

# OIL & GAS SECTOR

***Principia is an independent marine engineering company delivering innovative solutions to naval (defense & civil) and oil and gas industries from feasibility through design stages to operations support.***

Principia has been supporting the success of oil and gas development projects worldwide since 1981. Our track record covers projects from equatorial swamp to polar deepwater, from oil production facilities to LNG developments.

We deliver expertise and ground-breaking engineering design services applied to floating facilities, subsea modules, umbilicals, risers and flowlines, fixed platforms, offshore service vessels, LNG terminals.

Principia has offices in France, Singapore and Houston and can provide expertise and engineering services worldwide.

The expertise and endeavour to build client-focused solutions that underpin our work, allowed us to develop our first-class clients' trust year after year. This constantly renewed trust provides us the leverage to broaden our scope of services which covers today :

- Conceptual, feasibility study and FEED activities,
- Detailed design of packages and support to main contractors,
- Expert analysis and independent 3rd part verification,
- Simulation of accidental situations for risk assessment,
- Monitoring systems development and supply,
- Engineering softwares development and marketing,
- Research and development projects and JIP.

Principia also offers privileged access to some of the main French high technology model test basins.

**Our staff of more than 100 engineers, technicians and designers encompasses the following disciplines :**

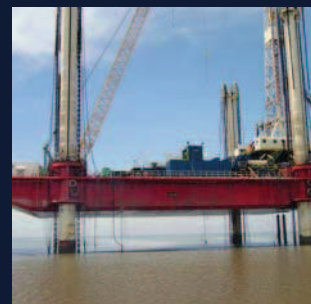
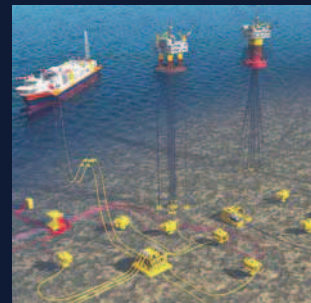
- Naval Architecture,
- Structural design,
- Hydrodynamic, sea-keeping, mooring, marine operations,
- Model testing,
- Flow assurance, process and thermal engineering,
- Risers, pipelines and subsea engineering,
- Mechanical design and piping.

## ***Our offer***

Our commercial offer is divided in three business lines to match our clients' needs :

- SURF : Subsea Umbilical Riser Flowline
- Floating facilities global performance
- Offshore service units & fixed platforms design

For 25 years, our expertise in core scientific disciplines as structural design, fluid-structure interactions, hydrodynamics and fluid dynamics has built upon multi-sectors research and development activities (naval, marine, renewable energy, nuclear, space, automotive,..) and cooperation with National research centres and Universities.



# References

## Our clients include :

- ▶ **International Oil Companies** : TOTAL, EXXON, CHEVRON, SHELL, GDF SUEZ
- ▶ **National Oil Companies, JV or Independent companies** : PETROBRAS ,SDAG, EDISON
- ▶ **Main contractors** : TECHNIP, SAIPEM, SBMOffshore, ACERGY, SOFEC, BUMI ARMADA, SWIBER, REMORA, DORIS ENGINEERING, BLUEWATER, SOGREAH
- ▶ **Suppliers** : TRELLEBORG, GTT, FMC Intl, SCHLUMBERGER, TECHLAM, INTERPIPE, COURBIS, BARDOT, ALCATEL, WARTSILA
- ▶ **Other industries** : Areva, DCNS, Astrium, Bouygues

## Sample of projects Principia worked for :

- ▶ **Deepwater West Africa** : Girassol, Dalia, Akpo, Usan, Kizomba, Erha, Angola Block15 Gas Gathering, Agbami, Greater Plutonio, Bonga, Egina, CLOV, Azurite, Block 32
- ▶ **Offshore West Africa** : Moho-Bilondo, Chinguetti, Oyo, Okoro-Setu, OFON, Zafiro, Sanha, N’Kossa
- ▶ **Americas** : Cascade, Golfinho, Gimboa, Hidra, Thunder Horse, Matterhorn
- ▶ **Far-east and Australia** : Kikeh, North Belut, Abu cluster, Puteri, MAD6, Sakhalin, WANAEA, Bongkot
- ▶ **Europe, Mediterranean and Middle East** : Frigg, Harding, Jura, Vega, Janice, Zakum, Balder, Shah Deniz, Troll Olje, Heidrun
- ▶ **Terminals** : Rio-Del Rey, Tamatave, Senipah, Shtokman (Barents sea), Livorno, Idku, Balhaf, Dahej, Skikda, Bejaia



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