

Year	Client	Location	Project Scope
1996	TOTAL	Argentina	Feasibility study for the onshore fabrication of a 12 km bundle (20" carrier, 8" flowline, 3" gasline & control umbilical) launch, tow-out and installation (by the deflect to connect method).
1997	TOTAL OIL MARINE	UK	Feasibility and conceptual study for a Hot-Tap Tee (hyperbaric welding) Tie-in onto the 32" Frigg UK trunkline.
1997	TOTAL	Argentina	Feasibility study for the shore approach of subsea lines (18" Oil trunkline, 3" service line, electrical & hydraulic umbilicals).
1998	FSH / CEP&M R&D	France	Within an alliance group (Elf, Doris Engineering and Forasol) the development of an "Integrated Active Production Riser" to improve wellhead production (i.e. riser artificial lift,...).
1998-1999	Technip	West Africa	Assisting Technip (formerly Coflexip Stena Offshore) in the FEED study of deep to ultra deep riser system technology (Shell Bonga, Nakika).
1999	SBM / CSO	Shell Bonga (Nigeria)	Design and engineering of PLEM for deepwater pipelay and installation engineering of the steel export riser system (Bonga Offshore Offloading Riser).
1999	TOTAL ASTRID MARIN GROUP	Gabon (West Africa)	Maintenance and intervention philosophy on ultra deepwater pipeline and umbilical (3,000m water depth).
1999-2000	Technip	West Africa	Expert to Technip (formerly Coflexip Stena Offshore) in a court case on patent infringement of Flexible Pliant Wave® Riser configuration.
1999-2000	TOTAL / Technip	West Africa	1,500m – 3,000m tensioned riser system dynamic analysis and feasibility study (i.e. : dry trees on the deep draft floater TPG 3300).

Year	Client	Location	Project Scope
1999-2000	(TOTAL) / Technip	West Africa	1,500m – 3,000m tensioned riser system dynamic analysis and feasibility study (i.e. : dry trees on the deep draft floater TPG 3300).
2000	TOTAL FINA ELF R&D	General	Conceptual engineering of an innovative oil export riser system to an offloading buoy and for deepwater field development (in collaboration with Trelleborg / Kleber flexible manufacturer).
2001	(EMDC) / Technip	West Africa	Design and engineering of flowline end termination for ExxonMobil Development Company EPS.
2001-2002	TOTAL FINA ELF	Girassol - Block 17 (Angola)	Detailed design of rigid spools for subsea tie-ins and installation procedures (including handling equipment) by drilling rig
2001-2002	TOTAL FINA ELF	Akpo (Nigeria)	FEED of the subsea umbilicals risers and flowlines (SURF) system (flexibles) including design of Subsea Production System (FPSO + subsea development in 1,200 – 1,800 m water depth)
2001-2002	EXXONMOBIL	WADO	As part of the WADO JIP run by ExxonMobil, state-of-the-art analysis including comprehensive review of riser towers concepts proposed by the industry, pros & cons analysis and proposal for a new concept
2002	Technip France	Greater Plutonio - Block 18 (Angola)	As part of a design competition performed for BP, flowlines field lay-out, design of a "Hybrid 'S' Riser" (HySR™) alternative, installation procedures of SLOR and HySR™ alternatives (FPSO + subsea development in 1,200 – 1,450 m water depth)
2002-2003	Technip France	Rosa/Lirio - Block 17 (Angola)	As part of a design competition performed for TotalFinaElf , design of a "Hybrid S Riser" (HySR™) alternative including installation procedures (subsea tie-backs to Girassol FPSO)

<b>Year</b>	<b>Client</b>	<b>Location</b>	<b>Project Scope</b>
2002-2004	Technip		Hybrid riser systems portfolio development - SLR: Single Leg Riser - HyPIP: Hybrid Pipe in Pipe - HySR™: Hybrid 'S' Riser – Model test and basic engineering for West of Africa and Brazil applications
2002-2003	Petrobras / Genesis	Roncador (Brazil)	Multibore hybrid riser tower FEED and specification for Invitation to Tender.
2004	Technip	SCR Tie-in Base	Conceptual design of SCR tie-in base to improve touch-down fatigue characteristics and reduce installation costs.
2004	Technip	Dalia Stinger & FLETs	Conceptual and detailed design of Dalia FLETs (gas and water injection)
2004-2005	Petrobras / Brasflex	Roncador (Brazil)	Basic and detailed engineering of free standing hybrid riser.