## PATENTS - SUMMARY

Reference the following Patents and Trademarks owned by Marine Turbine Technologies, LLC (MTT) and Turbine Powered Technology, LLC (TPT). TPT is a technology entity wholly owned by Ted McIntyre:

| 1 | PATENT | US9429078B1 | Multi-Compatible Digital Engine Controller | A digital engine controller compatible with multiple variants of gas turbine engine is programmed to receive identification of a variant of gas turbine engine coupled to the digital controller and thereafter to automatically determine and adjust inputs to the engine, according to the received identification of engine variant, to meet user-specified output. |
| 2 | PATENT | US9879609B1 | Multi-Compatible Digital Engine Controller | A digital engine controller compatible with multiple variants of gas turbine engine is programmed to receive identification of a variant of gas turbine engine coupled to the digital controller and thereafter to automatically determine and adjust inputs to the engine, according to the received identification of engine variant, to meet user-specified output. |
| 3 | PATENT | US9869305B1 | Pump-Engine Controller | A system controller manages a gas turbine engine driving a pump directly or indirectly coupled to the engine. The controller is programmed to automatically determine and adjust inputs to the gas turbine engine in order to cause the pump to produce a user-specified hydraulic output. |
| 4 | PATENT | US9689316B1 | Gas Turbine Engine Overspeed Prevention | A controller for a gas turbine engine is configured to respond to one or more prescribed engine overspeed conditions. Rather than shutting the engine down, the controller substantially reduces N1 airflow and substantially concurrently activates one or more engine igniters. |
| 5 | PATENT | US9638101B1 | System and Method for Automatically Controlling One or Multiple Turbogenerators | A system controller manages a gas turbine engine driving a pump directly or indirectly coupled to the engine. The controller is programmed to automatically determine and adjust inputs to the gas turbine engine in order to cause the pump to produce a user-specified hydraulic output. |
| 6 | PATENT | US9829002B2 | Pump System for High Pressure Application | A pump system for high pressure, high volume applications is presented. The pump system includes a turbo-shaft engine having a drive shaft and a high pressure, high RPM centrifugal pump coupled to the drive shaft. In certain embodiments the pump system further includes a second low pressure, high RPM centrifugal pump coupled to the drive shaft. |
| 7 | PATENT | US10415537B1 | Controller Assembly for Simultaneously Managing Multiple Engine/Pump Assemblies to Perform Shared Work | A pumping system includes a pump array of multiple pump-engine assemblies. Each pump-engine assembly comprises a pump and a gas turbine engine driving the pump. A manifold is coupled to the pumps. A master controller is coupled to each of the pump-engine assemblies either directly or via one or more intermediate controllers. The master controller and any intermediate controllers are collectively programmed to respond to user input including a desired hydraulic output at the manifold by automatically calculating and applying inputs to the individual pump-engine assemblies to provide the desired hydraulic output. |
| 8 | PATENT | US10465689B2 | Pump System for High Pressure Application | A pump system for high pressure, high volume applications is presented. The pump system includes a turbo-shaft engine having a drive shaft and a high pressure, high RPM centrifugal pump coupled to the drive shaft. In certain embodiments the pump system further includes a second low pressure, high RPM centrifugal pump coupled to the drive shaft. |
| 9 | PATENT | US10760556B1 | Pump-Engine Controller | A system controller manages a gas turbine engine driving a pump directly or indirectly coupled to the engine. The controller is programmed to automatically determine and adjust inputs to the gas turbine engine in order to cause the pump to produce a user-specified hydraulic output. |
| 10 | TRADEMARK | Registration No 4724316 | CRUZFRAC | Software to control high horsepower turbine driven pumps for use in hydraulic fracturing operations; electric components to control high horsepower turbine driven pumps for use in hydraulic fracturing operations, namely, integrated circuits, processors, controllers, digital data computers, relays and sensors. Diagnostic services in the field of high horsepower turbine driven pumps. |
| 11 | TRADEMARK | Registration No. 3999924 | FRAC STACK PACK | Hydraulic fracturing equipment consisting of pumps, gear boxes and turbine engines grouped together in a space-saving configuration. |
A digital engine controller compatible with multiple variants of gas turbine engine is programmed to receive identification of a variant of gas turbine engine coupled to the digital controller and thereafter to automatically determine and adjust inputs to the engine, according to the received identification of engine variant, to meet user-specified output.

Turbine Powered Technology, LLC and Tucson Embedded Systems, INC.
A system controller manages a gas turbine engine driving a pump directly or indirectly coupled to the engine. The controller is programmed to automatically determine and adjust inputs to the gas turbine engine in order to cause the pump to produce a user-specified hydraulic output.

Turbine Powered Technology, LLC and Tucson Embedded Systems, INC.

A controller for a gas turbine engine is configured to respond to one or more prescribed engine overspeed conditions. Rather than shutting the engine down, the controller substantially reduces N1 airflow and substantially concurrently activates one or more engine igniters.

Turbine Powered Technology, LLC and Tucson Embedded Systems, INC.
At least one controller manages a gas turbine engine driving a generator directly or indirectly coupled to the engine. The controller is programmed to automatically determine and adjust inputs to the gas turbine engine in order to cause the generator to produce a user-specified electrical output. Multiple sets of generator, engine, and controller may be used, in which case a master controller individually manages the other controllers to collectively provide the a user-specified electrical output.

A pump system for high pressure, high volume applications is presented. The pump system includes a turbo-shaft engine having a drive shaft and a high pressure, high RPM centrifugal pump coupled to the drive shaft. In certain embodiments the pump system further includes a second low pressure, high RPM centrifugal pump coupled to the drive shaft.
A pump system for high pressure applications is presented. The pump system includes a turbo-shaft engine having a drive shaft and a high pressure, high RPM centrifugal pump coupled to the drive shaft. In certain embodiments the pump system further includes a second low pressure, high RPM centrifugal pump coupled to the drive shaft.

Turbine Powered Technology, LLC and Tucson Embedded Systems, INC.
A system controller manages a gas turbine engine driving a pump directly or indirectly coupled to the engine. The controller is programmed to automatically determine and adjust inputs to the gas turbine engine in order to cause the pump to produce a user-specified hydraulic output.

Trademark
Registration No. 4724316

CruzFrac
Software to control high horsepower turbine driven pumps for use in hydraulic fracturing operations; electric components to control high horsepower turbine driven pumps for use in hydraulic fracturing operations, namely, integrated circuits, processors, controllers, digital data computers, relays and sensors. Diagnostic services in the field of high horsepower turbine driven pumps.

Assignee
Turbine Powered Technology, LLC and Tucson Embedded Systems, INC.
Trademark: FRAC STACK PACK

Goods and Services: Hydraulic fracturing equipment consisting of pumps, gear boxes and turbine engines grouped together in a space-saving configuration.

Assignee: Marine Turbine Technologies, LLC

Registration No. 3999924