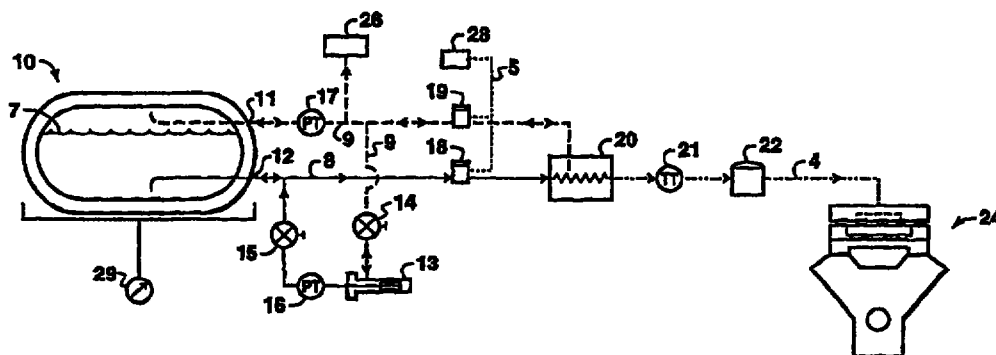




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(21) International Application Number: PCT/US98/12741 (22) International Filing Date: 18 June 1998 (18.06.98) (30) Priority Data: <table border="0"> <tr> <td>60/050,280</td> <td>20 June 1997 (20.06.97)</td> <td>US</td> </tr> <tr> <td>60/053,966</td> <td>28 July 1997 (28.07.97)</td> <td>US</td> </tr> <tr> <td>60/068,198</td> <td>19 December 1997 (19.12.97)</td> <td>US</td> </tr> </table> (71) Applicant: EXXON PRODUCTION RESEARCH COMPANY [US/US]; 3120 Buffalo Speedway, P.O. Box 2189, Houston, TX 77252-2189 (US). (72) Inventors: BOWEN, Ronald, R.; 37602 Pinwood Court, Magnolia, TX 77355 (US). MINTA, Moses; 39 Sterling Street, Sugar Land, TX 77479 (US). (74) Agents: CASAMASSIMA, Salvatore, J. et al.; Exxon Production Research Company, P.O. Box 2189, Houston, TX 77252-2189 (US).	60/050,280	20 June 1997 (20.06.97)	US	60/053,966	28 July 1997 (28.07.97)	US	60/068,198	19 December 1997 (19.12.97)	US	(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published Without international search report and to be republished upon receipt of that report.
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(54) Title: LNG FUEL STORAGE AND DELIVERY SYSTEMS FOR NATURAL GAS POWERED VEHICLES



(57) Abstract

Fuel storage and delivery systems are provided for storing pressurized liquefied natural gas (PLNG) fuel at a pressure of about 1035 kPa (150 psia) to about 7590 kPa (1100 psia) and at a temperature of about -123°C (-190°F) to about -62°C (-80°F) and delivering vaporized PLNG fuel on demand for combustion in an engine. The fuel storage and delivery systems have fuel storage containers that are constructed from ultra-high strength, low alloy steel containing less than 9 wt.% nickel and having a tensile strength greater than 830 MPa (120 ksi) and a DBTT lower than about -73°C (-100°F). While not limited thereto, the present invention is especially useful for automobiles, buses, trucks and other vehicles with engines designed to operate through combustion of natural gas.