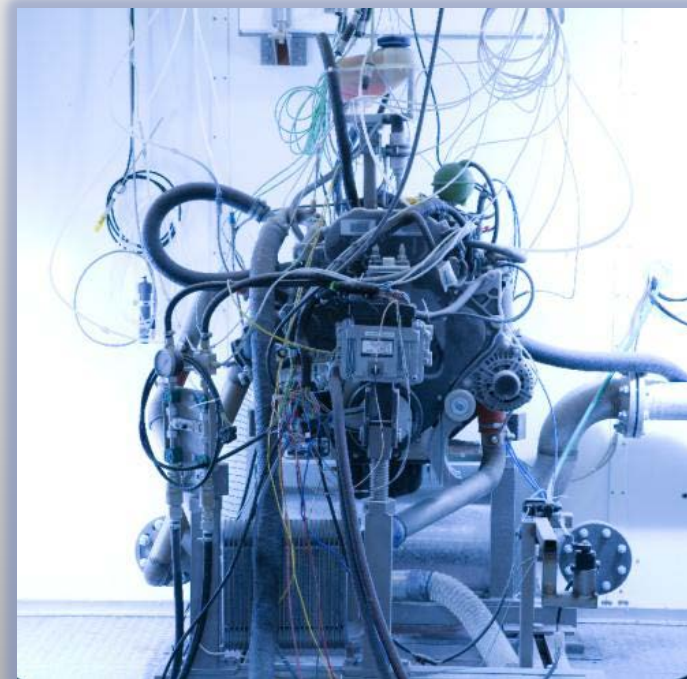


An innovative Pressure Sensor Glow plug offers improved diesel engine closed-loop control

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Poster location P-20

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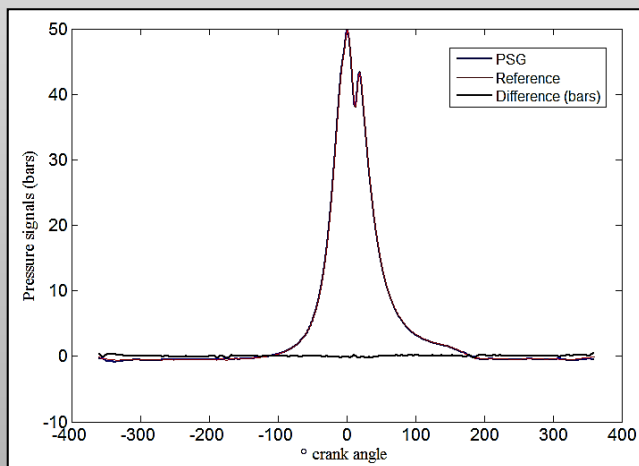
Eco-friendly glow plug

- The cylinder pressure sensing technology integrated in the glow plug enables extremely high accuracy real time measurement of pressure during combustion process.
- The pressure information, amplified, calibrated and filtered, by exclusive integrated ASIC is transmitted to the engine control unit.

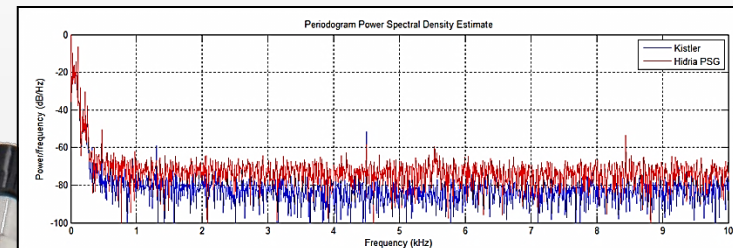
CHARACTERISTICS

- Operating temperature: $-40^{\circ}\text{C}/+140^{\circ}\text{C}$
- Pressure range: 0-220 bars
- Supply voltage: 5V \pm 0.5V
- Output analog, ratiometric to supply
- Bandwidth: 0-10kHz, free of resonances up to 5kHz
- Accuracy \pm 2%
- Starting time < 50ms
- Reliability: Engine lifetime, 600 M pressure cycles

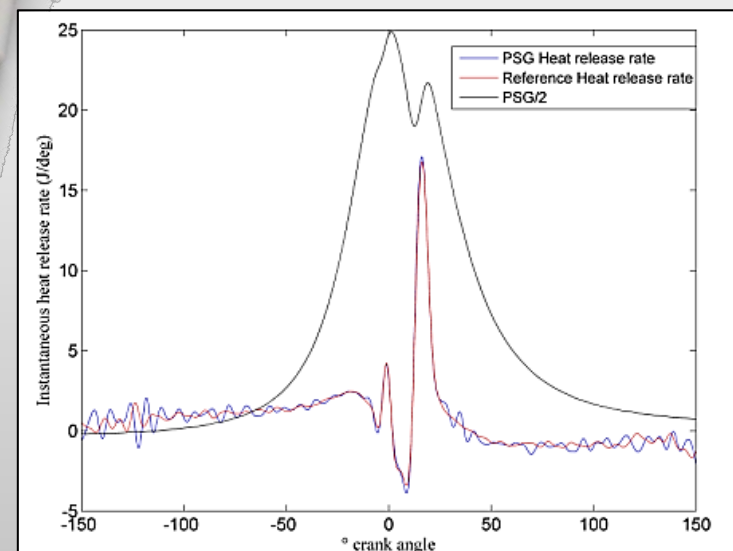
COMPARISON OF ENGINE DATA



BANDWIDTH



COMPUTATION OF COMBUSTION PARAMETERS



High precision on determination of

- Combustion points
- Time of injection
- Optimization of combustion
- Closed-loop control on combustion