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(71) Applicants (for all designated States except US):
EXXONMOBIL RESEARCH AND ENGINEERING COMPANY [US/US]; 1545 Route 22 East, P.O. Box 900, Annandale, NJ 08801-0900 (US). **CATERPILLAR INC.** [US/US]; 100 N.E. Adams Street, Peoria, IL 61629 (US).

(72) Inventors: **SOBOTOWSKI, Rafal, A.**; 711 Pine Ridge Road, Media, PA 19063 (US). **SCHLEYER, Charles, H.**; 578 Hyde Park Circle, Lincoln University, PA 19352 (US). **DUFFY, Kevin, P.**; 1 Kilverstone, Peterborough PE45DX (GB). **LIECHTY, Michael, P.**; 14216 N. Wayne Road, Chillicothe, IL 61523 (US).

(74) Agent: **WATOV, Kenneth**; Watov & Kipnes, P.C., P.O. 247, Princeton Junction, NJ 08550 (US).

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(54) Title: METHOD FOR SELECTING FUEL TO BOTH OPTIMIZE THE OPERATING RANGE AND MINIMIZE THE EXHAUST EMISSIONS OF HCCI ENGINES

PARAMETER	TEST METHOD	GASOLINE FUELS			
		G11	G12	G13	G23
DENSITY @ 15.6°C, g/cm ³	D4052	0.7121	0.7111	0.7101	0.7388
DERIVED CETANE NUMBER	D6890	27.2	29.6	32.0	32.4
RON	D2699	81.4	73.8	66.0	65.0
MON	D2700	79.9	72.3	64.0	60.0
(R+M)/2	-	80.7	73.1	65.0	62.5
DISTILLATION, °C	D86	65	66	63	68
		97	96	94	99
		146	148	151	150
SULFUR, ppm	D2622	48	67	85	40
PIONA, %	PARAFFINS	79.3	77.8	76.2	60.3
	CYCLOPARAFFINS	3.7	6.0	8.6	2.7
	OLEFINS	3.3	2.8	2.4	1.4
	AROMATICS	13.7	13.4	12.7	35.6
	BENZENE	0.8	0.9	0.9	1.5

(57) Abstract: Operation of a DI HCCI engine is optimized for maximizing load capability and load ranges via matching fuel ignitability with the compression ratio of the engine.

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