REal World Advanced Technologies foR Diesel Engines

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Project partners:
1 - AVL - AVL List GmbH - AT
2 - REN - Renault SAS - FR
3 - VCC - Volvo Car Corporation - SE
4 - CRF - CRF SCpA - IT
5 - CNRIM - Instituto Motori – Consiglio Nazionale delle Ricerche (CNR) - IT
6 - JM - Johnson Matthey Plc - UK
7 - RIC - Ricardo Plc - UK
8 - SCF - Schaeffler AG - DE
9 - LMM - Le Moteur Moderne - FR
10 - DELPHI - Delphi Automotive Systems Luxembourg S.A. - LU
11 - UNR - Uniresearch BV - NL
12 - IFPEN - IFP Energies Nouvelles - FR
13 - VIF - Virtual Vehicle Research Center - AT
14 - CTH - Chalmers Tekniska Högskola - SE
15 - CTU - Czech Technical University - CZ
16 - UPVLC - Universitat Politecnica de Valencia – Motores Termicos - ES

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Publishable Executive summary

Subtask 3.1.2 within REWARD is focused on development of friction and wear optimized valve train components for 4-stroke diesel engine. Therefore, different coating processes were developed by SCF to coat real valve train and bearing components. In addition, several coated components were delivered to CRF for friction measurements using an engine test rig and low viscosity oil. A clear friction reduction was achieved in the whole valve train at all investigated cam shaft speeds and temperatures using tailored coated roller finger followers. After that, two coating processes of the promising variants were scaled up to a mass production coating machine.