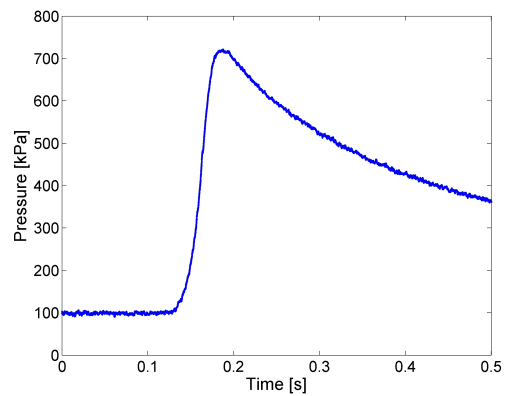


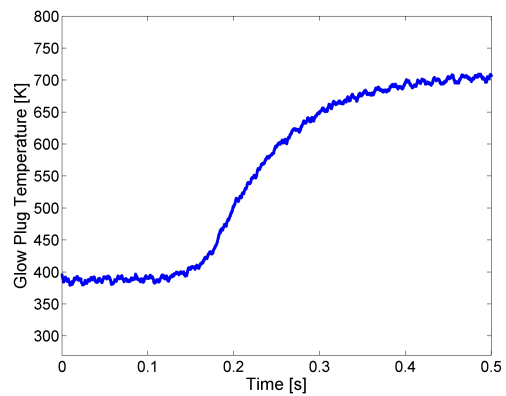
## Appendix M

# Hot Surface Temperature and Pressure Traces

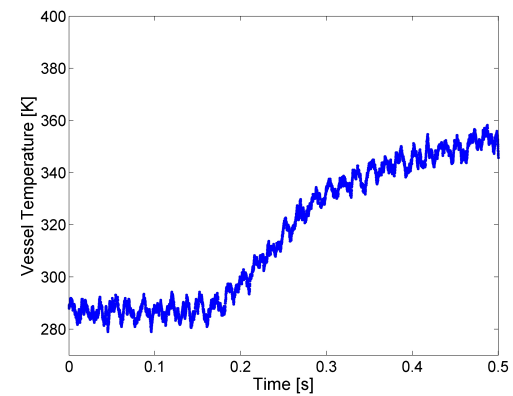
This appendix contains the temperature traces collected at the glow plug and the top of the vessel during the experiment as well as the pressure observed. Red lines indicate time of ignition from the schlieren video.



(a) Pressure

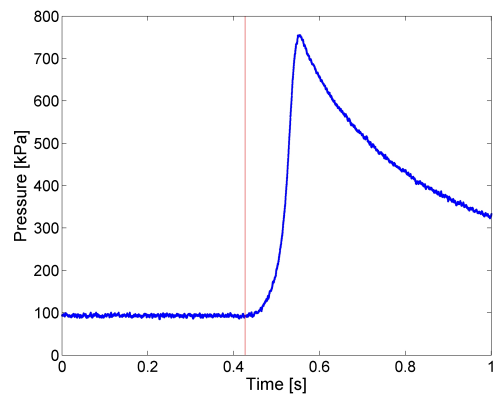


(b) Glow plug temperature

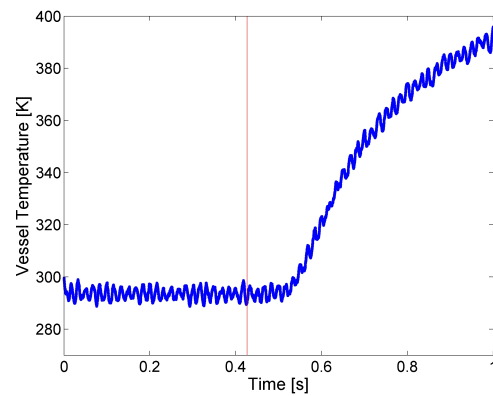


(c) Vessel temperature

Figure M.1: Experimental data from shot 7

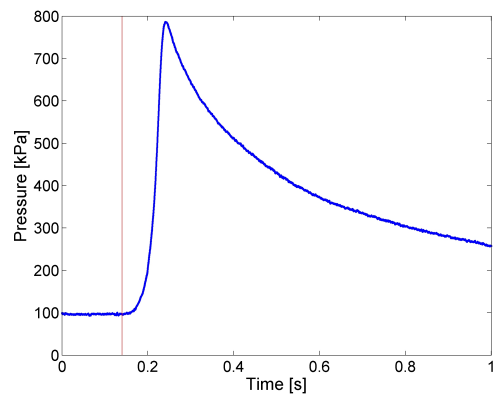


(a) Pressure

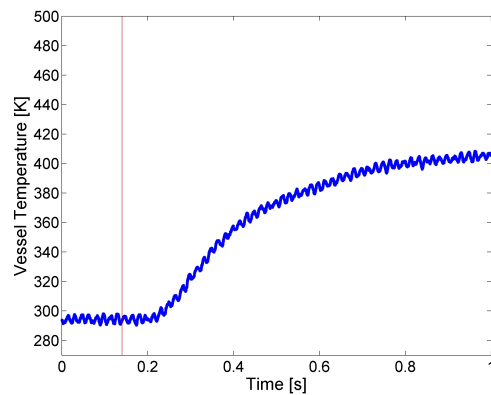


(b) Vessel temperature

Figure M.2: Experimental data from shot 8

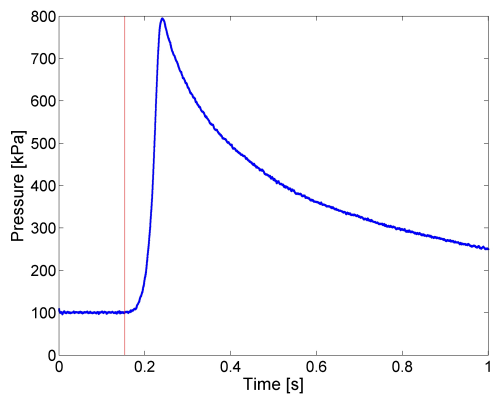


(a) Pressure

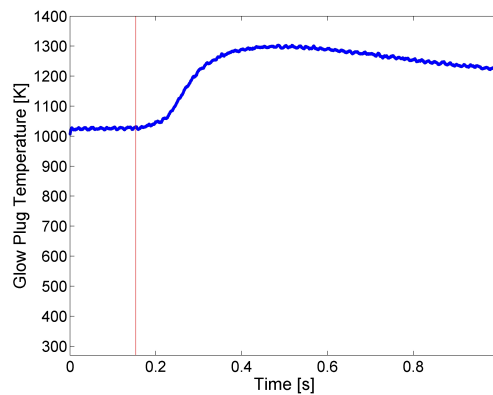


(b) Vessel temperature

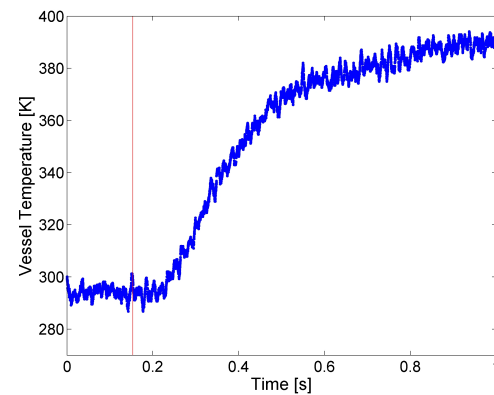
Figure M.3: Experimental data from shot 9



(a) Pressure

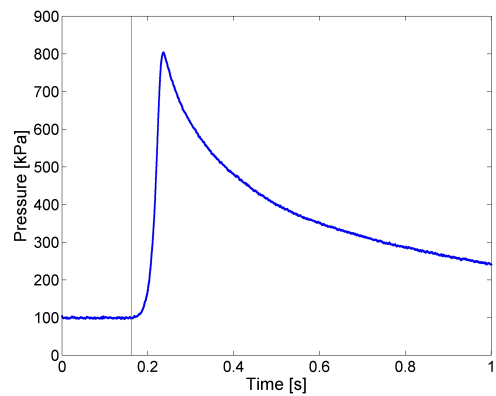


(b) Glow plug temperature

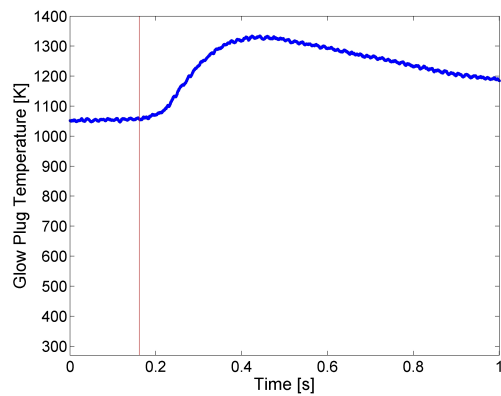


(c) Vessel temperature

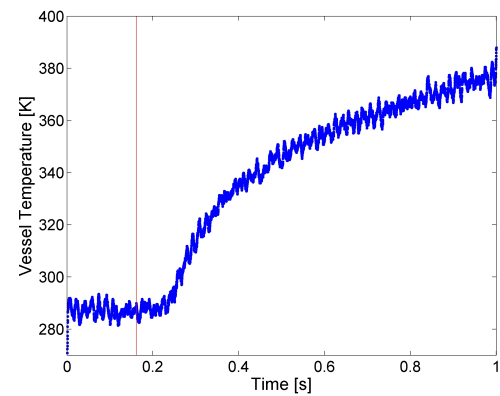
Figure M.4: Experimental data from shot 10



(a) Pressure

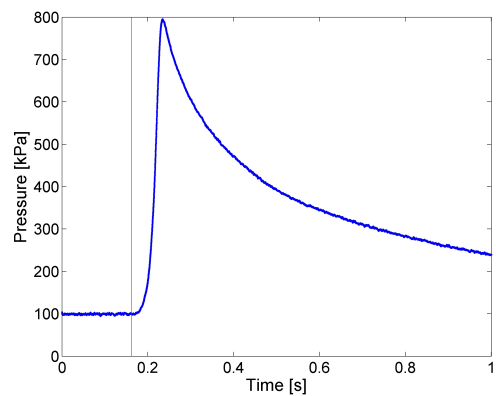


(b) Glow plug temperature

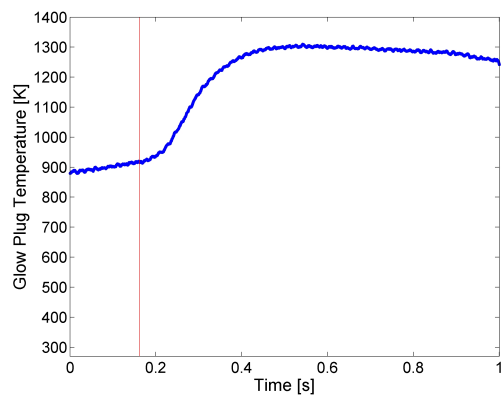


(c) Vessel temperature

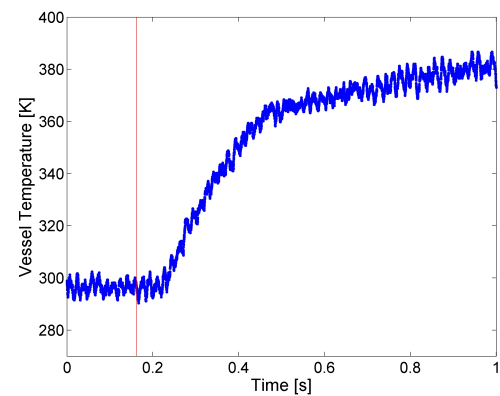
Figure M.5: Experimental data from shot 11



(a) Pressure

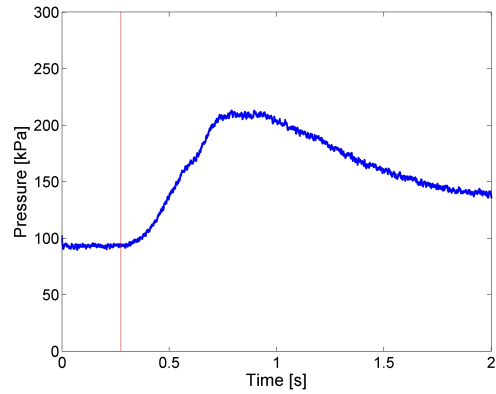


(b) Glow plug temperature

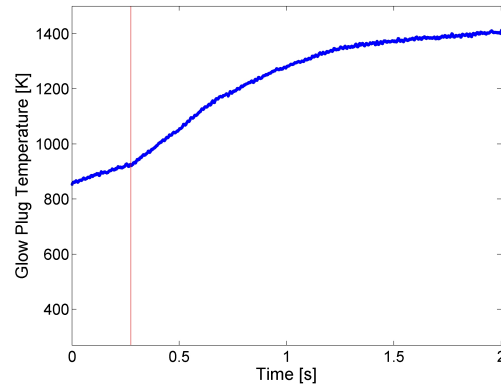


(c) Vessel temperature

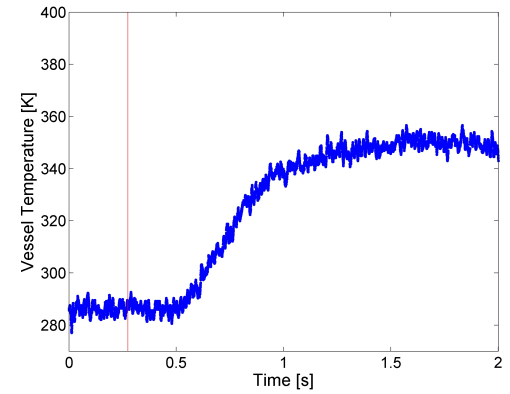
Figure M.6: Experimental data from shot 12



(a) Pressure

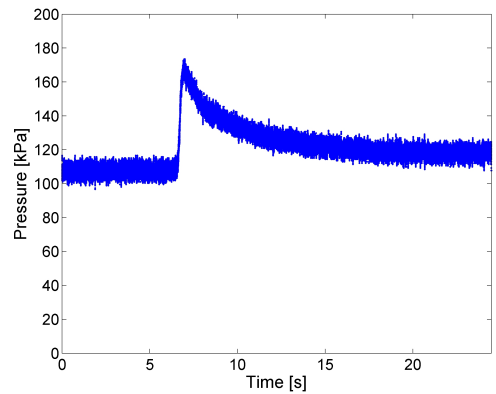


(b) Glow plug temperature

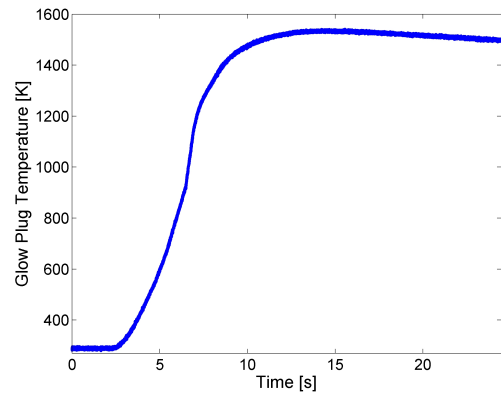


(c) Vessel temperature

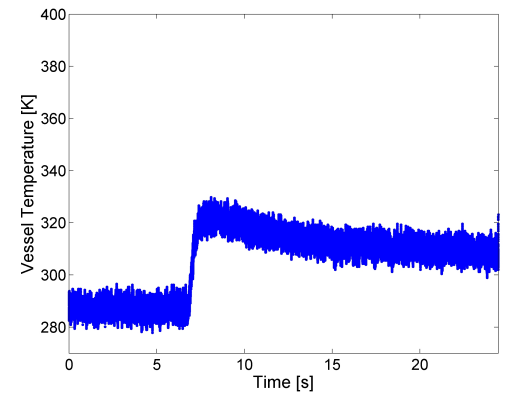
Figure M.7: Experimental data from shot 15



(a) Pressure

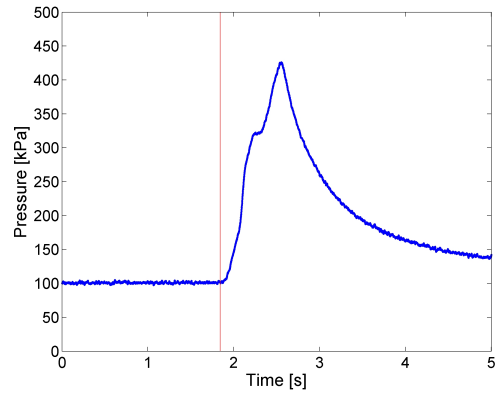


(b) Glow plug temperature

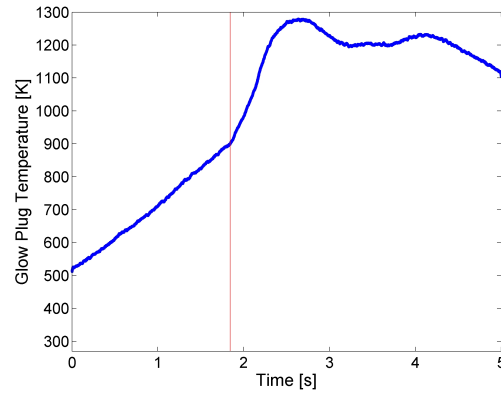


(c) Vessel temperature

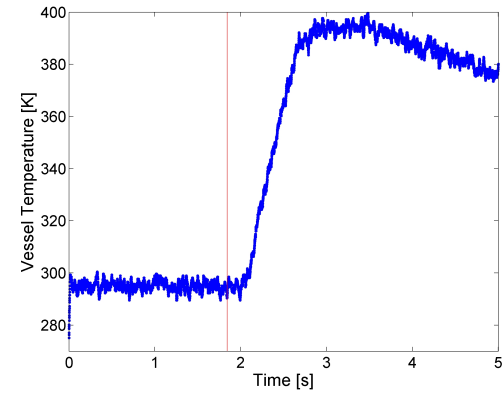
Figure M.8: Experimental data from shot 17



(a) Pressure

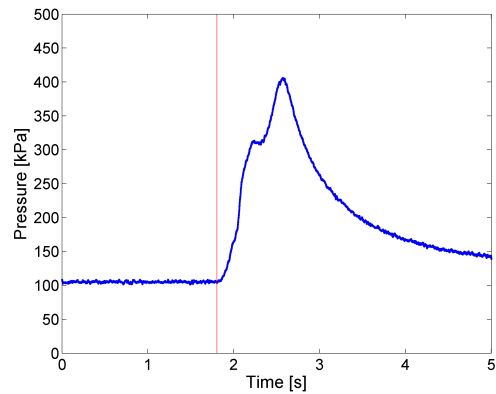


(b) Glow plug temperature

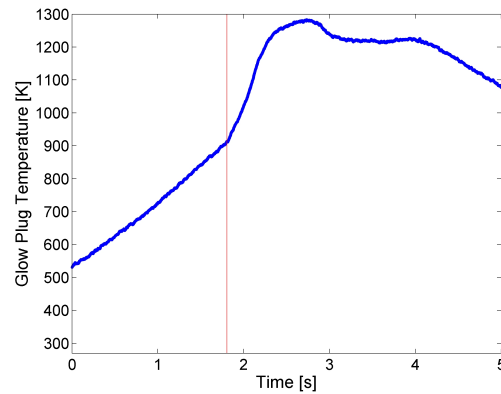


(c) Vessel temperature

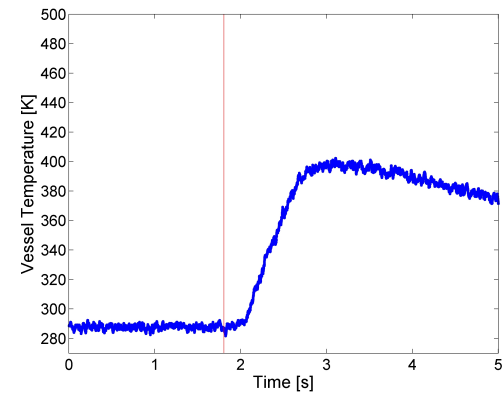
Figure M.9: Experimental data from shot 20



(a) Pressure

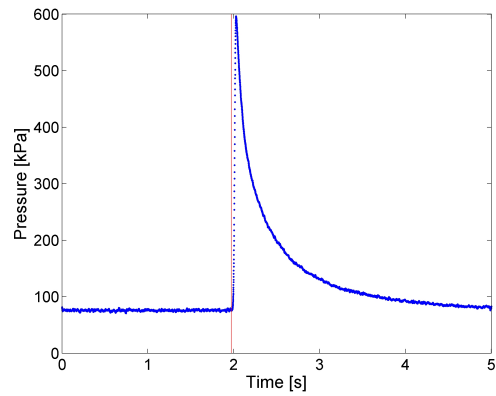


(b) Glow plug temperature

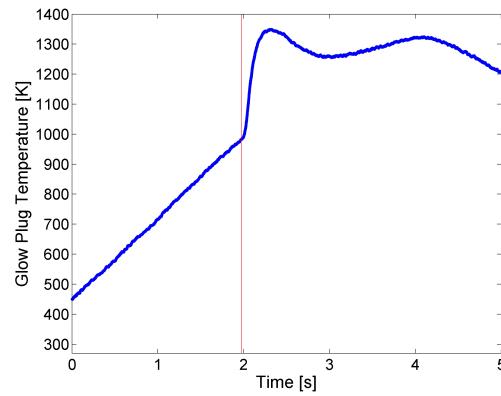


(c) Vessel temperature

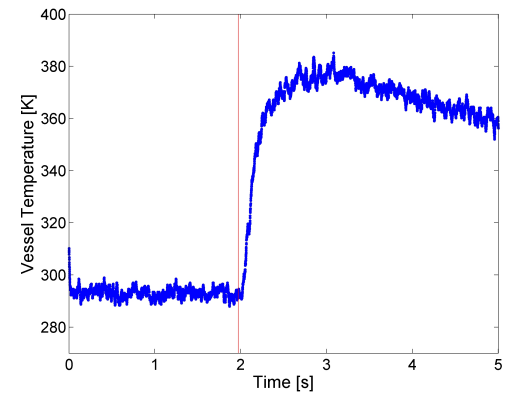
Figure M.10: Experimental data from shot 21



(a) Pressure

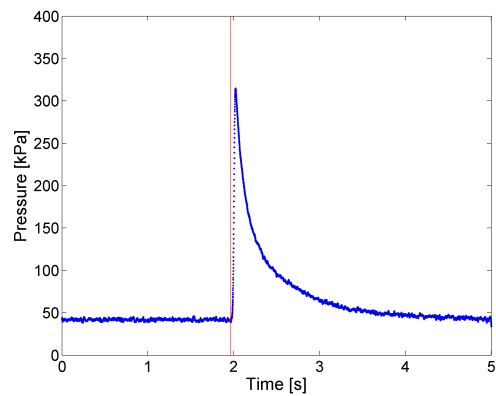


(b) Glow plug temperature

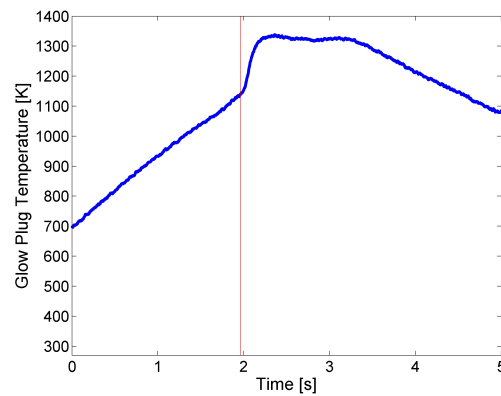


(c) Vessel temperature

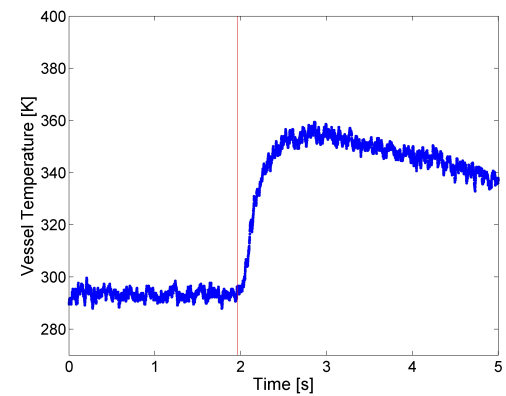
Figure M.11: Experimental data from shot 22



(a) Pressure

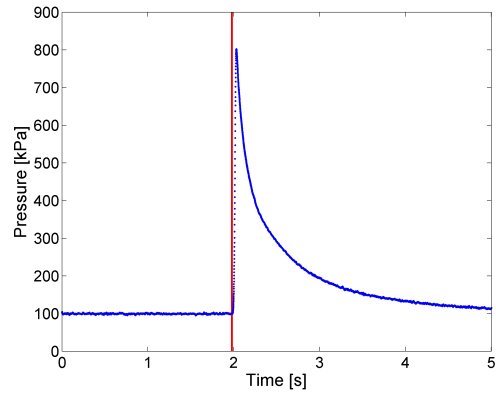


(b) Glow plug temperature

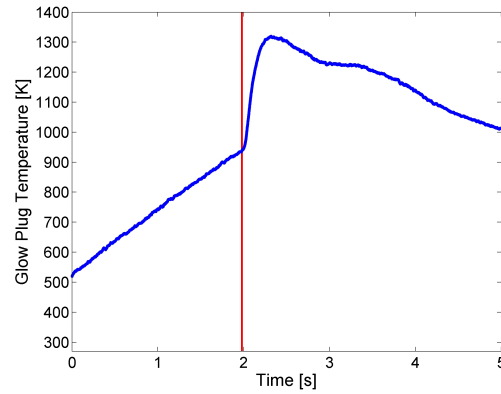


(c) Vessel temperature

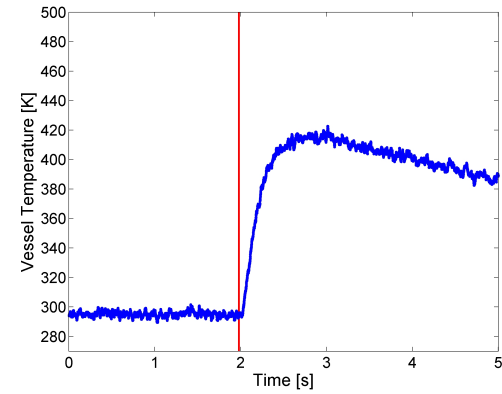
Figure M.12: Experimental data from shot 23



(a) Pressure

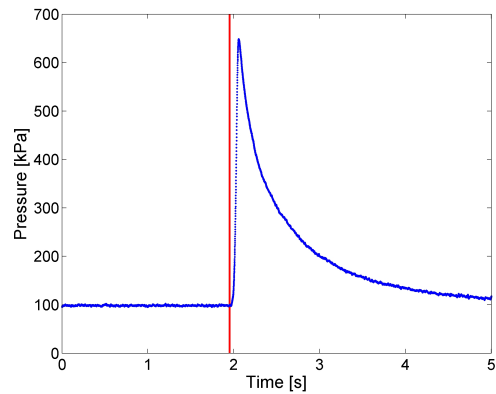


(b) Glow plug temperature

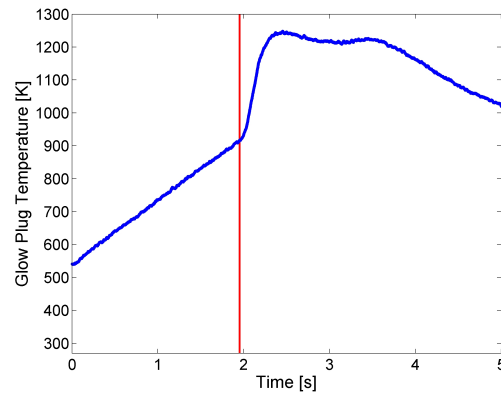


(c) Vessel temperature

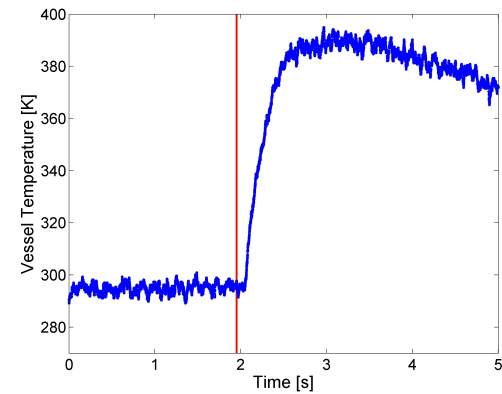
Figure M.13: Experimental data from shot 24



(a) Pressure



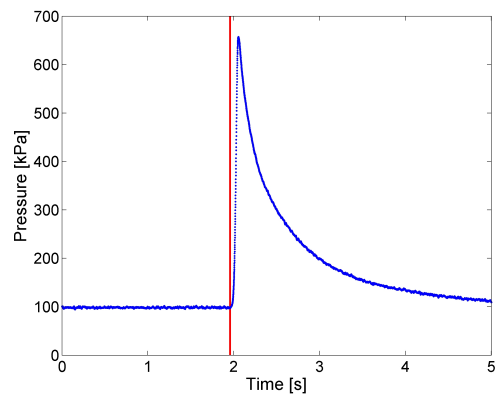
(b) Glow plug temperature



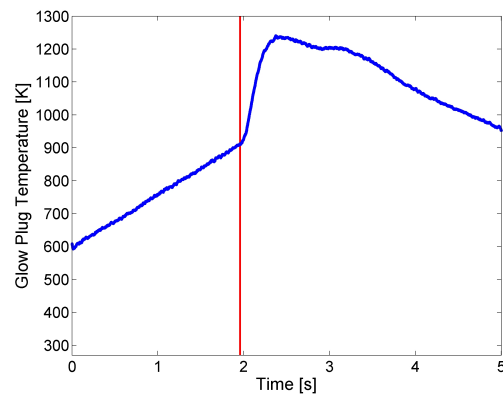
(c) Vessel temperature

Figure M.14: Experimental data from shot 25

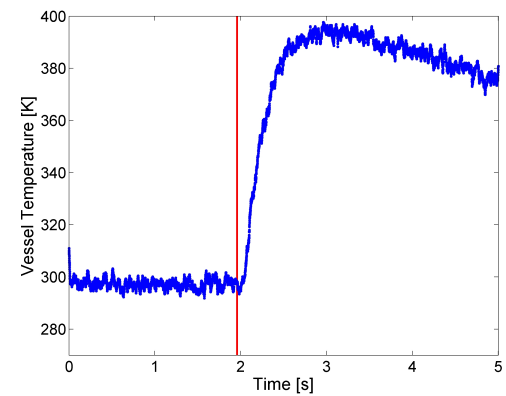




(a) Pressure

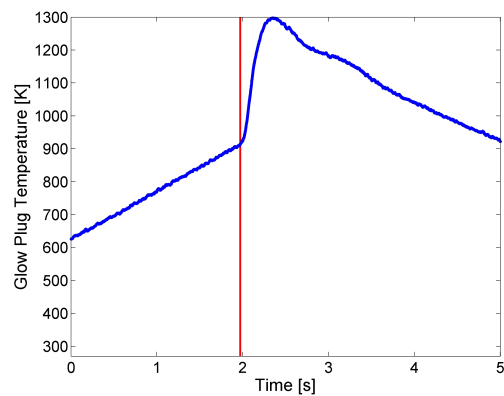


(b) Glow plug temperature

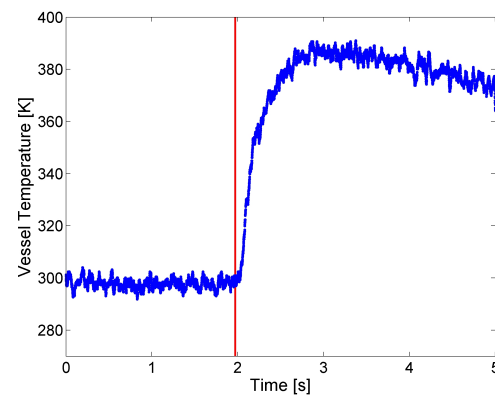


(c) Vessel temperature

Figure M.15: Experimental data from shot 26

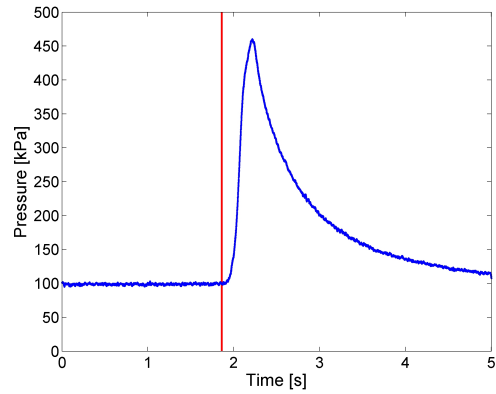


(a) Glow plug temperature

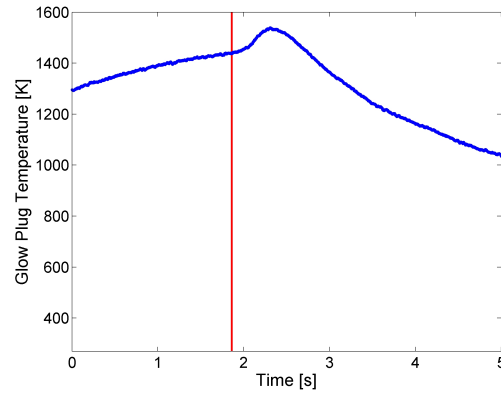


(b) Vessel temperature

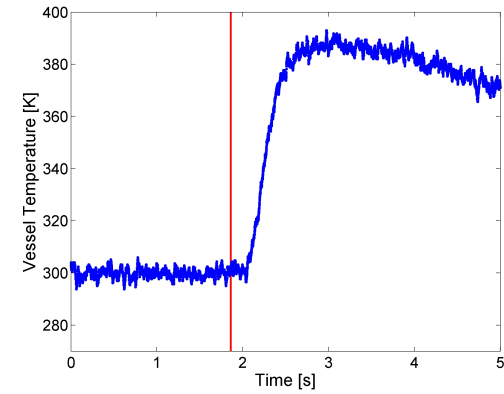
Figure M.16: Experimental data from shot 27



(a) Pressure

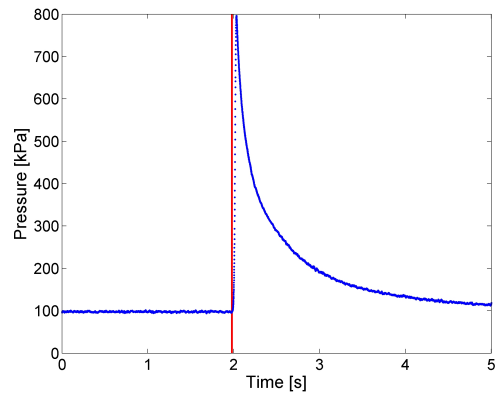


(b) Glow plug temperature

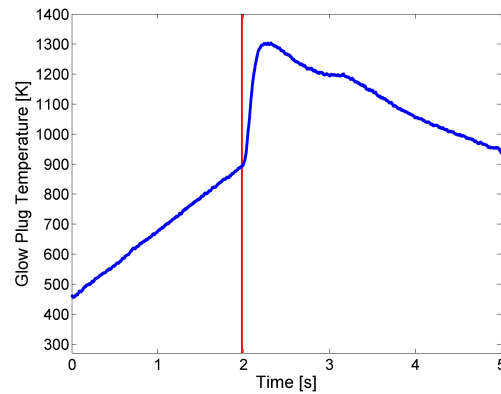


(c) Vessel temperature

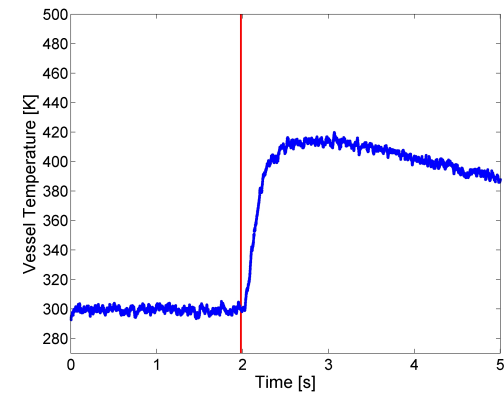
Figure M.17: Experimental data from shot 28



(a) Pressure

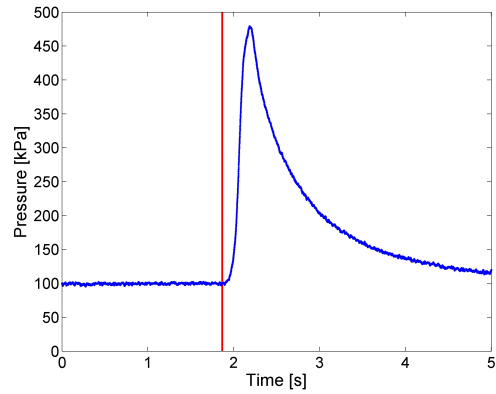


(b) Glow plug temperature

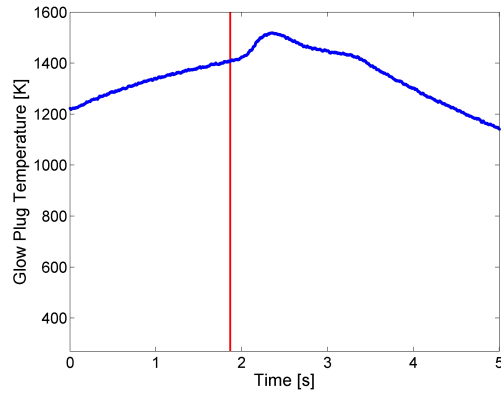


(c) Vessel temperature

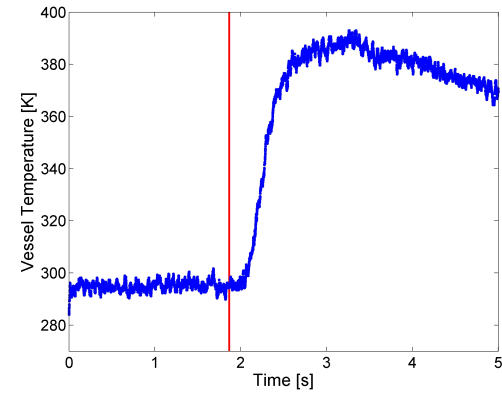
Figure M.18: Experimental data from shot 29



(a) Pressure

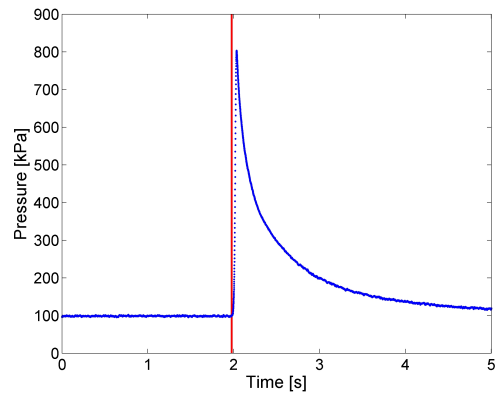


(b) Glow plug temperature

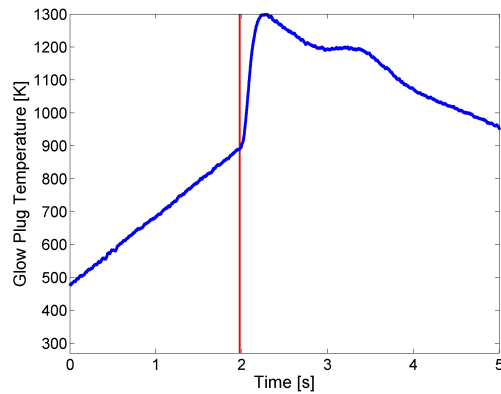


(c) Vessel temperature

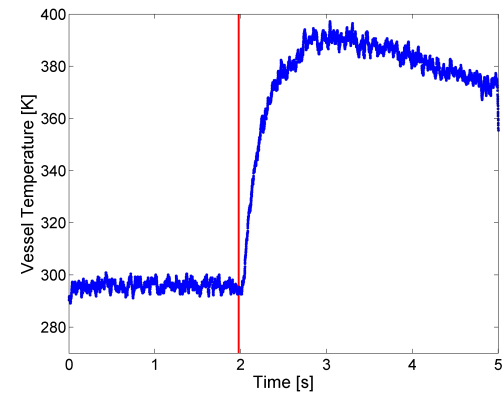
Figure M.19: Experimental data from shot 30



(a) Pressure

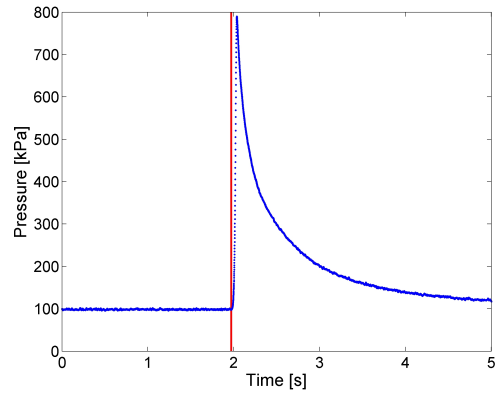


(b) Glow plug temperature

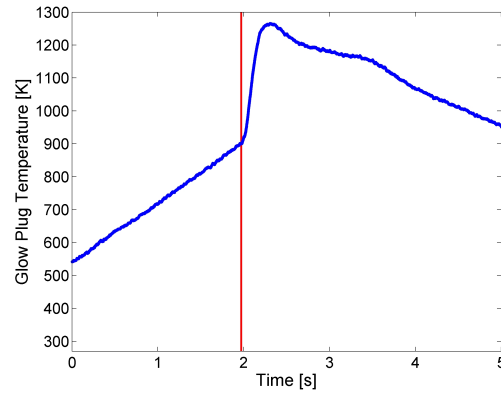


(c) Vessel temperature

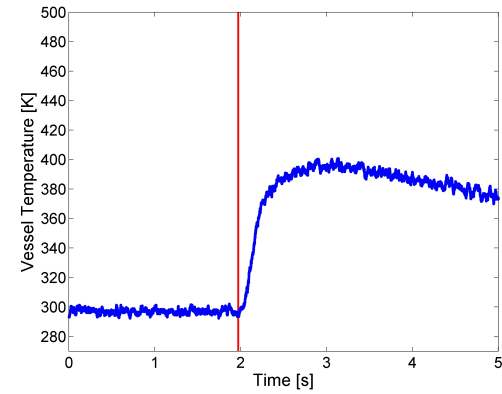
Figure M.20: Experimental data from shot 31



(a) Pressure

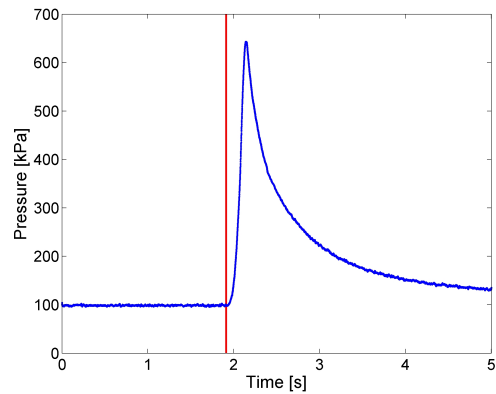


(b) Glow plug temperature

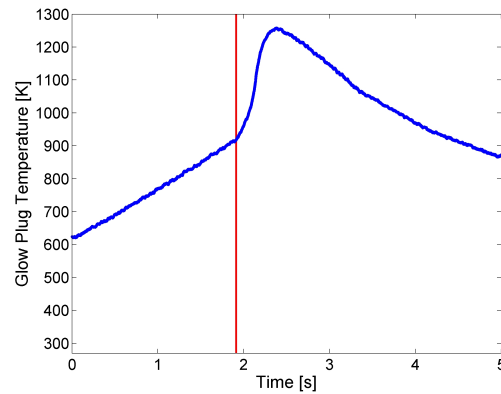


(c) Vessel temperature

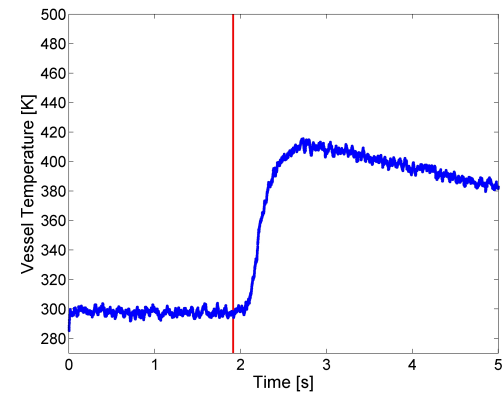
Figure M.21: Experimental data from shot 32



(a) Pressure

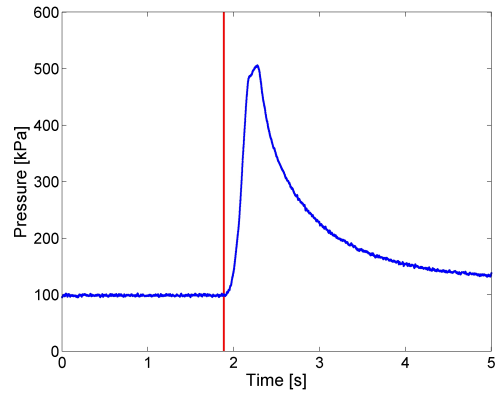


(b) Glow plug temperature

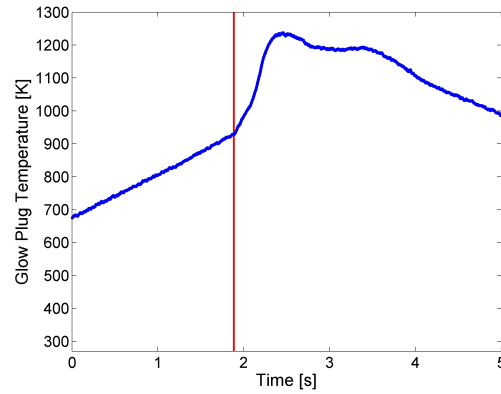


(c) Vessel temperature

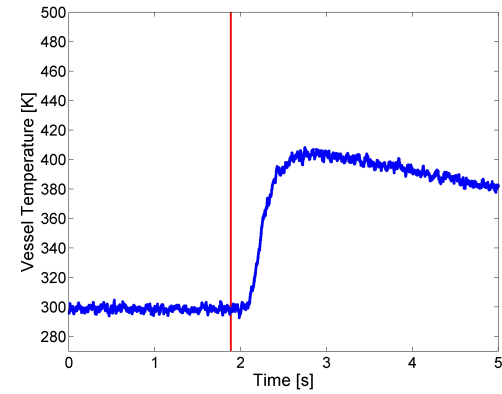
Figure M.22: Experimental data from shot 33



(a) Pressure

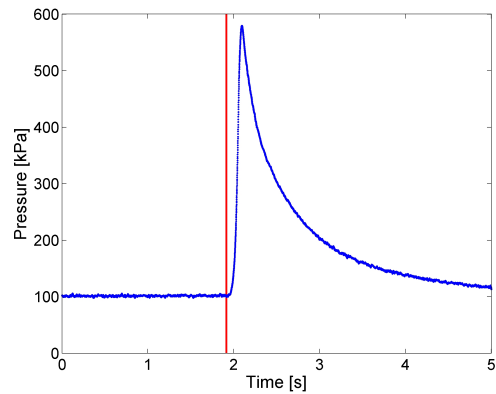


(b) Glow plug temperature

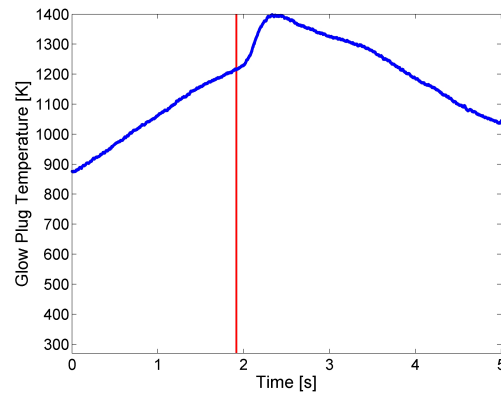


(c) Vessel temperature

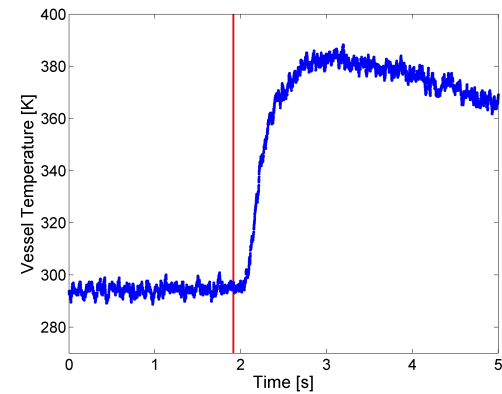
Figure M.23: Experimental data from shot 34



(a) Pressure

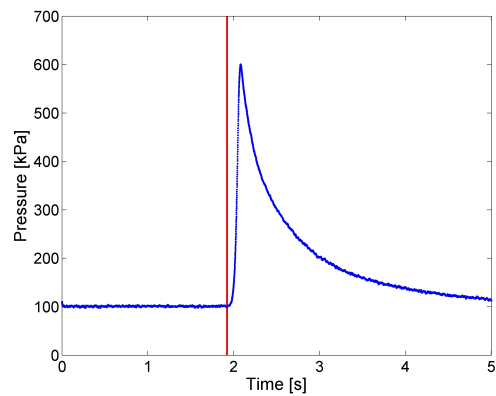


(b) Glow plug temperature

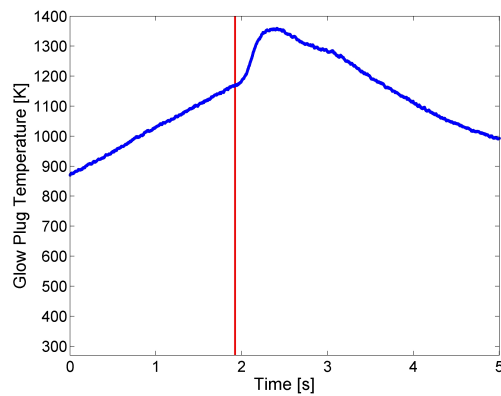


(c) Vessel temperature

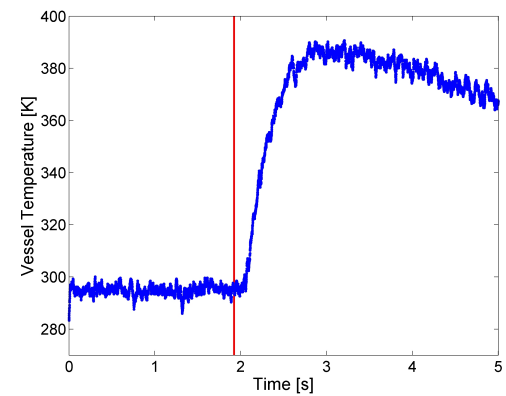
Figure M.24: Experimental data from shot 36



(a) Pressure

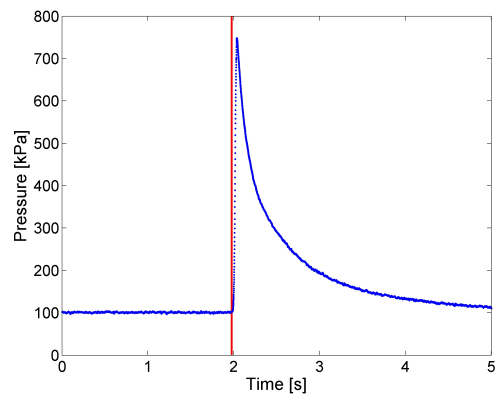


(b) Glow plug temperature

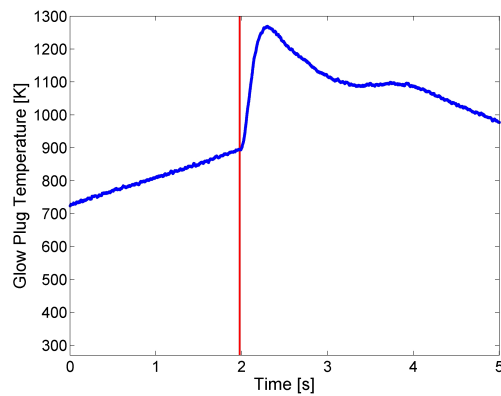


(c) Vessel temperature

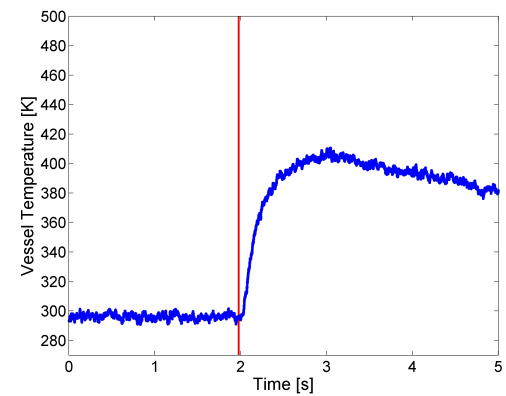
Figure M.25: Experimental data from shot 37



(a) Pressure

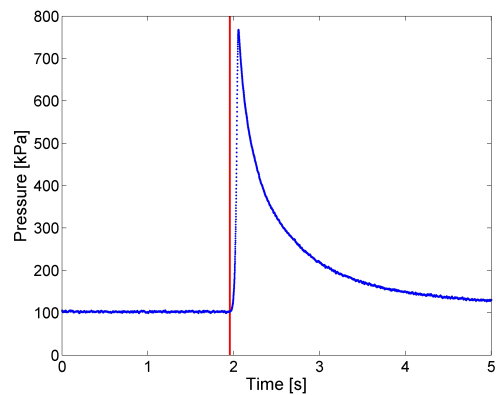


(b) Glow plug temperature

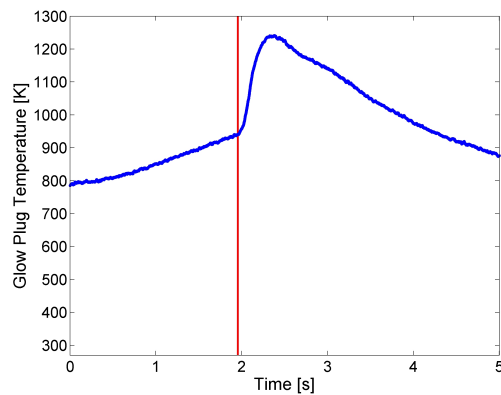


(c) Vessel temperature

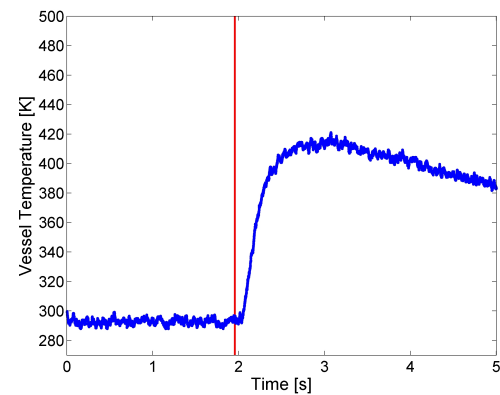
Figure M.26: Experimental data from shot 38



(a) Pressure

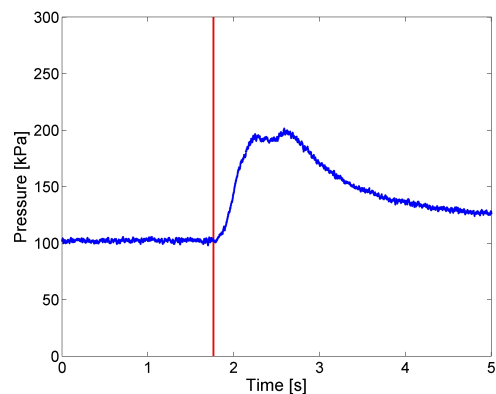


(b) Glow plug temperature

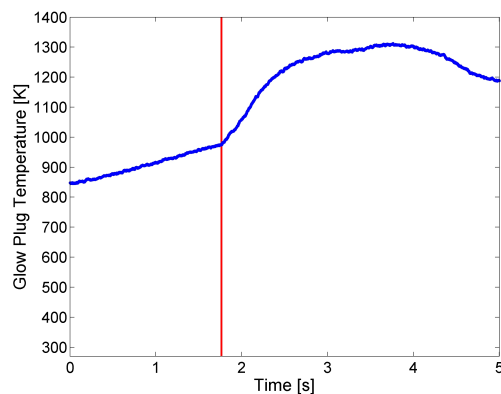


(c) Vessel temperature

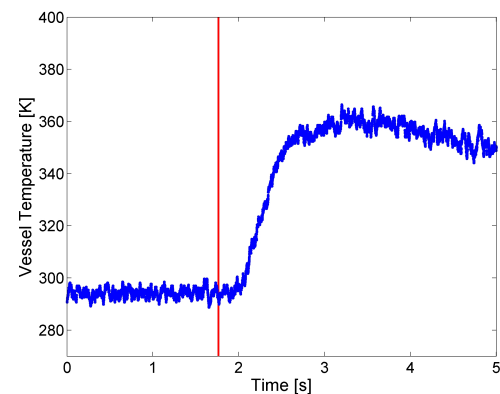
Figure M.27: Experimental data from shot 40



(a) Pressure

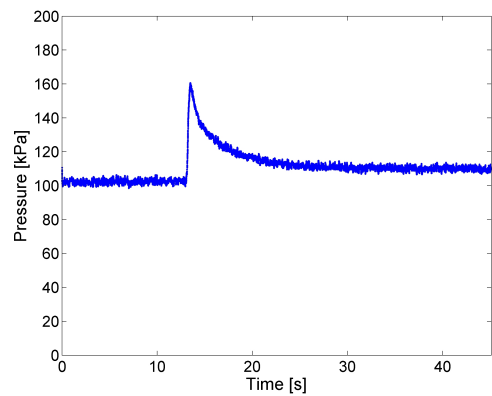


(b) Glow plug temperature

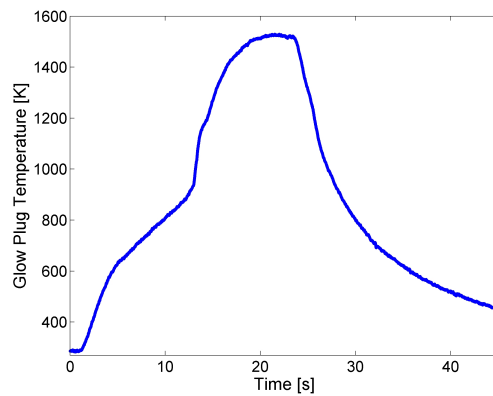


(c) Vessel temperature

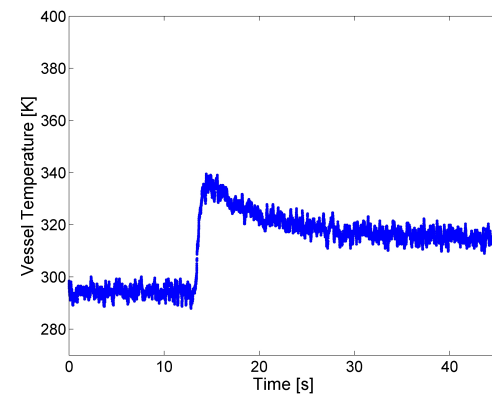
Figure M.28: Experimental data from shot 41



(a) Pressure

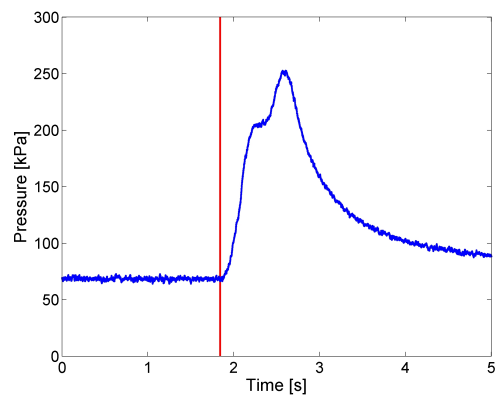


(b) Glow plug temperature

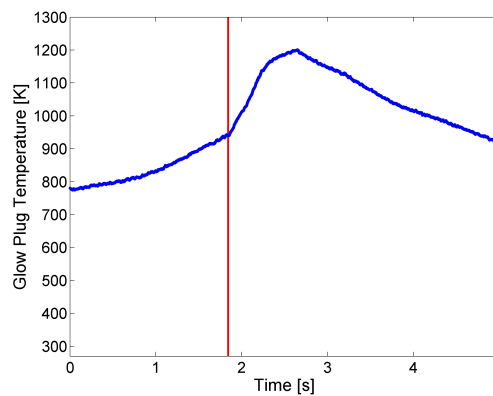


(c) Vessel temperature

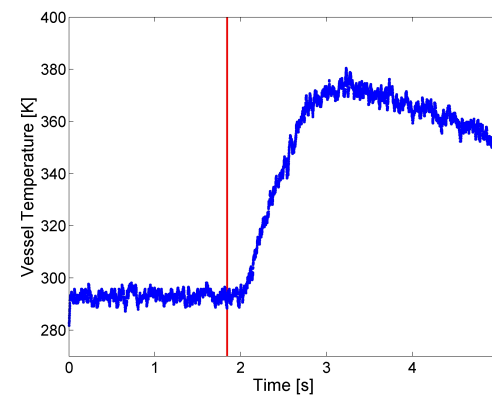
Figure M.29: Experimental data from shot 42



(a) Pressure



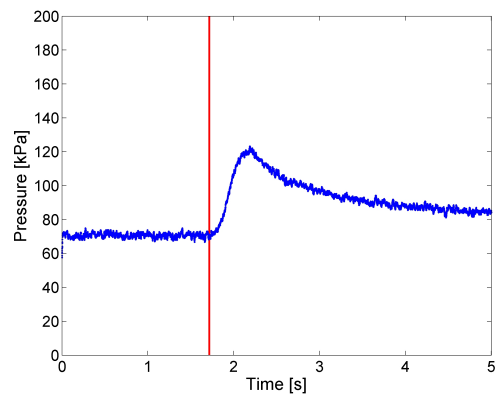
(b) Glow plug temperature



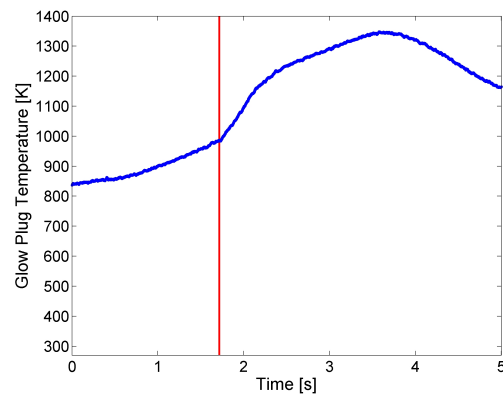
(c) Vessel temperature

Figure M.30: Experimental data from shot 43

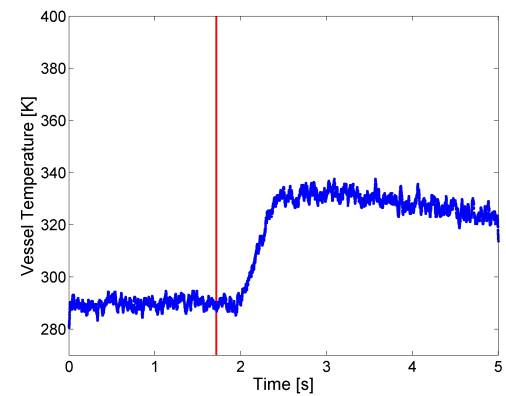




(a) Pressure

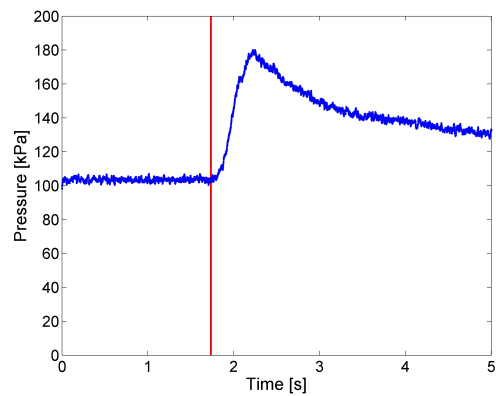


(b) Glow plug temperature

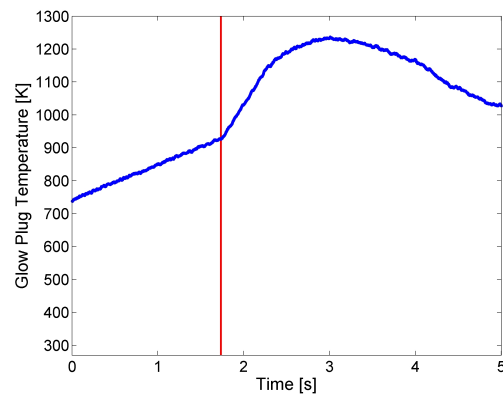


(c) Vessel temperature

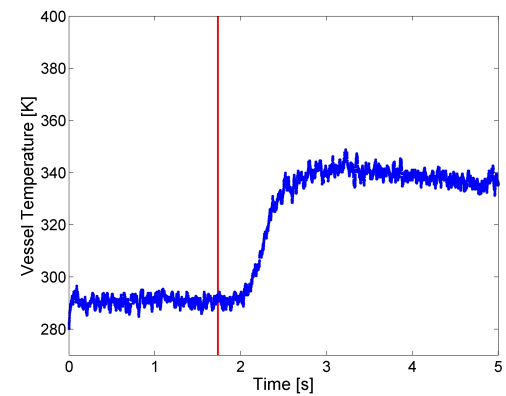
Figure M.31: Experimental data from shot 44



(a) Pressure

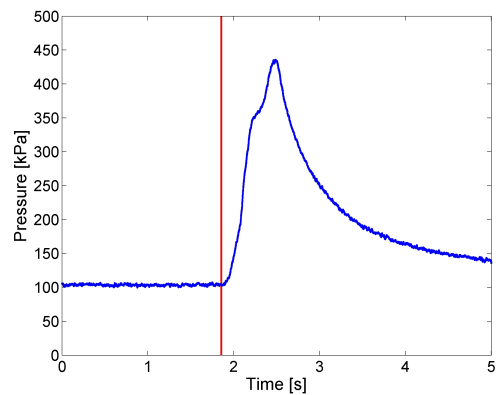


(b) Glow plug temperature

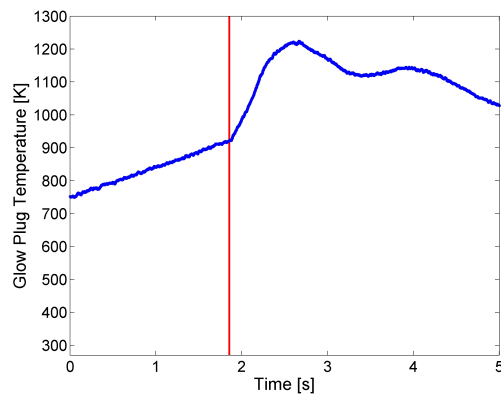


(c) Vessel temperature

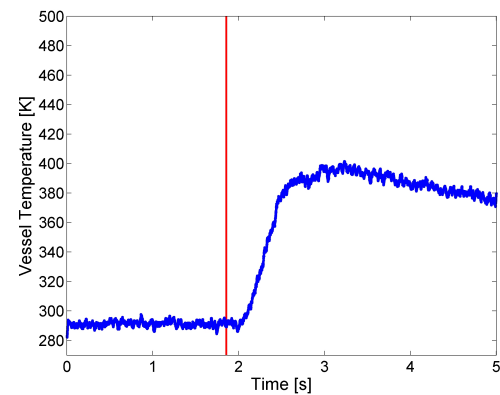
Figure M.32: Experimental data from shot 45



(a) Pressure

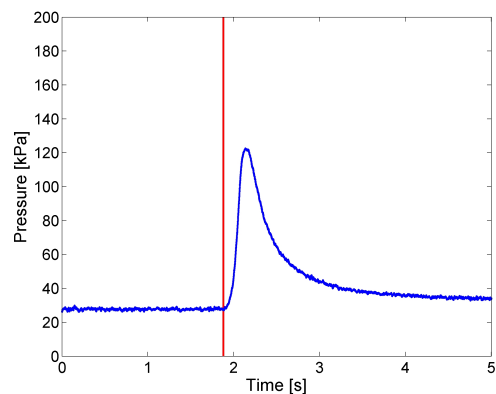


(b) Glow plug temperature

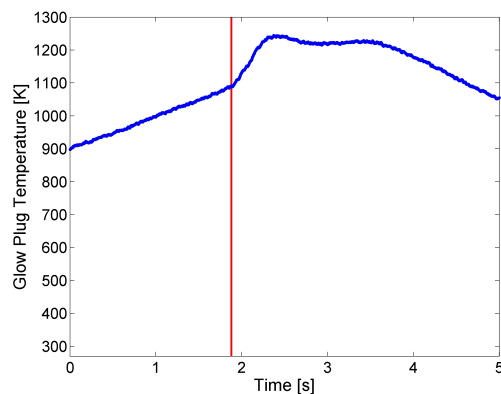


(c) Vessel temperature

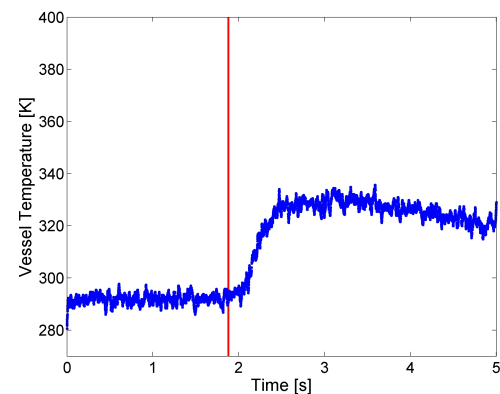
Figure M.33: Experimental data from shot 46



(a) Pressure

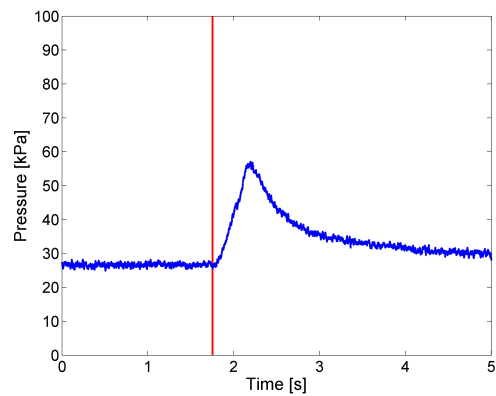


(b) Glow plug temperature

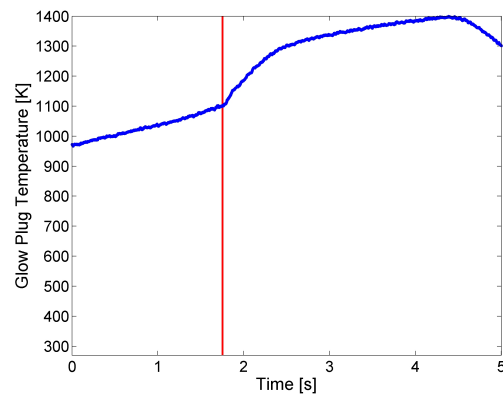


(c) Vessel temperature

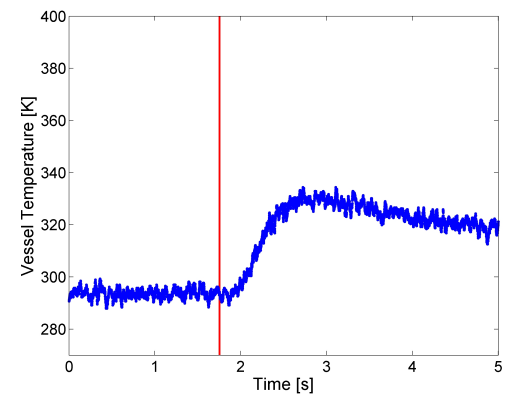
Figure M.34: Experimental data from shot 47



(a) Pressure

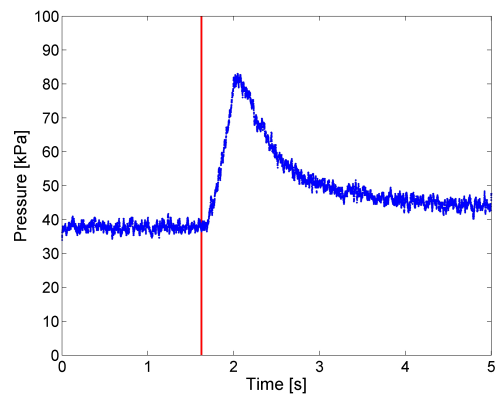


(b) Glow plug temperature

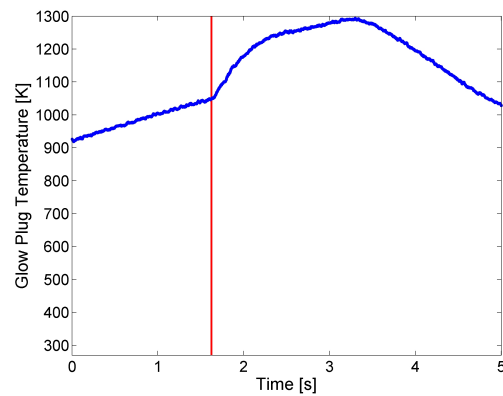


(c) Vessel temperature

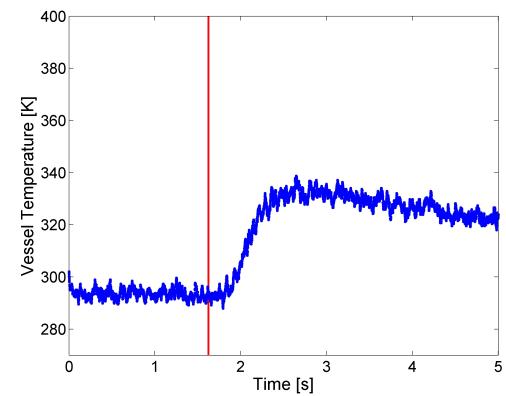
Figure M.35: Experimental data from shot 49



(a) Pressure

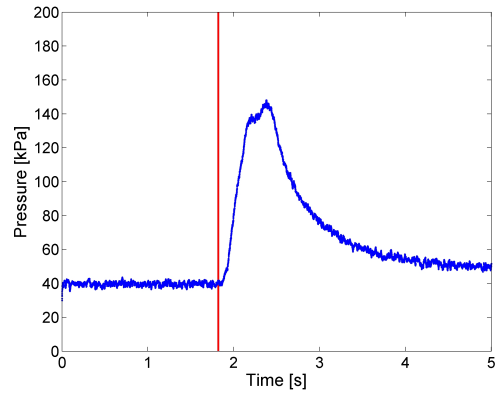


(b) Glow plug temperature

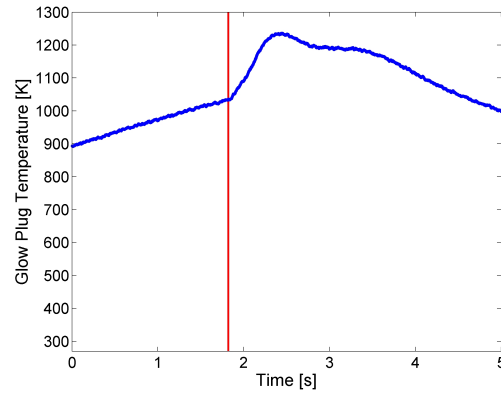


(c) Vessel temperature

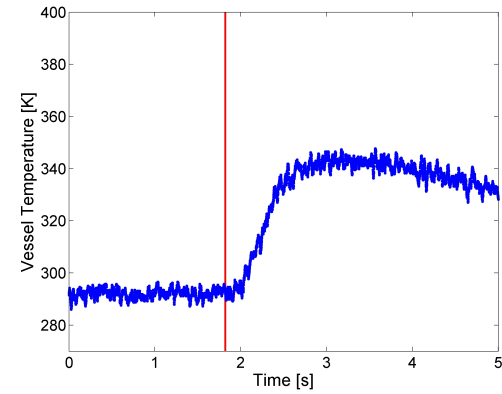
Figure M.36: Experimental data from shot 50



(a) Pressure

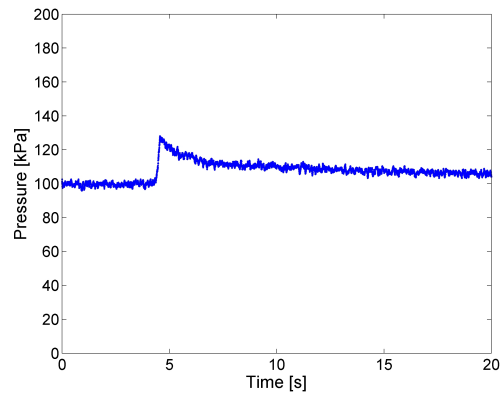


(b) Glow plug temperature

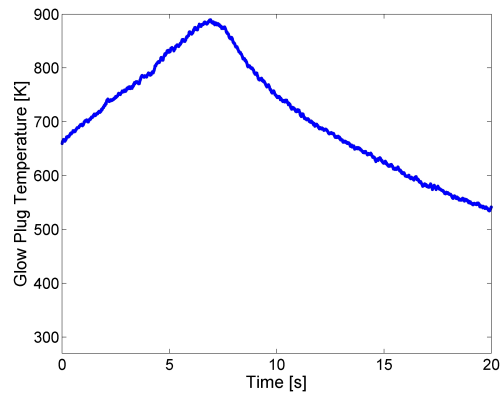


(c) Vessel temperature

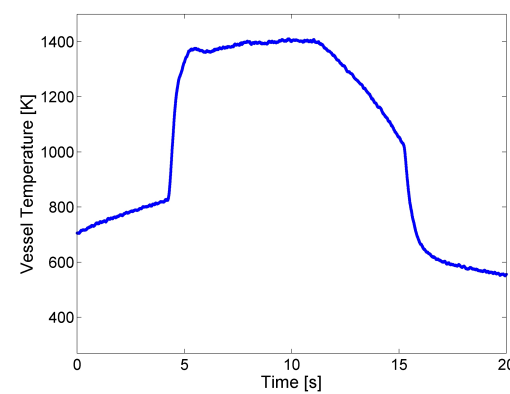
Figure M.37: Experimental data from shot 51



(a) Pressure

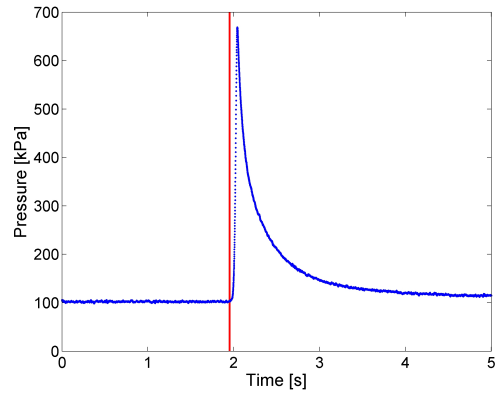


(b) Glow plug temperature

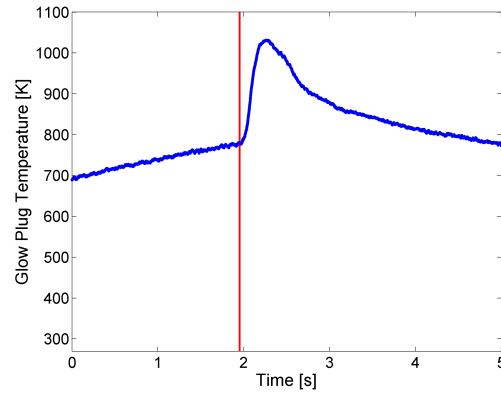


(c) Vessel temperature

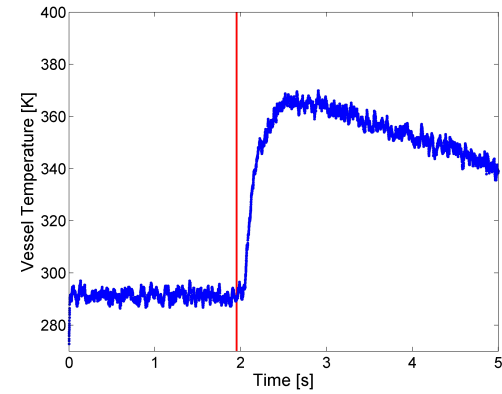
Figure M.38: Experimental data from shot 54



(a) Pressure

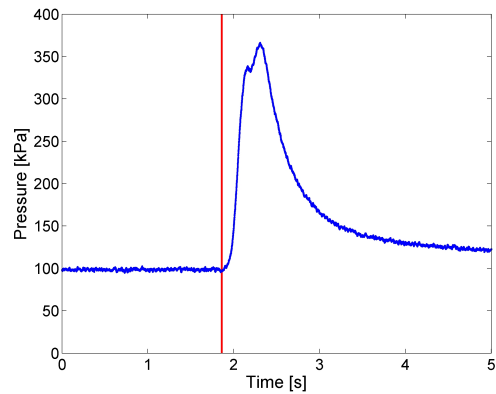


(b) Glow plug temperature

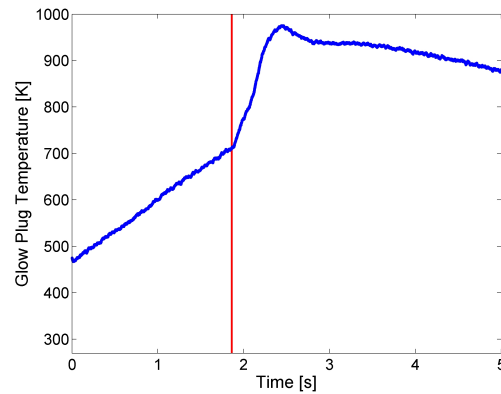


(c) Vessel temperature

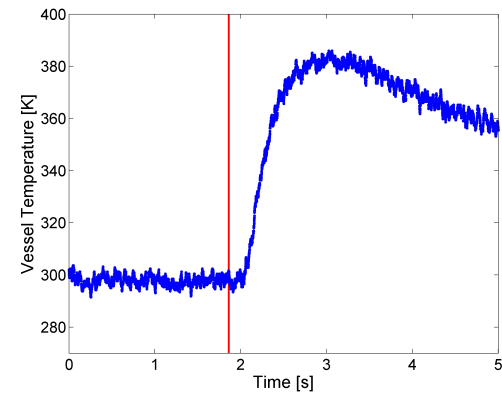
Figure M.39: Experimental data from shot 55



(a) Pressure

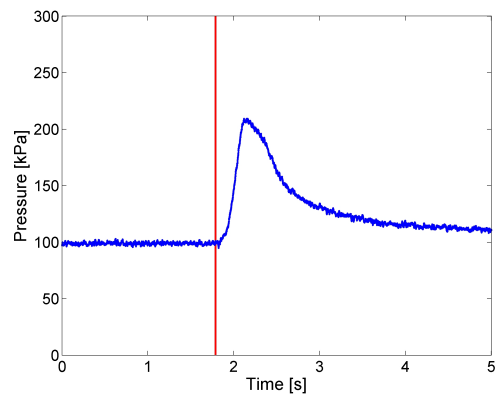


(b) Glow plug temperature

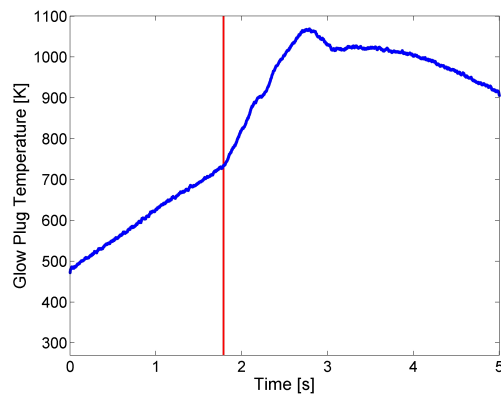


(c) Vessel temperature

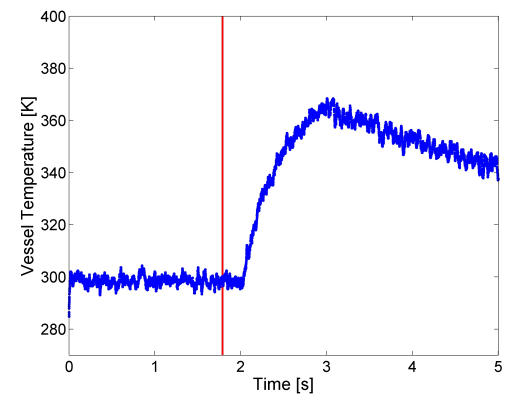
Figure M.40: Experimental data from shot 57



(a) Pressure

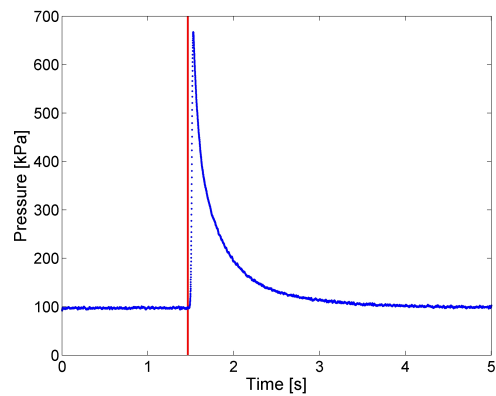


(b) Glow plug temperature

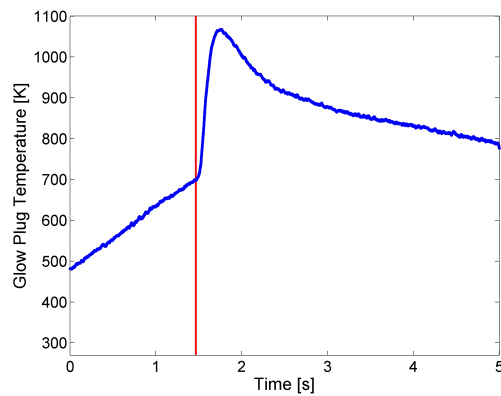


(c) Vessel temperature

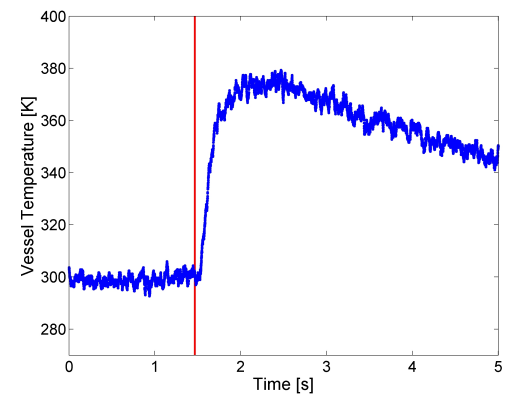
Figure M.41: Experimental data from shot 58



(a) Pressure

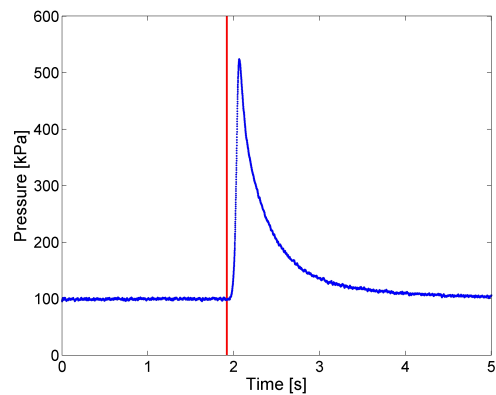


(b) Glow plug temperature

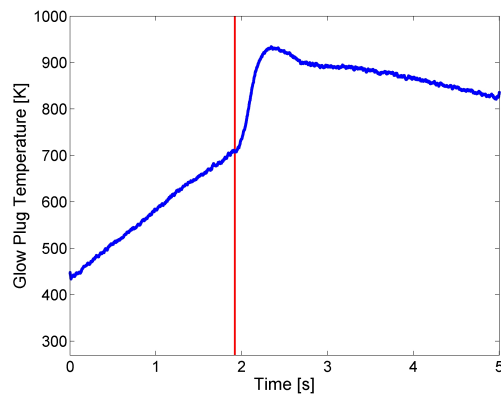


(c) Vessel temperature

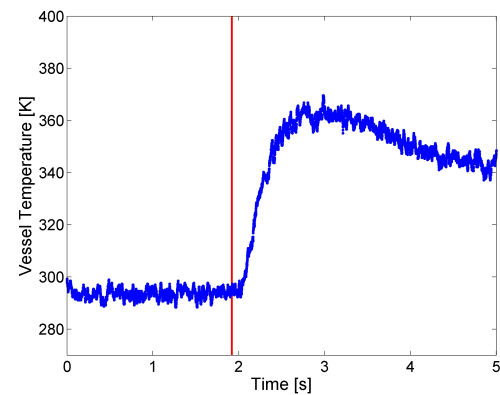
Figure M.42: Experimental data from shot 61



(a) Pressure

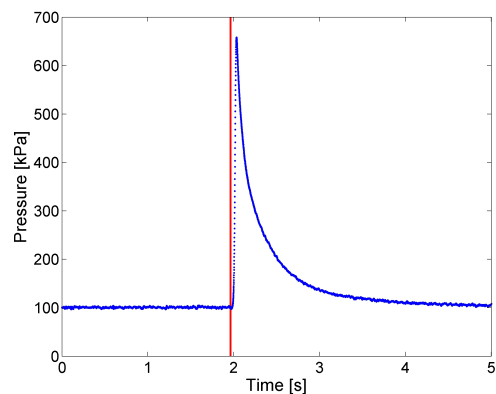


(b) Glow plug temperature

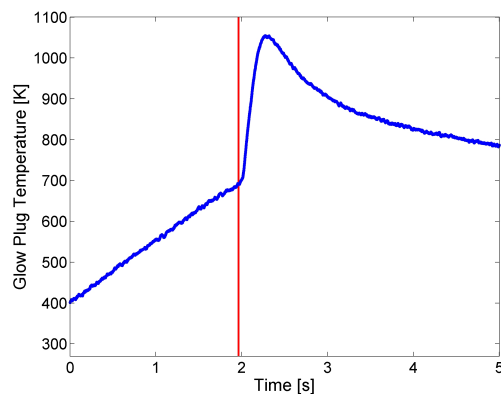


(c) Vessel temperature

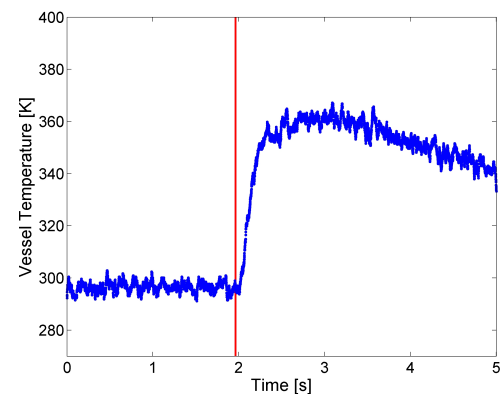
Figure M.43: Experimental data from shot 64



(a) Pressure

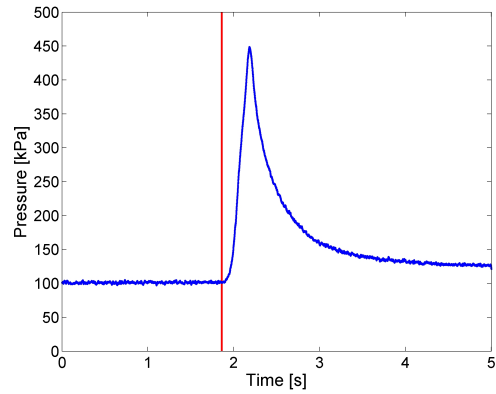


(b) Glow plug temperature

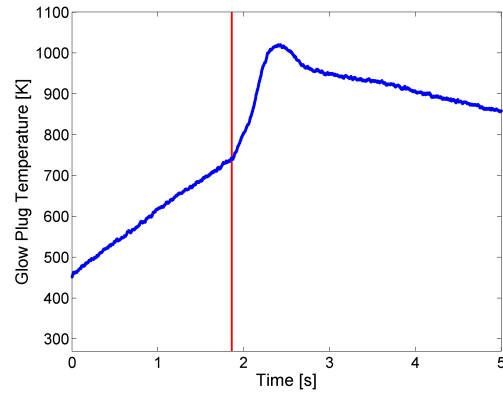


(c) Vessel temperature

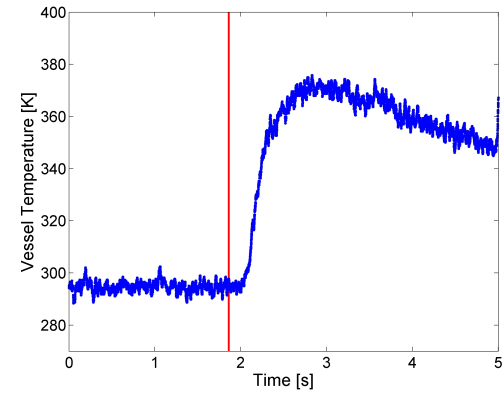
Figure M.44: Experimental data from shot 65



(a) Pressure

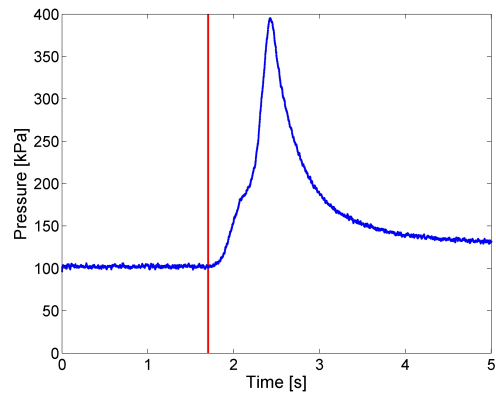


(b) Glow plug temperature

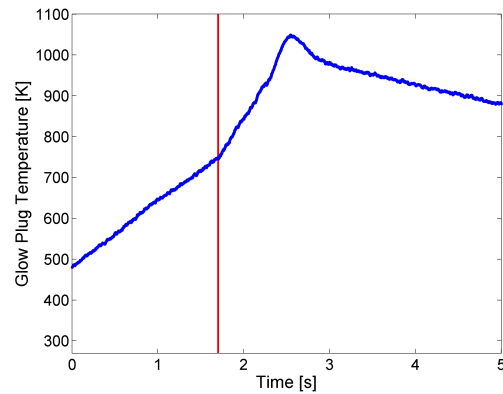


(c) Vessel temperature

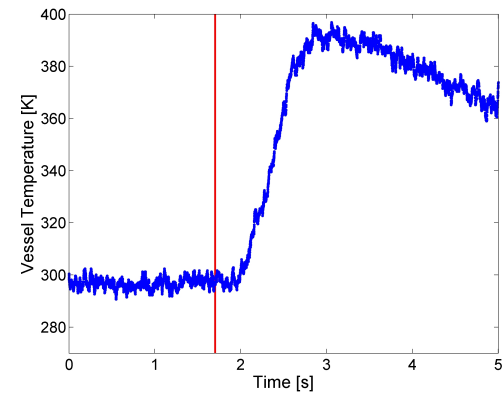
Figure M.45: Experimental data from shot 68



(a) Pressure



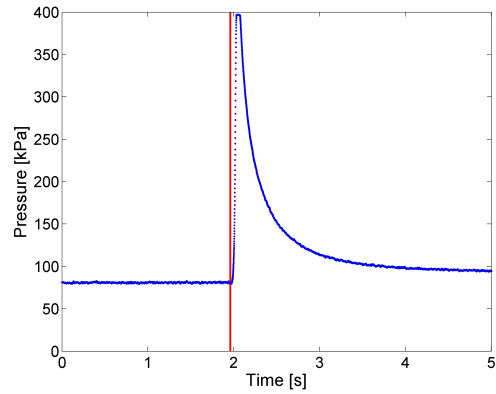
(b) Glow plug temperature



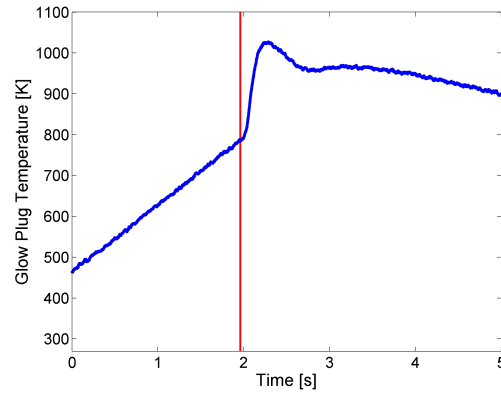
(c) Vessel temperature

Figure M.46: Experimental data from shot 69

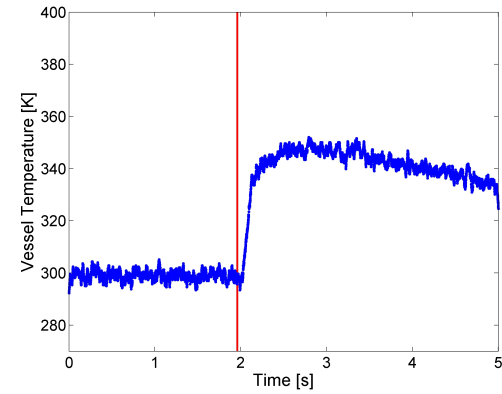




(a) Pressure

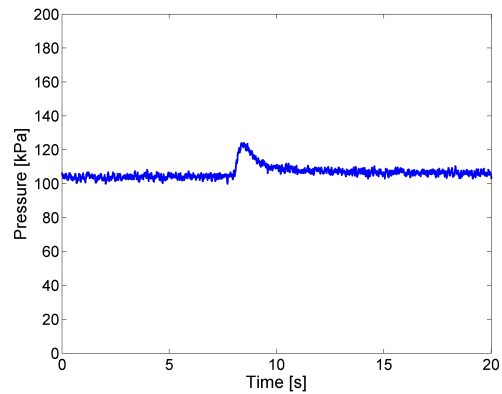


(b) Glow plug temperature

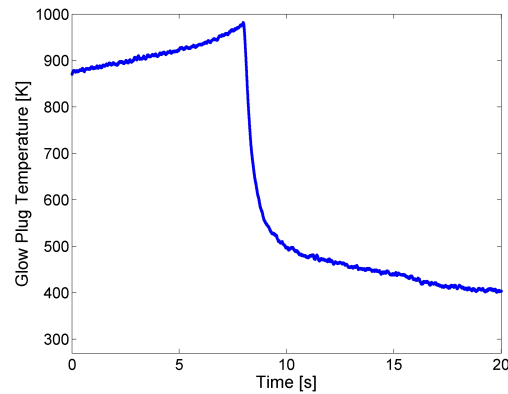


(c) Vessel temperature

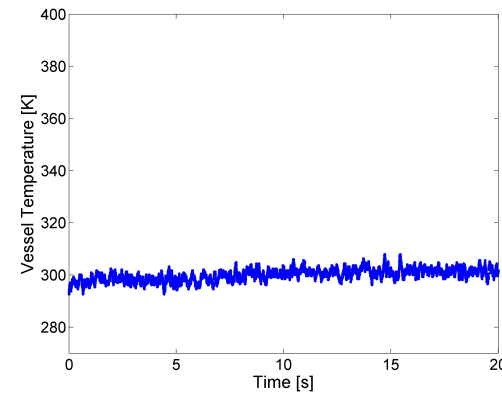
Figure M.47: Experimental data from shot 70



(a) Pressure

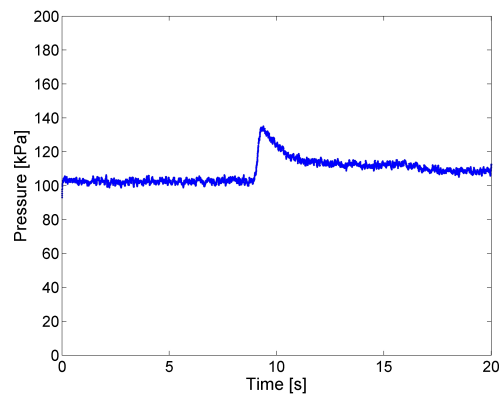


(b) Glow plug temperature

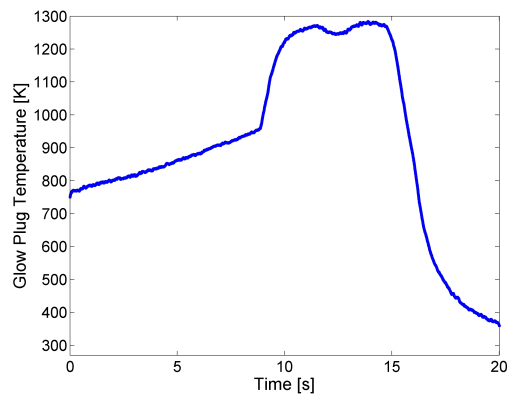


(c) Vessel temperature

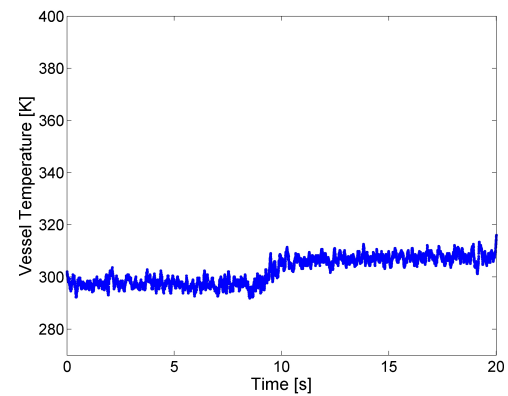
Figure M.48: Experimental data from shot 85



(a) Pressure

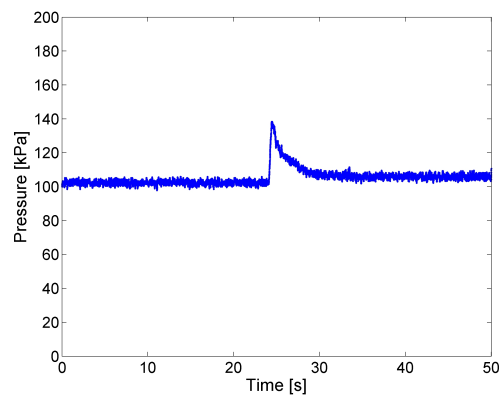


(b) Glow plug temperature

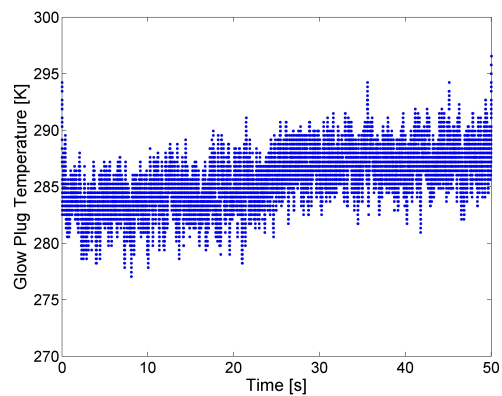


(c) Vessel temperature

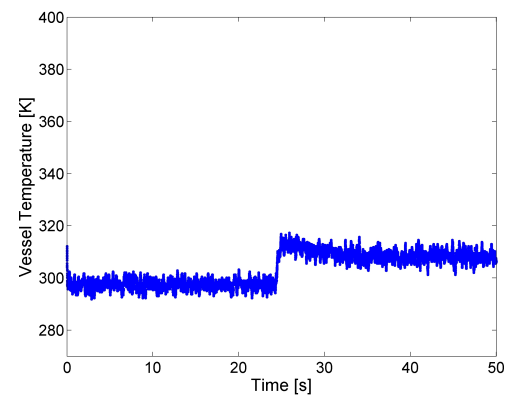
Figure M.49: Experimental data from shot 86



(a) Pressure

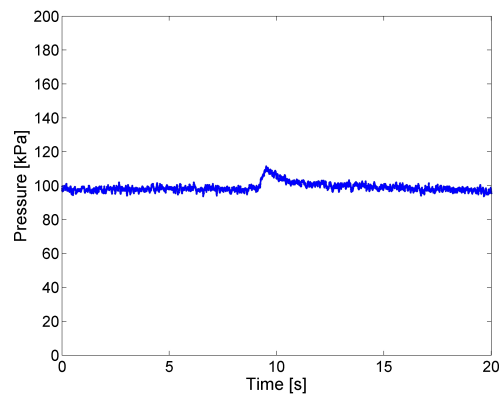


(b) Glow plug temperature

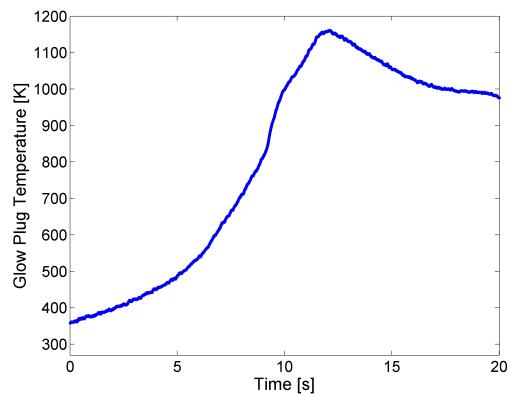


(c) Vessel temperature

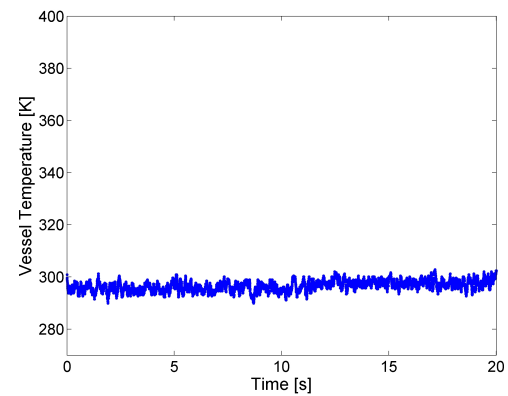
Figure M.50: Experimental data from shot 87



(a) Pressure

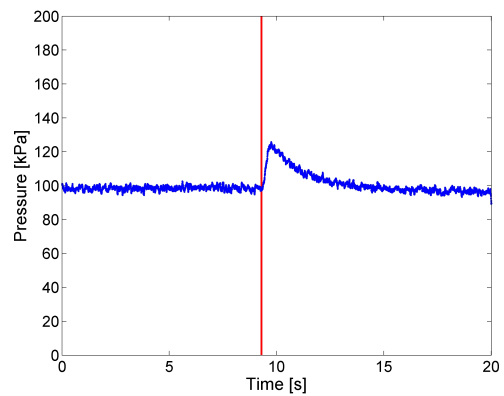


(b) Glow plug temperature

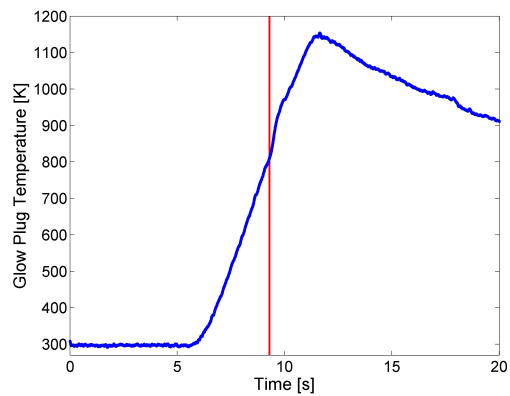


(c) Vessel temperature

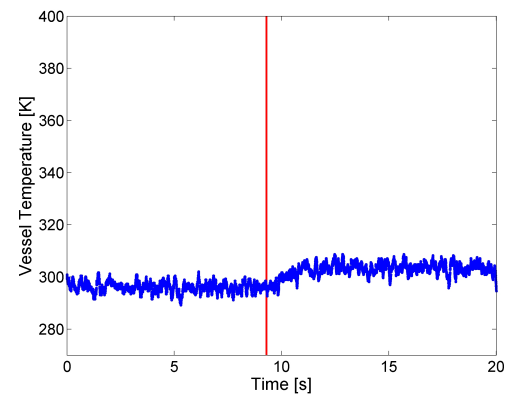
Figure M.51: Experimental data from shot 90



(a) Pressure

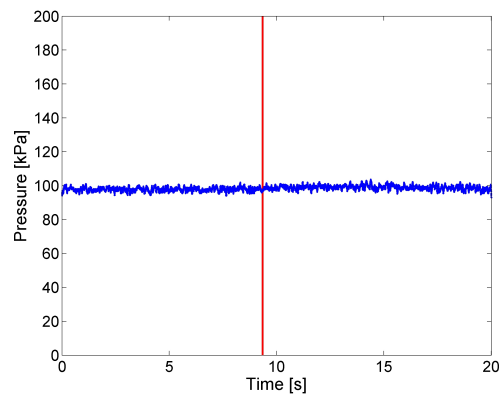


(b) Glow plug temperature

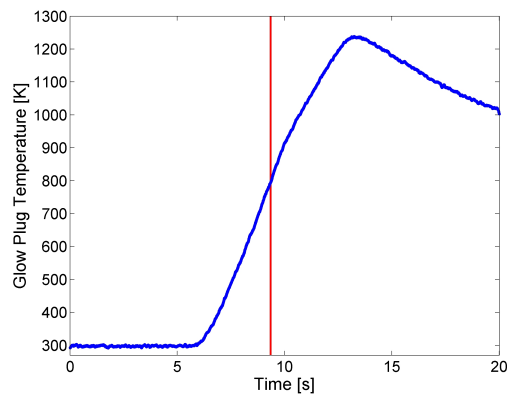


(c) Vessel temperature

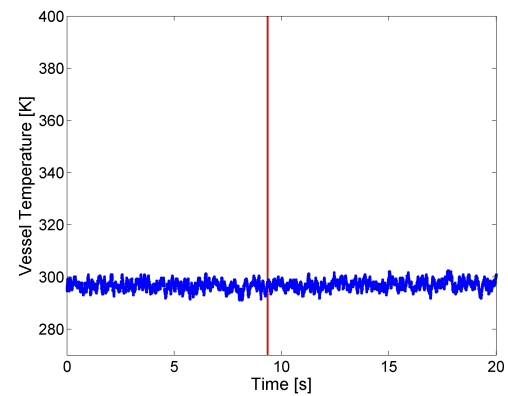
Figure M.52: Experimental data from shot 91



(a) Pressure

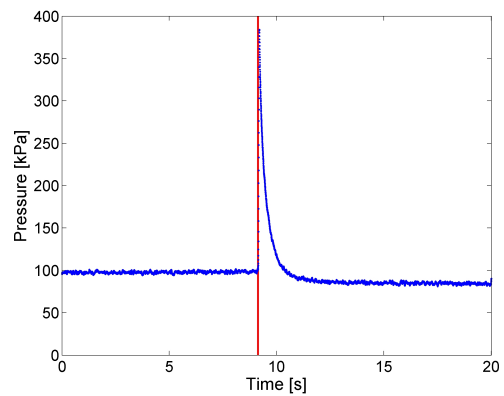


(b) Glow plug temperature

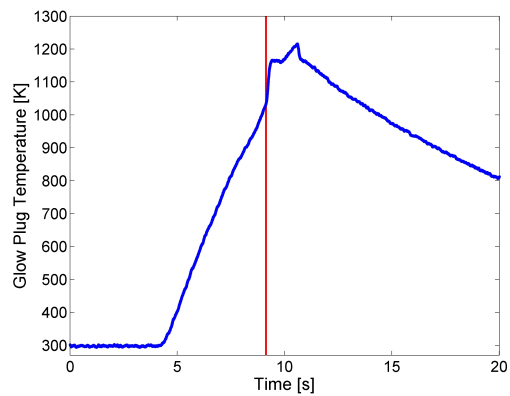


(c) Vessel temperature

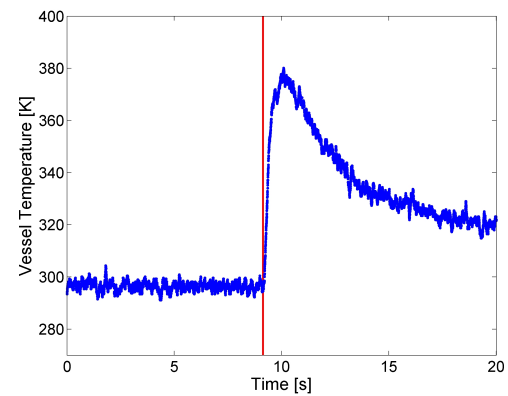
Figure M.53: Experimental data from shot 92



(a) Pressure

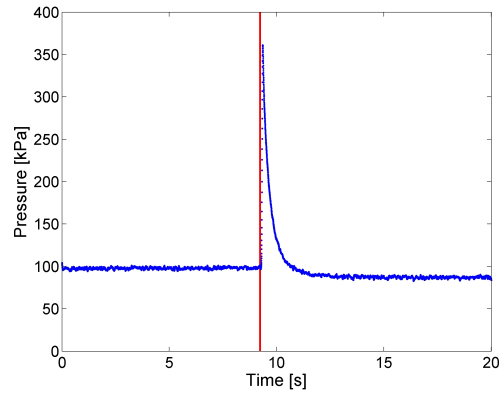


(b) Glow plug temperature

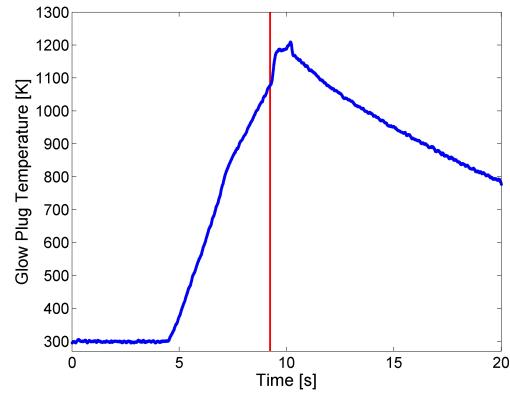


(c) Vessel temperature

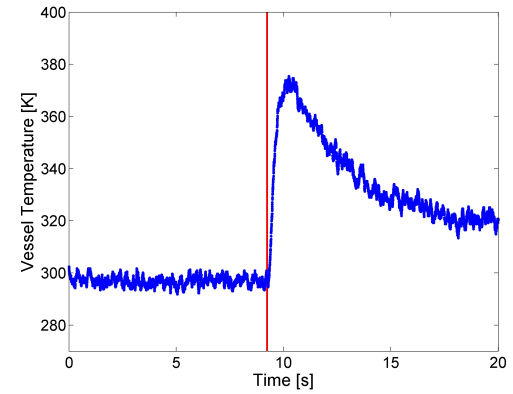
Figure M.54: Experimental data from shot 93



(a) Pressure

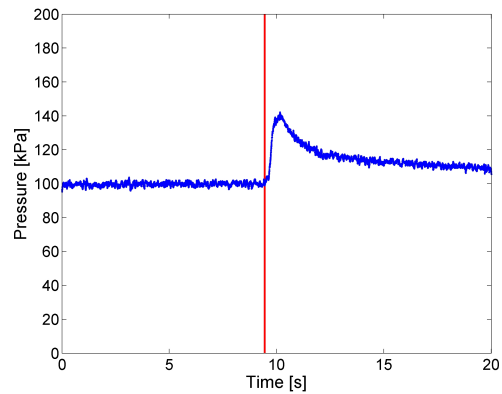


(b) Glow plug temperature

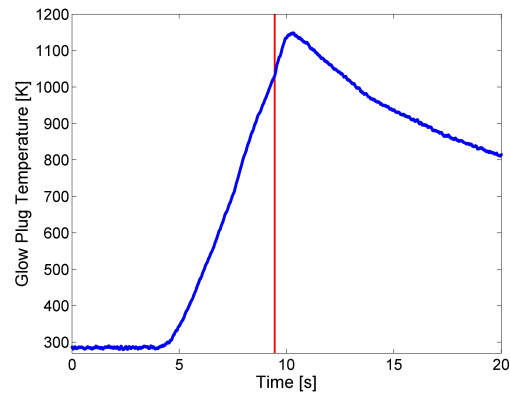


(c) Vessel temperature

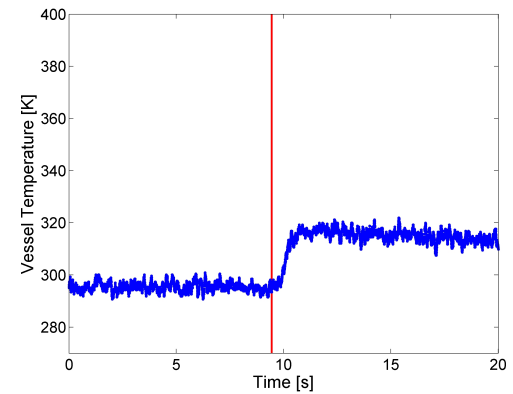
Figure M.55: Experimental data from shot 94



(a) Pressure

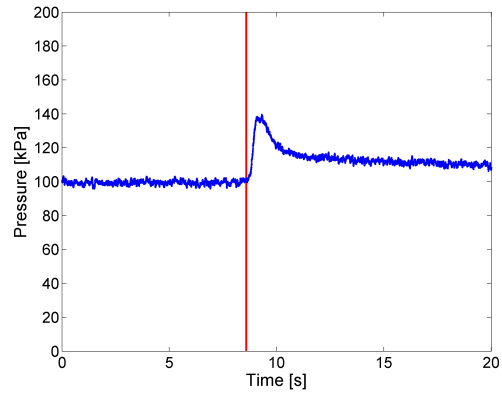


(b) Glow plug temperature

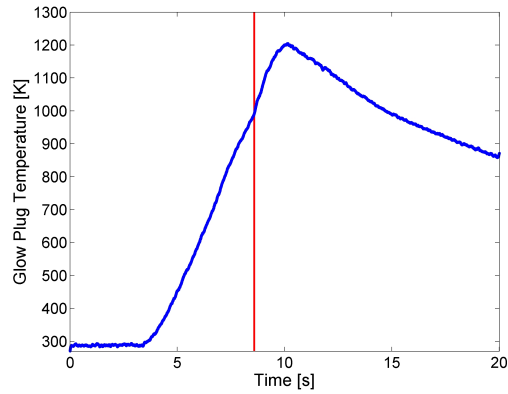


(c) Vessel temperature

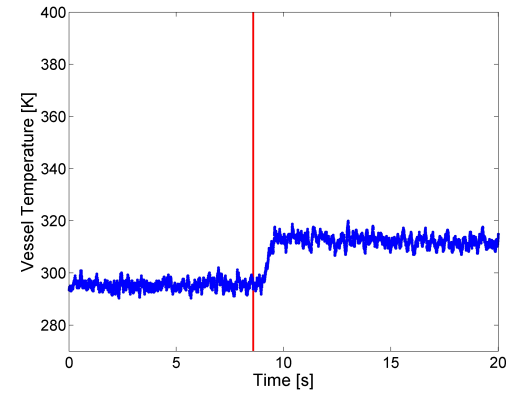
Figure M.56: Experimental data from shot 95



(a) Pressure

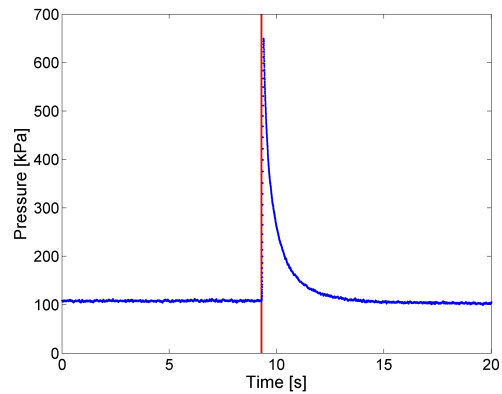


(b) Glow plug temperature

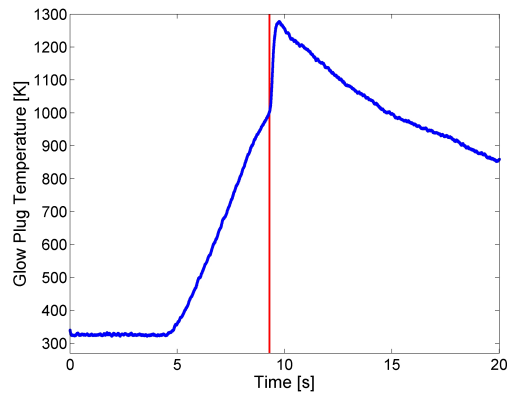


(c) Vessel temperature

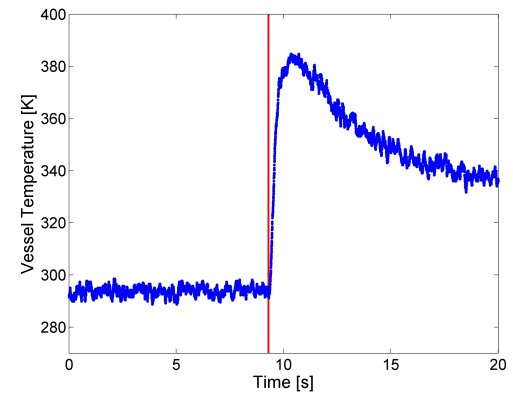
Figure M.57: Experimental data from shot 96



(a) Pressure

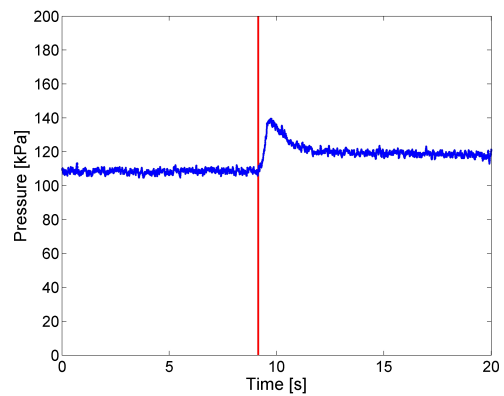


(b) Glow plug temperature

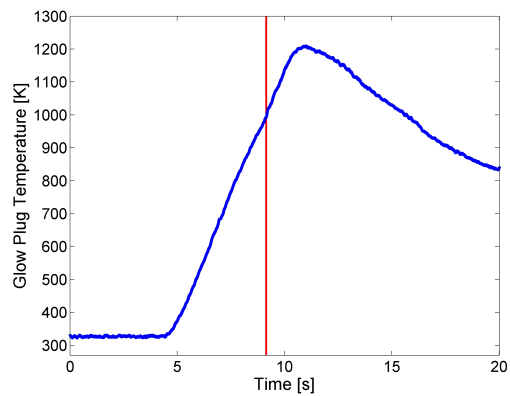


(c) Vessel temperature

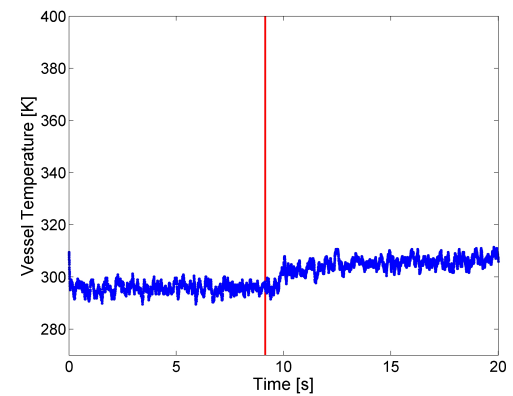
Figure M.58: Experimental data from shot 97



(a) Pressure

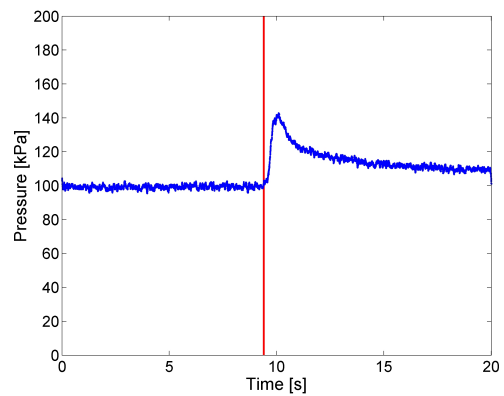


(b) Glow plug temperature

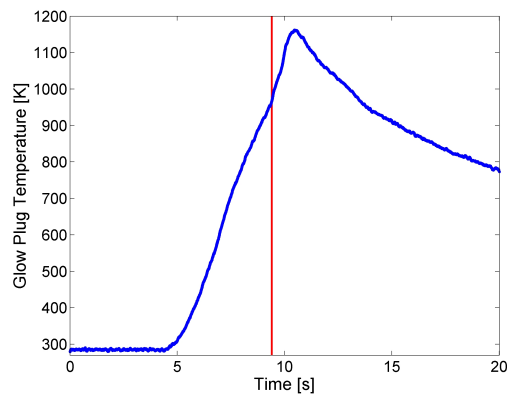


(c) Vessel temperature

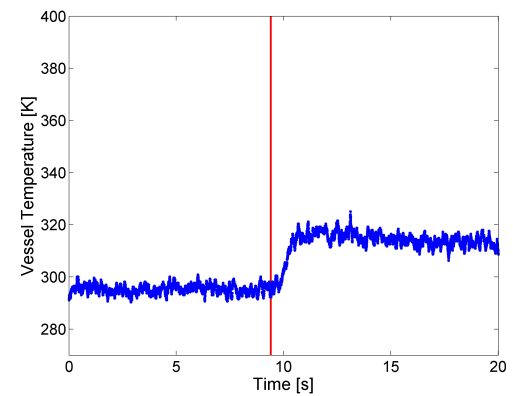
Figure M.59: Experimental data from shot 98



(a) Pressure

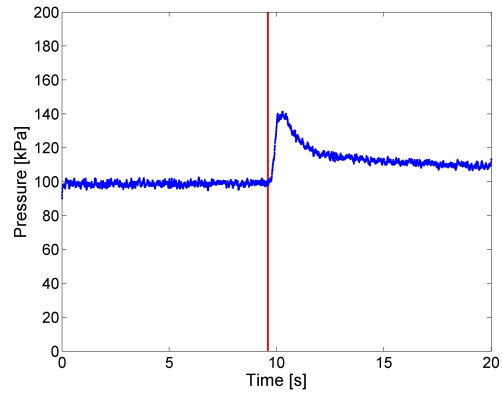


(b) Glow plug temperature

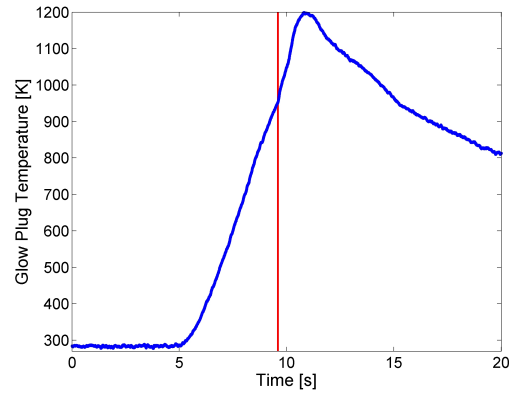


(c) Vessel temperature

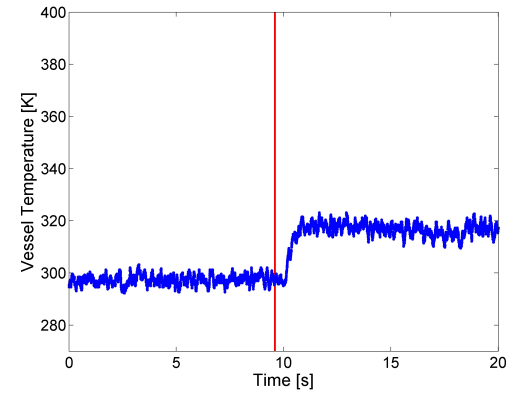
Figure M.60: Experimental data from shot 100



(a) Pressure

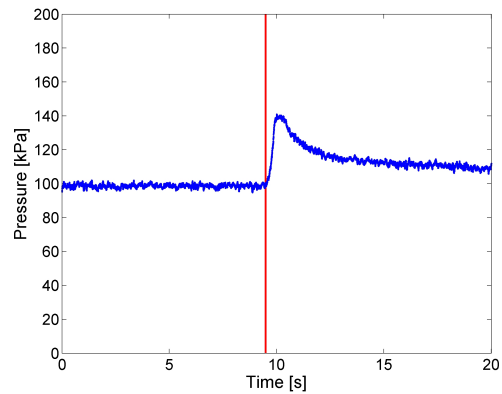


(b) Glow plug temperature

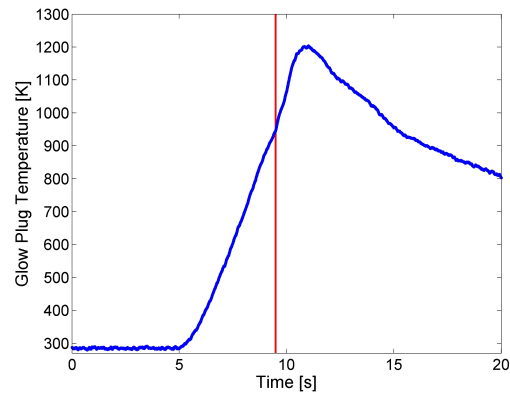


(c) Vessel temperature

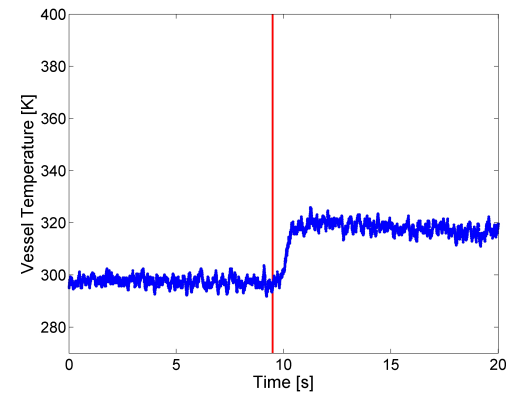
Figure M.61: Experimental data from shot 101



(a) Pressure



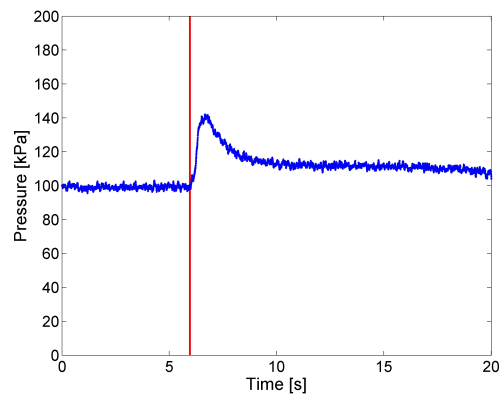
(b) Glow plug temperature



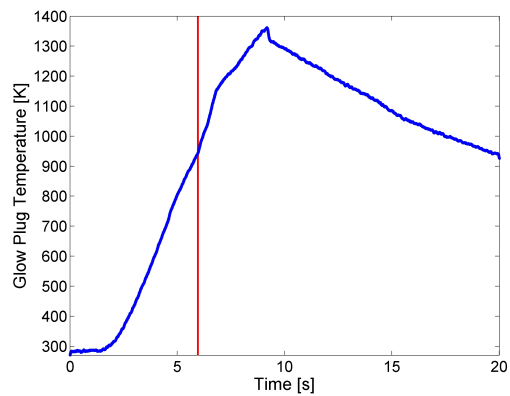
(c) Vessel temperature

Figure M.62: Experimental data from shot 102

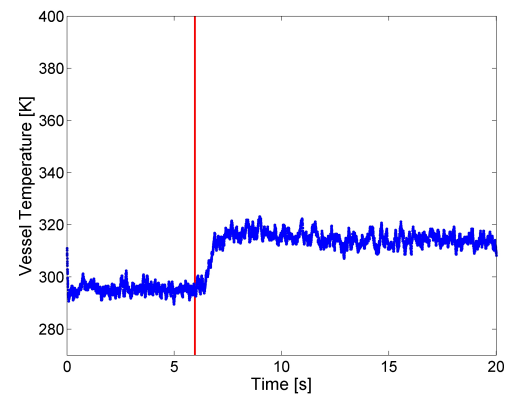




(a) Pressure

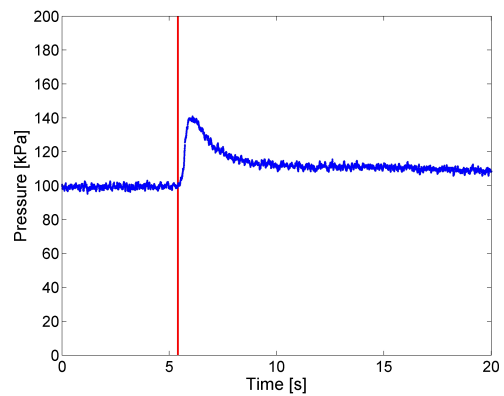


(b) Glow plug temperature

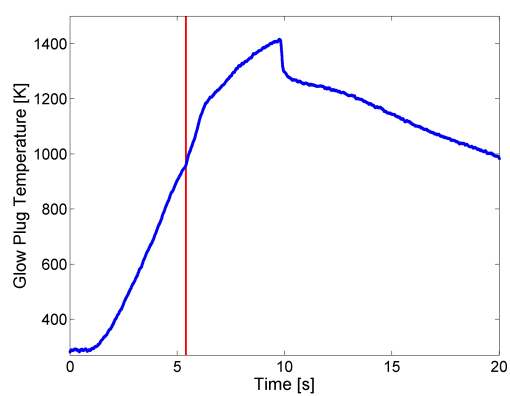


(c) Vessel temperature

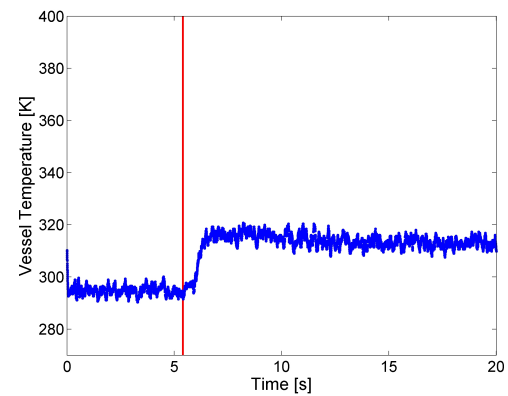
Figure M.63: Experimental data from shot 103



(a) Pressure

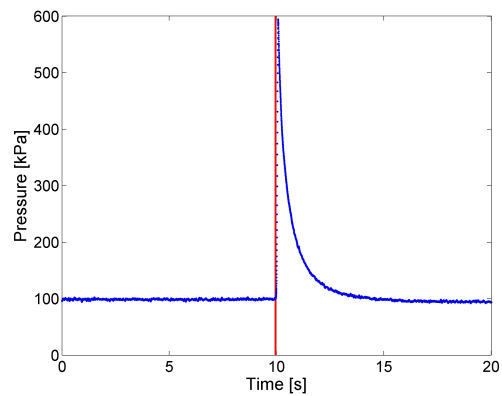


(b) Glow plug temperature

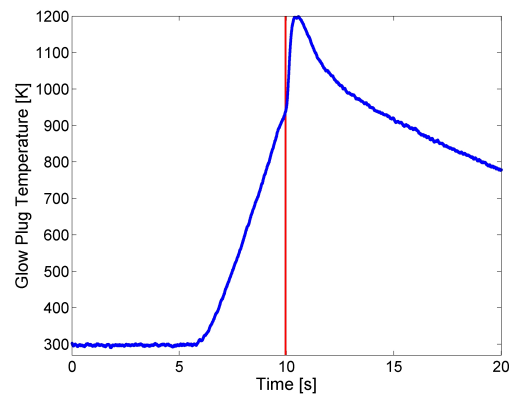


(c) Vessel temperature

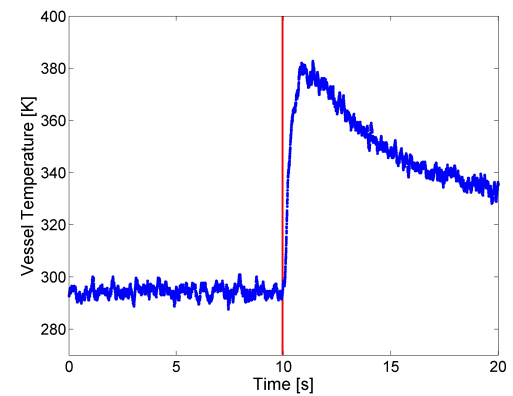
Figure M.64: Experimental data from shot 104



(a) Pressure

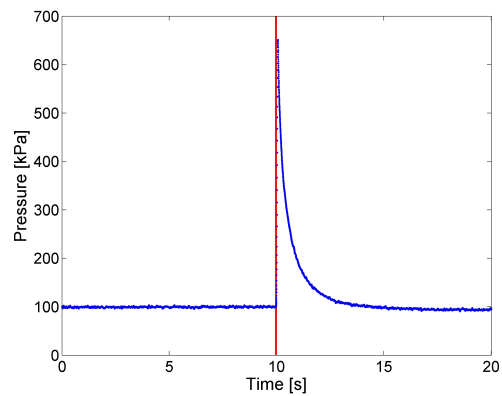


(b) Glow plug temperature

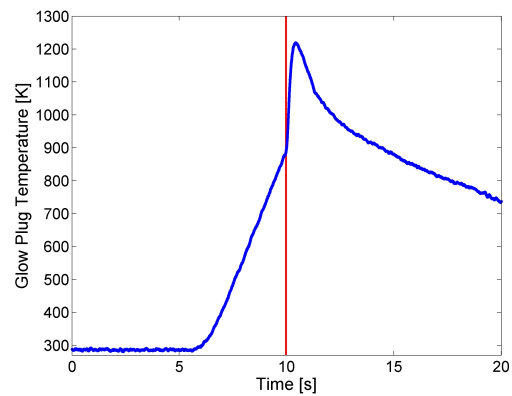


(c) Vessel temperature

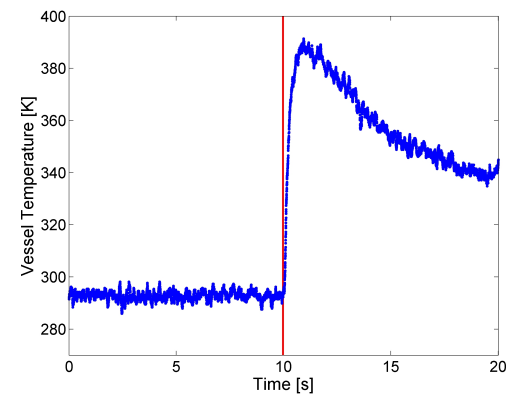
Figure M.65: Experimental data from shot 115



(a) Pressure

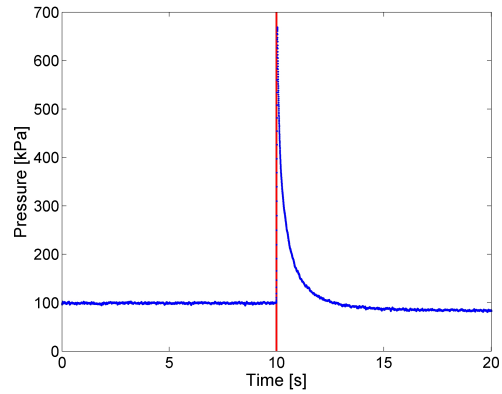


(b) Glow plug temperature

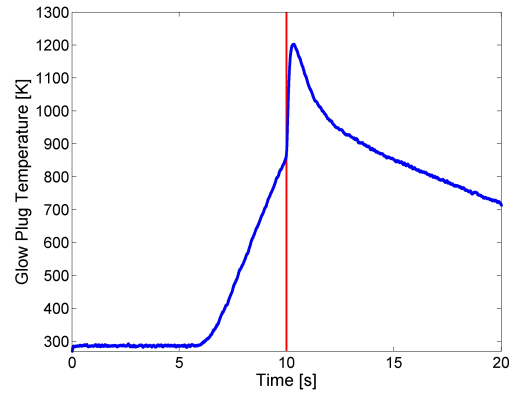


(c) Vessel temperature

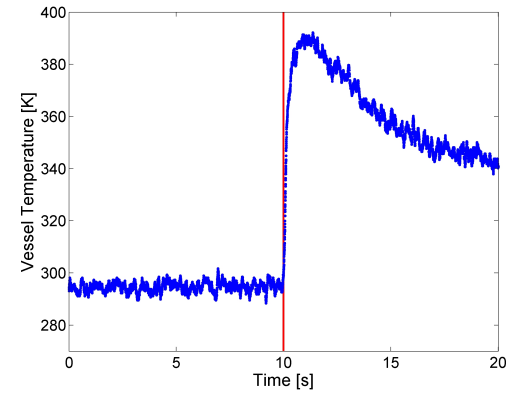
Figure M.66: Experimental data from shot 116



(a) Pressure

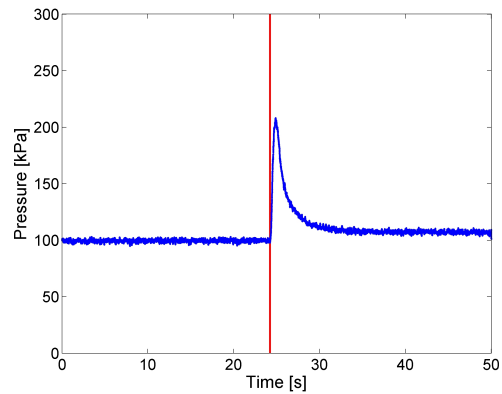


(b) Glow plug temperature

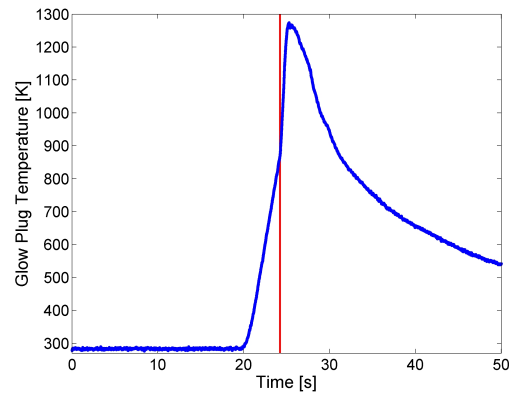


(c) Vessel temperature

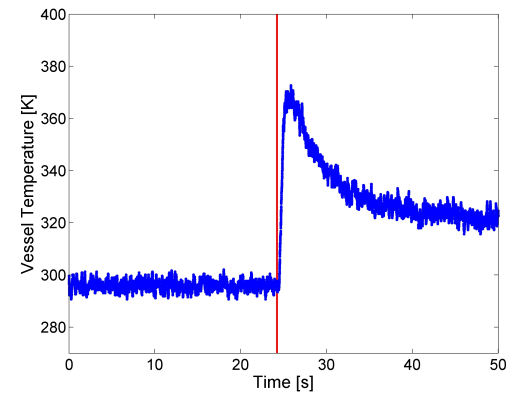
Figure M.67: Experimental data from shot 117



(a) Pressure

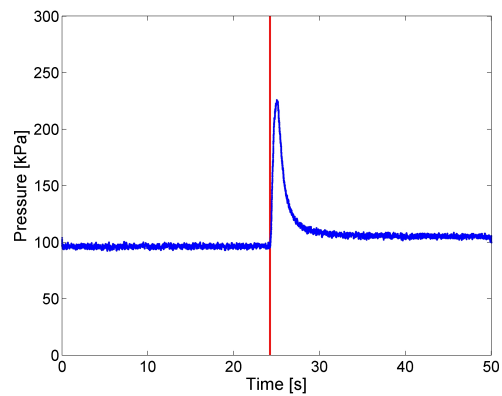


(b) Glow plug temperature

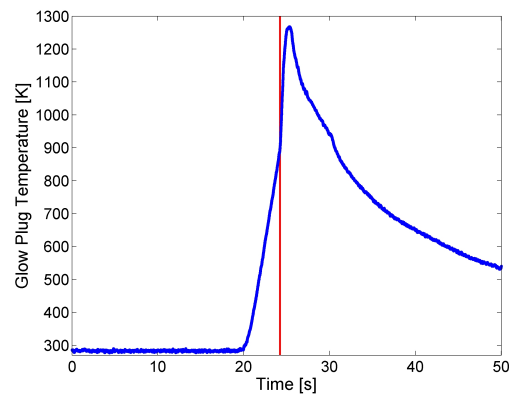


(c) Vessel temperature

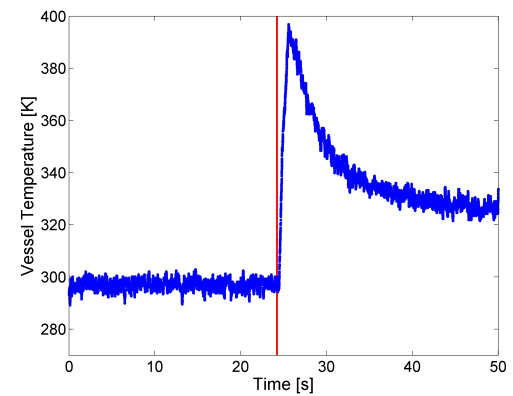
Figure M.68: Experimental data from shot 118



(a) Pressure

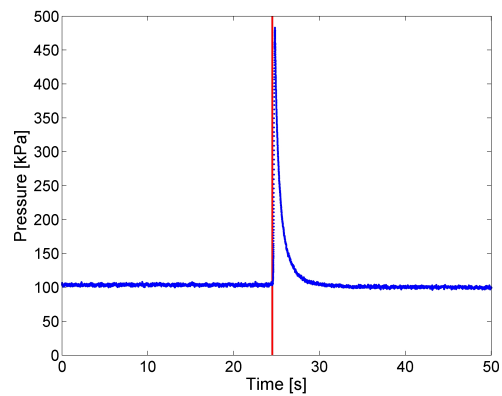


(b) Glow plug temperature

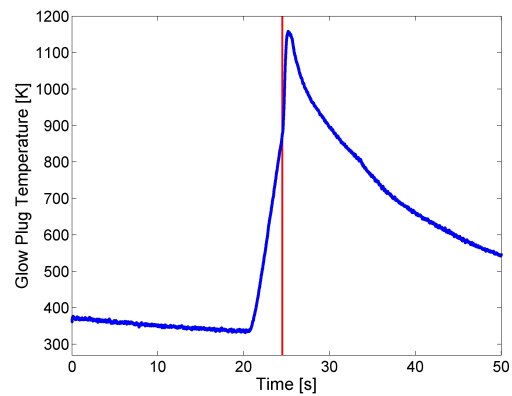


(c) Vessel temperature

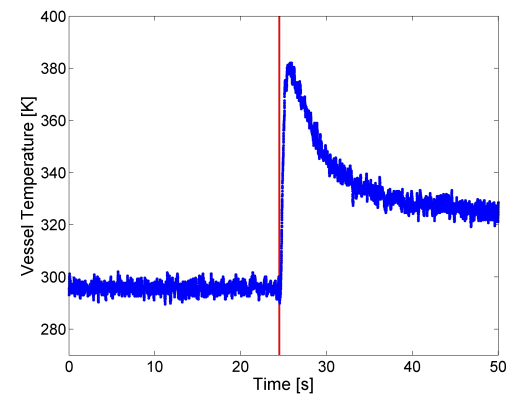
Figure M.69: Experimental data from shot 119



(a) Pressure

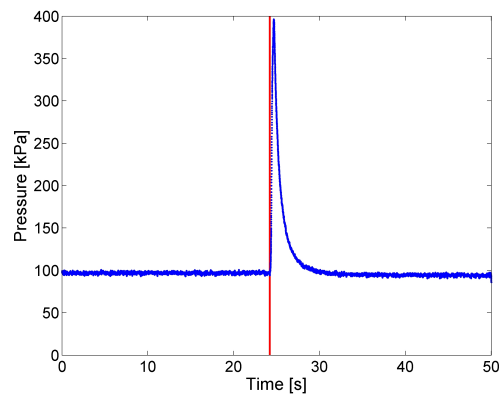


(b) Glow plug temperature

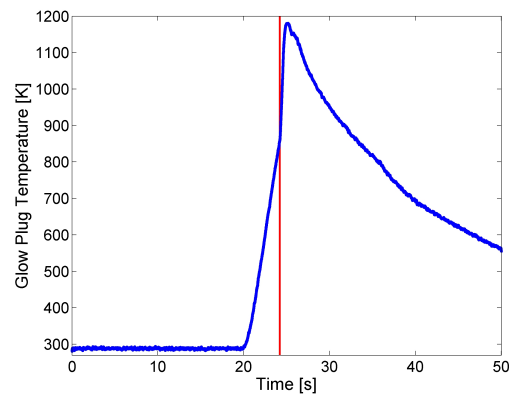


(c) Vessel temperature

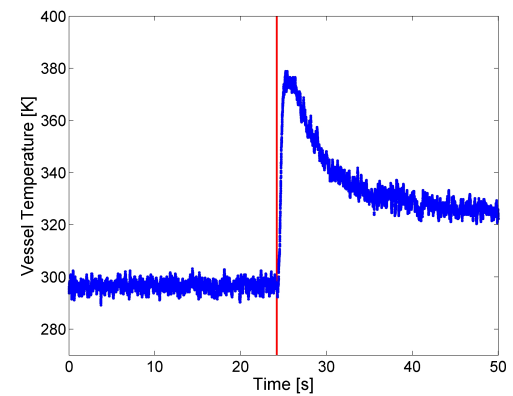
Figure M.70: Experimental data from shot 121



(a) Pressure

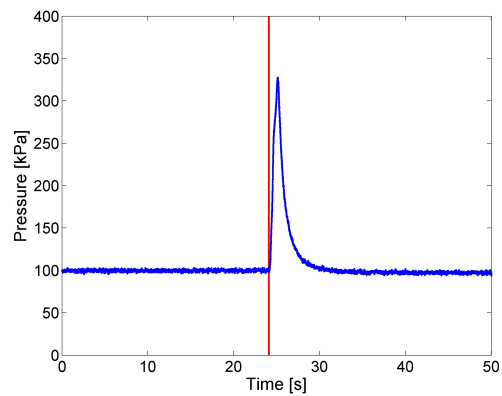


(b) Glow plug temperature

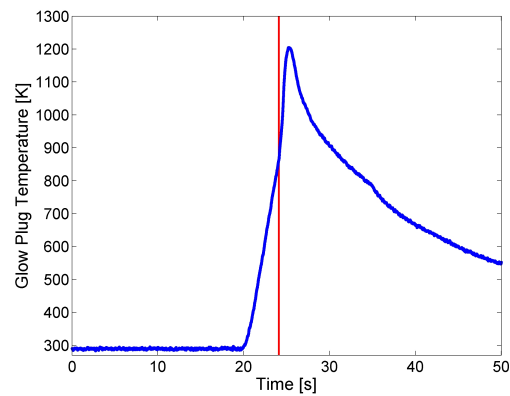


(c) Vessel temperature

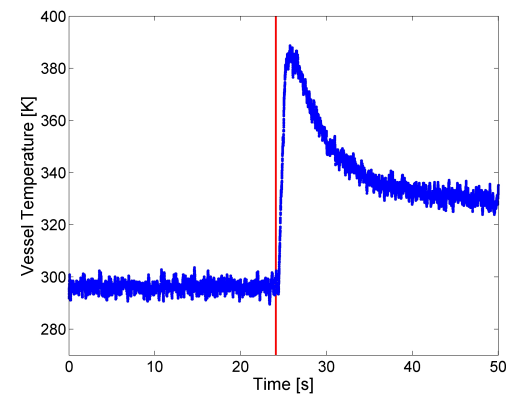
Figure M.71: Experimental data from shot 122



(a) Pressure



(b) Glow plug temperature



(c) Vessel temperature

Figure M.72: Experimental data from shot 123

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