

# COMPACTED GRAPHITE IRON FOR ENGINE CYLINDER BLOCKS

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*Abstract. The growth of diesel engines usage for passenger cars has been remarkable in Europe, especially after the introduction of the high-pressure common-rail technology. This growth is surrounded by requirements as: less fuel consumption, emissions reduction, and larger power output and torque. Improved performance, as operation efficiency and engine power density, are being achieved by the rise of combustion chamber pressures, particularly for diesel engines. The paper provides an overview of recent trends in diesel engines improvements and related innovations in materials selection for cylinder blocks and cylinder heads. The increasing demands for higher power output and torque, and the need for weight reduction and fewer emissions, require the use of stronger materials, opening a promising space for compacted graphite iron (CGI). The properties of CGI are described, in particular those required for engine cylinder blocks.*