Giacintec
Mesure, Télémesure, Equipement

An added value

Years of relationships at import export and years in sensing and instrumentation business helps building a strong experience in both related domains.

Providing measurement systems in foreign countries and particularly when these countries are far away built up a strong experience.

One has to leave aside Manichaeism to adapt procedures to different way of thinking. First of all the projects we are answering to, because of our reputation, are always off the beaten tracks. Our advices applies to very specific applications with innovative solution.

As we cannot get an expertise in every field, we remain humble and use all help that can lead to success. We have partners in rotating machine business, automotive, railroads, marine, aeronautics, civilian engineering structures and natural sites monitoring.

Telemetry

We have been involved in torque measurements, for instance in India, applying our know how to tractors axels for measuring torque including transients on axels when operating on torture tracks or on starter shaft of military aircraft turbines.

In the US temperature monitoring of inside rotating oven in cement industries or acoustic listening of rotating crushers.

In other country we measured the weight of rotating oven using supporting rollers.

Each time we had to get the expertise of strain gages implementation specialists of use the experience of thermocouple pyrometric protection tubes.

The shape and assembly of the telemetry transmitter and its inductive power supply had to be designed and a prototype to be built and tested in France before Shipping for installation.

In some cases we had to proceed to water proof testing, high rotation speed testing and mechanical calibrations.

Specific sensors

Force multicomponent sensors using measurements of 3 moments and 3 loads is not an easy challenge particularly when the temperature varies and when the proof body is rotating. We had to involve a lot of resources to solve this problem.

Measuring traction on cables in marine operations without cutting the wires was another request with in addition the bouncing rotation of the line. There a new design was used with high loads calibrations and appropriate matching electronics.

High range load cells and pressure sensors were requested in exotic applications and our advice was the key for deciding from several technologies.

Obviously, most of the time, sensing element being the heart of the solution we were requested to advice and sometime provide the electronics.

Conditioning electronics, data loggers, sometime radio transmissions and software are determining the best operation of the complete system

Beacons

As a representative of GMG, we offer beacons to monitor, for instance slopes. A beacon is a system integrating several sensors as displacement, angle, temperature and sometimes gyros.

If our principal can provide and assemble the sensors into the beacon, we are very careful regarding sensors selection and can, for some applications, help in the choice.

Beacons use some other technologies like GPS and radio transmission systems where we have our own experience.

On another hand we are not geologists neither geotechnicians and even if we are familiar of slopes and civilian engineering structures, we rely on some of our partners to determine locations and implementations of the devices.

We were requested, for example, to think about mines celling collapsing risks for African countries. Monitoring had to be used in this case to prevent disaster and preserve workers.

Fiber optics

Fiber optic solutions for measurements are quite complicated. First of all the fiber optic must be designed and manufacture in accordance with the application. A raw fiber optic of fiber optic protected with usual sleaving like rubber or plastics is not to be used of shelves.

Because fiber optics are embedded in soil or concrete or other material, sleaving has to be carefully attached to the fiber and in order to measure strength being pre strengthen. The material covering the

fiber may be iron, stainless steel and so on but has to be chosen to match its environment. An understanding of grouting the fiber lines in holes makes huge of a difference in measurement.

The length of the fiber, prolongation cables, intermediate boxes and connectors are as many concerns to be taken in account.

The complete system needs to operate, to use a data logger. There are several data logger manufacturers and several technologies used. The experience help making the smart choice in between all available units in this market. Depending upon the application reflectometers from Canada, US, UK, Germany or France will make the difference.

Our fiber optic supplier being South Korean and not manufacturing data loggers, we are free to decide what will be the best solution for an application or the other.
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