapted to the automotive manufacturing and after sales environment.

Where other concepts like Turbo compounding, the Stirling cycle, the (Organic -) Rankine cycle, Thermo-electrics and Thermo-chemistry so far had failed to hit the automotive market due to high cost or technical hurdles, heat2power now puts forward a simple and performing hot air machine to make efficient use of waste heat that is normally thrown away through the exhaust. Furthermore, a high efficiency of regeneration over the whole range of operation of the ICE was obtained and is a key to achieve significant fuel economy on NMVEG cycle.

The company now proposes its knowledge about heat regeneration, and its own concept in particular, to OEMs for reducing their vehicles' fuel consumption and CO_2 emissions. Additionally, relations with race teams are established to introduce WHR in race cars, primarily in Le Mans Series and in Formula 1, where the benefit is actually two-fold: Fuel economy and, perhaps most interesting in this sector: extra power for the same fuel consumption. For race engines at full power with an exhaust thermal power of about 1.8 times the effective crankshaft power, there is truly a huge potential for WHR; especially at the 1.2 kW added for each kg; a value considered as acceptable in top level motorsports. Heat2power also hopes that motorsport successes will stimulate adoption of this clean energy technology by the automotive industry.

In the opposite side of the spectrum, WHR as a 'combustion engine optimizer' is found to be fully complementary to electrification in hybrid electric vehicles. At a fraction of the cost hybrids can also become fuel efficient on the motorway…

The scalability of the technology enables applications with small and big power outputs. Markets with short return on investment time got particular commercial attention and managing director Randolph Toom expects the technology to enter the market in the power generation sector first (generator sets) soon followed in the exciting world of racing because of the short development times. Automotive and truck applications only to follow later.

In its commercial approach heat2power first proposes joint evaluation of simulations (absence of financial and technical risks for the client) before proposing joint prototyping projects and full product development.

More information on **www.heat2power.net**

Contact :
heat2power
7 Rue Adolphe Focillon
75014 Paris – France
Managing director : Randolph Toom
Phone +33 6 1103 4127
Email : r.toom@heat2power.net