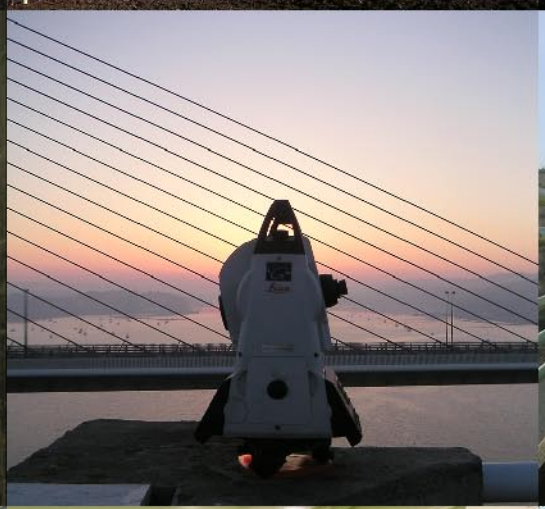
the services of IGN

INSTITUT GEOGRAPHIQUE NATIONAL

dimensional and geodesic metrology









The Special Projects Unit of the Geodesic and Levelling Department

Its long-recognised competence and the diversity of the techniques it uses allow the Special Projects unit to provide numerous services, both in France and abroad.

In October 2007, the Special Projects unit was certified ISO 9001 : 2000 for its expertise, measuring and consulting services in the field of dimensional and geodesic measurement.

Fields covered

Territorial planning

Infrastructures

Major Projects

Civil engineering structures

Aeronautics

Industrial sites

Laboratories

Sensitive zones

Land movement

Risk prevention

If you are...

An institutional ordering party,

a design or engineering office,

civil engineering manager,

an industrialist...

The Special Projects unit is one of the French benchmarks in the field of safety monitoring, land movement monitoring, geometric verification of civil engineering structures, and laboratory and industrial environment determination.

If you want to...

Establish
a diagnosis or carry out a study,

Draw up
project specifications,

Set up
a reference network,

Have access
to reliable measurements and results,

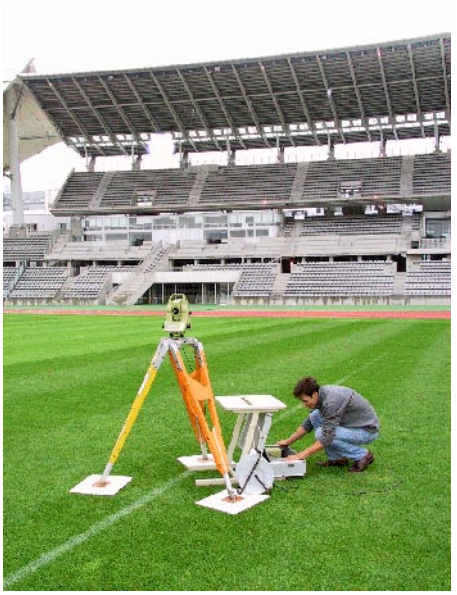
Verify
methods, work and results,

Monitor
deformations,

Ensure
constant monitoring of a civil engineering structure or sensitive sector.

Topometric monitoring of the Viaduct of Passy (Paris)

Topometric monitoring of the pressure conduit of Le Bious (Pyrénées-Atlantiques)



Topometric monitoring
of the superstructures of the Charléty Stadium (Paris)

Automatic monitoring in Amsterdam (Netherlands)

Topometric monitoring of the Viaduct of Passy (Paris) - levelling operations

Topographic survey assignment at the ITRF site in Herstmonceux (United Kingdom)

... the skills and competence of the Special Projects unit is at your service

Dimensional measurements

Verification of forms, installation and verification of reference networks, orientations, metrology assignments...

REFERENCES

IXSEA – Orientation verification of a network of targets and mirrors requiring the use of a high precision gyroscope

Mega Joule Laser – Setting up reference networks serving as a basis for all industrialists for the installation of laser chains and technical instrumentation

Aéroports de Paris – Regular verification and supply of information relating to any eventual movement of structures at Charles-de-Gaulle airport 2F

Geodesic Measurement

Monitoring of civil engineering structures and sensitive zones, installation and verification of reference networks, automatic monitoring...

REFERENCES

City of Amsterdam- Automatic monitoring, in association with SolData, of 3.5 km of city centre buildings during the tunnelling phase of a new Metro line. Similar work in other sites in Saumur, Toulon, Budapest, Barcelona, London...

Gaz de France – Regular surface verifications and operating indicators in order to gather data on any eventual subsidence movement at gas storage sites.

Pont d'Iroise – Regular planimetric and altimetric monitoring of the structure in order to gather data regarding its evolution. Similar treatment for several other civil engineering structures.

Expertise

Study and analysis of site or office-based measurement systems, post-production verification, pre-surveys, simulations.....

REFERENCES

Pont de Brotonne - Evaluation of a system of metrological monitoring during work to improve certain sectors of the structure

Mega Joule Laser - Definition of hypotheses and propositions based on simulations carried out during the pre-survey phase on reference and support networks

Assistance for Contract Owners and Consulting

Definition of needs, drawing up requirements and functional specifications, monitoring, evaluation, data validation

REFERENCES

Pont de Cheviré - Assistance for the Contract Owner, in particular during the phases of drawing up technical specifications and choice of service providers.

Direction des Travaux Maritimes de Brest – Assistance for the Contract Owner, from the definition of needs to verification of service provision

Research and Development

External projects

in association with SolData – Combining interferometry and topographic survey data. The aim is to improve data provided by satellite radar images by associating terrestrial data

in association with the Civil Aviation Authority Technical Department and Aéroports de Paris - Detection of a rapid mobile by processing images, with one of the applications being the positioning of aircraft on landing.

European project - S@ny (Sensors Anywhere)

IGN is one of the 16 European partners associated for this integrated project (No.0033564) financed by the European Commission.

Through innovative tools, the players involved in S@ny are developing the interoperability of different sources of environmental information (sensors in the field, monitoring networks, modelling tools, etc.).

The aim of the project is to standardise these exchanges of information, making the data easily accessible.

This means S@ny is one of the flagship projects for the deployment of environmental information services of the future.

S@NY
Sensors Anywhere

Subsidence verification at Poligny (Jura)

Geodesic assignment, astronomical site in Hawaii (United States)

Bridge load trials, Térénez (Finistère)

The strong points of Special Projects

A team of 15 people,
a range of high performance equipment
and our ISO 9001 certified expertise
mean we can supply reliable information
for all types of dimensional and geodesic metrology projects.

Topographic survey assignment
at the ITRF site in Hartebeesthoek (South Africa)

Our links with the different IGN laboratories,
as well as many schools in France
(ENSG, ESGT, ENPC, INSA Strasbourg, Centrale Paris...)
and abroad (EPFL)
enable us to constantly
develop new tools
and new approaches.

Topographic survey assignment
at the ITRF site in Seshan (China)

A range of equipment enables us
to respond to a large variety of situations:
- More than 20 bi-frequency GPS receivers
- Tacheometers:
TDA 5005, TCRA 1201, TCA 2003, TC 2002
- Gyroscope:
Gyromat 3000
- High precision levels
DNA03, NA 3003
- Means of random information acquisition:
inclinometers, accelerometers, meteorological sensors

Processing:
- Least squares calculation software:
GeoLab, Comp3D...
- Visualisation tools: AutoCAD, Surfer...

Contact

Service de Géodésie et Nivellement - Travaux Spéciaux
73 avenue de Paris
94165 Saint-Mandé Cedex
travaux.speciaux@ign.fr
tél : (33)1 43 98 80 13
fax : (33)1 43 98 84 50

www.ign.fr

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