

350,000 Bbl Generic FPSO Hull (G-350-T)

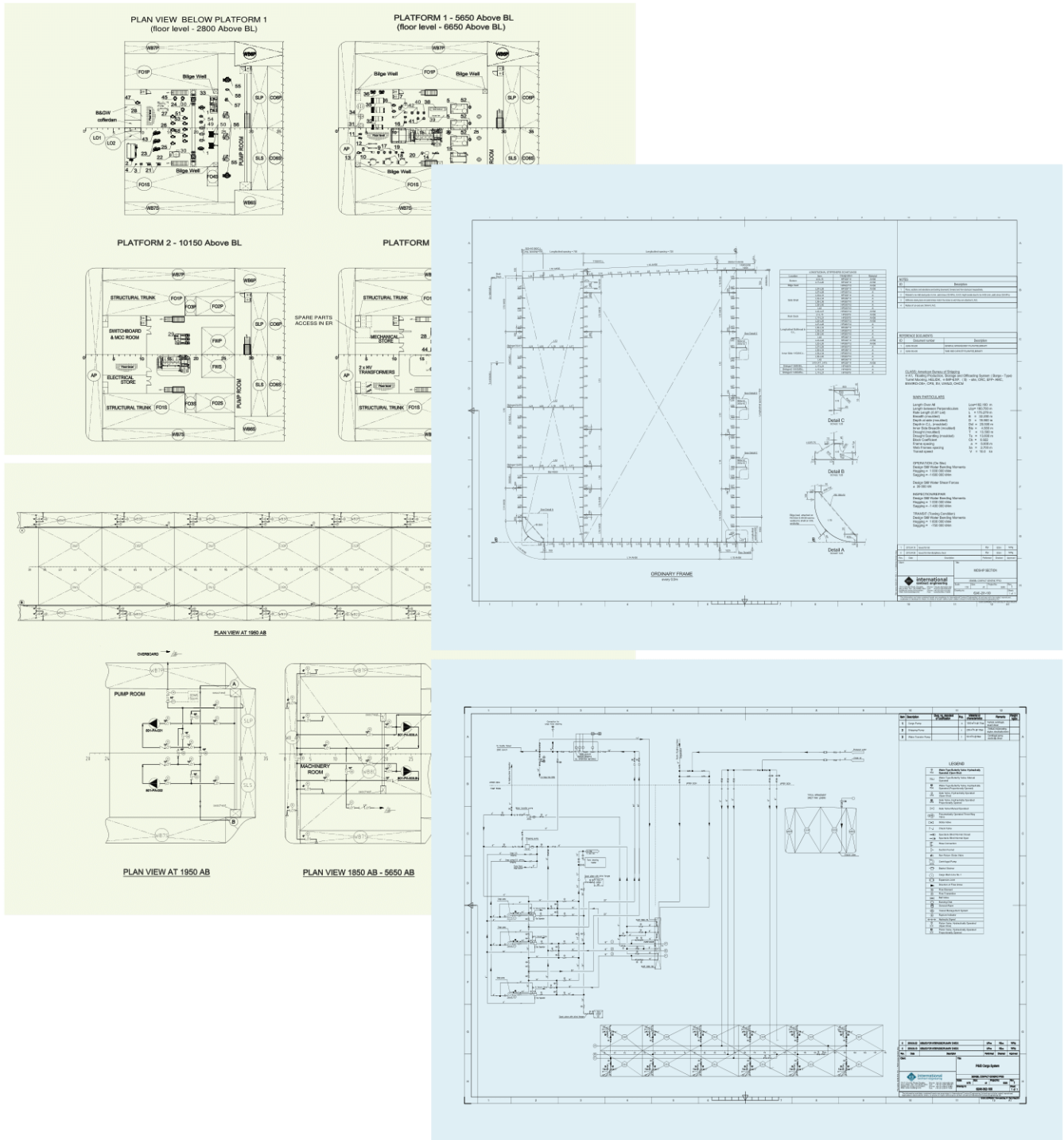
Based on experience from about 40 FSO and FPSO projects, ICE has developed a compact hull design that is:

- suitable as a platform for a range of floating production, storage and offloading (FPSO) facilities for offshore oil and gas,
- barge-shaped, with double sides, single bottom in cargo area, and low-slamming elipsoidal rounded bow,
- adaptable to topside configurations weighing up to 3,500 tons and capable of up to 10,000 barrels of oil per day production rate (subject to owner requirements),
- capable of storing 350,000 barrels of oil available for offloading, with an offloading rate of 300,000 bopd,
- hull-integrated internal turret, supporting weathervane mooring configuration and a flexible riser system,
- capable of a 25-year service life without dry-docking,
- providing accommodation and support facilities for 74 persons, including maintenance personnel.



G-350-T

Design developed from concept to detail engineering



Adaptability

Robust ship design adaptable to:

- Spread mooring;
- Internal/External turret arrangement;
- Various standardized (generic) and Field specific topside modules arrangement;
- Field / Client specific requirements.

Principal Dimensions

Length o.a	182.10 m
Length p.p	180.70 m
Breadth mld.	32.20 m
Depth mld.	19.90 m
Draught, design scantling	14.00 m
Hull form	FPSO service tailor-made shape; double side; single bottom.

Capacities

Deadweight (design)	62,025 t
Crude Oil Overall Capacity	370,000 bbl
Crude Oil Overall Offloading Capacity...	350,000 bbl
Slop Tanks	2 x 619 m3
Water Ballast Tanks	32,455 m3
Marine Diesel Oil	4,500 m3
Fresh Water	510 m3

Mooring System

TypeTurret mooring

Accommodation & Safety

Accommodation for 74 persons.

Life saving appliances for 80 people on board:

- 2 x Enclosed lifeboats 80 pers. with handling Davit;
- Fast rescue boat 6 pers., with handling crane;
- 8 x Davit launched life rafts 30 pers.;
- Life jackets;
- Smoke Hoods / Cabinets;
- Lifebuoys.

Helideck

One MI-4 aircraft (equivalent Sikorsky 92, ECC 225).

Cargo System

Processed oil flow rate	10,000 bopd;
Cargo tank pumps	3 x 50% + 1 stripping, steam driven;
Cargo pump capacity	1,000m3/h 16bar;
Stripping pump capacity	200m3/h 11bar;
1 Oil operation metering for max. capacity of 2,000 m3/h;	
Offloading	Stern Discharge System, tandem arrangement;
Offloading rate	300,000 barrels of oil in 24 hours;
Slop tank pumps	cargo pumps to be used.

Ballast System

Ballast pumps:

- for cargo area 2 x 50% pumps (800m3/h 4 bar);
- for aft machinery area 2 x 50% pumps (400m3/h 4 bar).

The cargo and ballast systems feature 12 cargo tanks distributed in 6 rows of 2 tanks and 19 ballast tanks arranged at ends and in double side i.w.o. cargo area.

Power Generation

Main Power Generation Plant:

2 (two) dual-fuel (gas / diesel) turbine driven generators
13.4 MWe / 6.6 kV / 3 phase / 60Hz, located in ER;

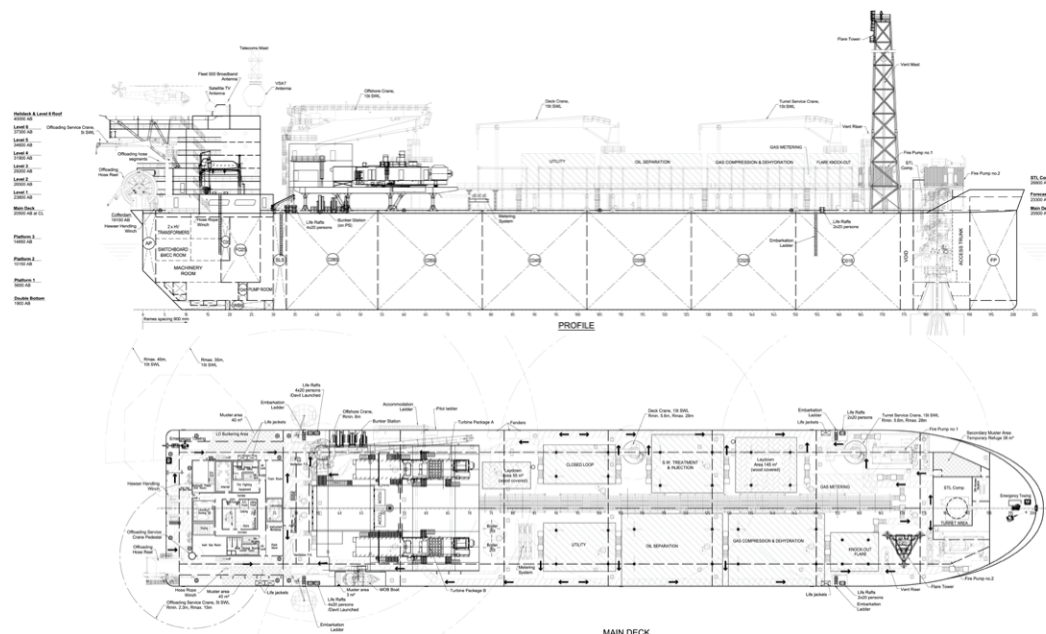
Auxiliary / Essential Power Generation Plant:

1 Diesel-driven Auxiliary Generator set
3.500 kWe / 440 V / 3 phase / 60 Hz, located in MR;

CLASS – ABS

✠ A1, Floating Production, Storage and Offloading System (Ship-Type) Turret Mooring, HELIDK, ✠ IMP-EXP, (S) site, HL (25), FL (25), Year, CRC, EFP-AMC, ENVIRO-OS+, CPS, SV, UWILD, OHCM

Other leading Class designations are optional.



The specifications and data given in this leaflet are for guidance only and subject to applicable metocean data and change.

ICE GROUP CAPABILITIES AND RESOURCES

ICE is an independent full service marine design company with a substantial capacity, serving clients world-wide. Our experience includes 40+ FSO / FPSO projects (new construction, conversions and various studies), jack-up drilling platforms, drill ships, semi-submersible drilling rigs, self-elevating vessels for wind turbine installation, well intervention vessels, converter platforms, etc. We are familiar with the rules of the major IACS Classification Societies and with Brazilian, UK and Norwegian (NORSOK and PSA) regulations. Most of our work is done for repeat clients.



ICE Main Design Office



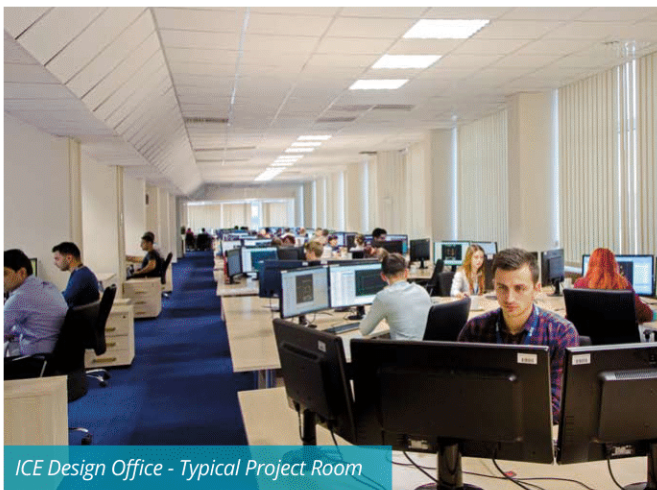
Drill Ship AVEVA Marine 3-D Model developed by ICE



Wind Turbine Installation Vessel



Semi-Submersible Drilling Rig



ICE Design Office - Typical Project Room



FPSO (Dubai)



FSO Conversion



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With a 50-year track record and an annual capacity of 700,000 professional engineering man-hours, the International Contract Engineering (ICE) Group is Europe's largest independent ship design consultancy. We provide high-calibre multi-discipline design services to yards and owners in the commercial shipping, defence and offshore energy industries, ranging from conceptual studies and Class drawings to detail design and production information. We cover a full range of naval architecture and marine engineering disciplines such as hydrodynamics, structural, mechanical, piping, electrical, instrumentation, outfit and HVAC. Our experience includes gas carriers, passenger vessels, navy and coast guard ships, chemical tankers, drill ships, FSO/FPSOs and a range of other vessels. We also have available proprietary designs that can be adapted to clients' requirements.

With our head office in the Isle of Man and our main engineering facilities in Romania, we provide high quality design and engineering at very competitive prices.