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New Products

October 2015



TCL have developed an Anti-windmill brake for use on the RR Avon gas generator. The brake is designed to prevent the Avon turning, wind-milling, whilst shutdown. Wind-milling can occur for a number of reasons:-

1. Thermal heat drafts following a shutdown
2. Induced drafts in exhaust stacks due to high winds
3. Induced drafts caused by the rotation of a non-operational power turbine, installations where there are multiple turbines on a single shaft

Wind-milling at low speeds causes damage to the root fixing of the first stage compressor rotor blades as the blades are not held in place by centrifugal forces.

The TCL anti-windmill brake is located in place of the existing phonic gear wheel on the auxiliary drive to the wheelcase. The brake uses a solenoid operated friction brake which is energised at low speeds to slow the Avon and prevent wind-milling.

The TCL brake has already been installed on a number of RR Avon gas turbines worldwide.

All equipment is designed and manufactured to TCL's strict quality control standards which have been audited to **ISO EN ISO 9001:2008, ISO 14001:2004 & BS OHSAS 18001:2007** standards

[Contact the TCL sales team for a quotation sales@tcluk.net](mailto:sales@tcluk.net)

Motorcycle Land Speed Record

October 2015



TCL are pleased to announce their participation in the motorcycle land speed record attempt project 'The 52 Express'

The project is attempting to break the land speed record for a two wheel vehicle in the driven wheel class, i.e. not powered by exhaust gas from a jet engine or a rocket. The current record stands at 376mph and the aim is to exceed 400mph.

The motorcycle is powered by a gas turbine engine normally used to power a helicopter and the output shaft of the turbine is connected to the rear wheel of the bike.

The project director is Alex Macfadzean, who used to participate in sidecar GP races and the rider will be James Toseland who is a former world superbike champion.

TCL are providing engineering and consultancy services in relation to the fuel control to the gas turbine.

Contact TCL Sales department for details of the project at:-
sales@tcluk.net

The 52Express project web page is www.the52express.com

TCL New Projects

October 2015



Coventry Waste

Recently awarded the contract is for the replacement of the control and protection system for a 4.0MW steam turbine.

The existing Alstom control system will be replaced with an Allen Bradley ControlLogix 5000 based system and the project includes the design and supply of the following equipment:-

1. Allen Bradley ControlLogix based PLC performing steam turbine control and sequence functions
2. Vibrometer vibration system
3. Rockwell Automation FactoryTalk HMI
4. Basler DECS250 AVR and generator protection relay
5. Jaquet 2003 overspeed trip system
6. 1002 Steam turbine protection system

Gabon

The project involves the supply of a control system for an Alison 501 gas turbine generator located on an offshore platform in Gabon. TCL have previously supplied the gas fuel system for this gas turbine. The equipment supplied includes:-

1. Allen Bradley ControlLogix based PLC performing governor and sequence functions
2. Allen Bradley XM based machine monitoring equipment
3. Rockwell Automation FactoryTalk HMI
4. Allen Bradley CGCM AVR
5. Schneider Generator protection system
6. Det-Tronics Fire and gas system
7. Liquid fuel system based on the TCL Posiflow system

TCL will be responsible for the configuration of all the supplied equipment and for the design of the system integration. The award of this contract follows a number of successfully implemented projects in the same region.

Dubai

The project involves the supply of a control system for a Garrett IE-990-50 gas turbine compressor located on an offshore platform in Dubai. The equipment supplied includes:-

1. Allen Bradley ControlLogix based PLC performing governor and sequencer functions
2. Bently Nevada machine monitoring equipment
3. Rockwell Automation FactoryTalk HMI
4. Compressor surge protection equipment
5. Gas fuel supply system, control and shut-off valves

TCL will be responsible for the configuration of all the supplied equipment and for the design of the system integration. Again the award of this contract follows a number of successfully implemented projects in the same region.

[click here to see details of TCL projects>>](#)

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