



ISTITUTO MOTORI

Consiglio Nazionale delle Ricerche

AVVISO DI SEMINARIO

Martedì 27 gennaio 2015, ore 11:30
Istituto Motori - CNR, Aula Barsanti e Matteucci

Prof. Antonio Cavaliere

DICMAPI - Università degli Studi di Napoli "Federico II"

Dott.ssa Mara de Joannon

CNR - Istituto di Ricerche sulla Combustione

with

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1. DICMAPI - Università degli Studi di Napoli Federico II

2. CNR-Istituto di Ricerche sulla Combustione

Technical, ethical and aesthetical aspects of MILD Combustion

MILD Combustion refers to a class of elementary processes completely different both from deflagration/detonation, in a classic form, and also from processes that generate diffusion flames. Therefore it deserves to be analysed separately and quoted with a well-defined name. More specifically the acrostic MILD (Moderate or Intense Level of Dilution) refers to a class of elementary processes that can be identified in relation to three reference temperatures, namely maximum, frozen and auto-ignition temperatures. In MILD combustion processes these temperatures are combined in such a way that the mixture can auto-ignite and yield a relatively small temperature increase, comparable to the ignition temperature. Such a broad definition can be specified in several elementary processes in homogeneous mixture (HBBI Homogeneous Burnt Backmixing Ignition, HCCI Homogeneous Charge Compression Ignition, HFFI Homogeneous Flow Flowing Ignition) as well as in a system with separated reactants (HDDI Hot Diluted Diffusion Ignition)

The main characteristics of MILD Combustion in relation to both elementary processes and complex, practical systems (homogeneity, single mode combustion, flameless, noiseless) are outstanding and unique in respect to "classical" combustion modes and offer the chance to be analysed, in a loose way, with some pregnant and stimulating questions related to ..."ethics" and "aesthetic".

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