

FPSO / FSO / MOORING SYSTEM DESIGN & ENGINEERING

ma and its personnel have experience in design and engineering work related to the following FPSO/FSO conversion, CALM/SALM buoy projects,

- TLDD FPSO
- BP ANGOLA FPSO
- LPG FSO BERGE RACINE
- FSO NU COASTAL ENERGY
- GAS CONCORD GAS FSO
- PETROCOM FSO
- PETROLEO NAUTIPA
- Ruby FPSO
- FPSO ESPOIR IVIROINE
- ABO FPO
- CALM BUOY (For TUXPAN, SALINA CRUX, ROSARITO)
- CALM Buoy (For Ravva Field)
- SALM Buoy (For Bangkot Field)

Summary of scope of work undertaken by **mA** on the **TLDD LAMSON FPSO** for PTSC (novated from Fred Olsen Production), is as follows,

- General Arrangement
- 3D layout of structure, machinery and piping
- FE Analysis of hull (3Hold analysis)
- FE Analysis for cantilever turret integration
- Fatigue Analysis (global and local)
- Preparation of drawings for hull modifications based on analysis results
- Stability Analysis (Intact / Damage)
- Motion response study
- Hydrodynamic analysis for computation of wave bending moments
- Design of Powergen module
- Support design for topside modules (strength / fatigue)
- Design of Lay Down areas (main deck / elevated)
- Marine Pipe rack design
- Design and analysis of Helideck structure
- Design work related to Modification and upgrade to helideck
- Hazardous area plan
- Life saving and structural fire protection plan
- Design of flare tower structure / foundation
- Design and analysis of deck crane foundation
- Foundation design for major machinery
- Pipe stress analysis
- Surge analysis for fire mains
- Piping isometrics / spool piece drawings for all marine systems
- Pipe support details
- Routing of major cable trays
- Material Handling study
- Follow on engineering during construction
- Offloading platform design

Some snap shots for the TLDD FPSO conversion engineering and other projects are included in the following pages





