

# **Commissioning & Startup**

Fores Engineering, with 25 years in oil & gas asset plants worldwide, is well experienced in Pre-Commissioning and Commissioning activities and can provide high qualified expert personnel necessary to safely and on-schedule follow all phases required by each plant unit to achieve a successful Start-up condition.

Fores Engineering Commissioning Service Process is developed according the following standard phases with only one single target in mind: "bring safely, smoothly and on schedule the plant into production" trying to maximize efficiency by performing tasks in parallel whenever possible always in safe way.



- 1. Systems definition (P&ld markup boundaries) • Documents Preparation:
  - 2. Pre-commissioning and Commissioning Execution plan with Organization Chart & Responsibility
  - 3. Critical Path Analysis
  - 4. Engineering Documents Review
  - 5. Pre-commissioning and Commissioning Schedule and Vendors Call-off Schedule
  - 6. Precommissioning / Commissioning and Start-up Procedures for each identified plant sub-system



## **Commissioning & Startup**

- Mechanical Completion and Installation Verification with Field Inspection Site Phase
- (sub-systems cleaning and required checks Precommissioning according procedures - Dossier Preparation accuraing procedures - possier Preparation Punch List and next phase handover management
  - Work Permit Management)

 Commissioning
 (sub-systems start-up according priority defined and required checks according procedures - and required checks according procedures - and required checks according procedures - and required checks according priority defined - and required - and req Commissioning and required checks according procedures Operating Instructions Review and Changes Track
Record-Dossier Preparation - Punch List and
Necord-Dossier Preparation - Work Permit
Necord-Operation - Work Permit Management)

This is achieved by Fores strong attitude in problem avoidance (by analyzing in advance in detailed way what is necessary to get the job done) and problem solving (whenever a sudden, unexpected issue raise during each phase) gained during the years from more than 3000 systems (skid & packages and Automation & Telecom) delivered and commissioned worldwide.



### **Operation & Maintenance**

Fores Engineering has become, through near 25 years of accumulated plant knowledge and experience, a leading specialist in **Operation** & Maintenance Industrial Services recognized worldwide by all major Oil & Gas Operation Companies.

Fores Service Team is dedicated in supporting Customer needs, in order to ensure optimized safe operational performance, maximize availability and minimize costs.

Fores Service Team is specialized in maintaining Clients' production facilities and power plant at minimum costs through several services and solutions covering all operational problems during Oil & Gas asset lifetime.

Our Advantage over competitors
is that, as system integrator, we own
the knowledge and experience of
all automation/telecom and skid & packages
supplies in our portfolio
that enable our Maintenance team
to be able to give the best support to our clients
for all safety and or production critical systems and equipment of their Oil & Gas assets

Fores can offer a wide range of different customized maintenance solutions to Customers; typically, a maintenance contract, at a fixed annual fee, can cover for example: HSE/Work permit documents and VISA Manag.

Preliminary Analysis and Troubleshooting

- Maintenance Schedule Plan • Telephone Emergency Technical Assistance 24/7
- Coordination, Supervision and Support Preventive Service and Maintenance
- Corrective Service and Maintenance
- Failure and Emergency Service
- Spare Parts Manag. and Customer Assitance\*

(\*) https://spareparts.fores.it

These maintenance contracts:

ensure maximum reliability and high availability of plant systems functions at predictable costs for the entire period of performance

guarantee one central point of contact that takes responsibility for all plant, releasing customer from unnecessary workload in case of service

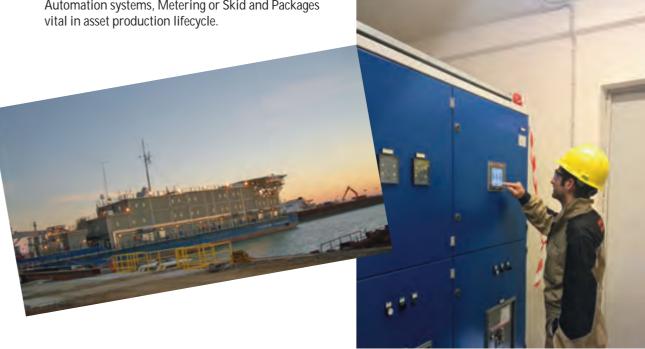
ensure 24/7 support from our central service organization, making possible quick reaction and professional technical assistance in case of a service



#### **Operation & Maintenance**

Fores Maintenance Contracts can cover and protect either Customer entire asset from Offshore platforms, to Floating units (FPSO, FSRU, etc), to Onshore plants or single systems within plant such as Automation systems, Metering or Skid and Packages

Whatever type is chosen, Customer will have always available worldwide Fores experience and Oil & Gas knowledge at his side.



### **Revamping / Upgrading**

As part of Operation and Maintenance Service Fores can also completely cover all Customer Revamping and Upgrading needs during plant lifecycle, guaranteeing minimal shutdown downtime with proper optimized schedule according Customer production requirements.

Our revamping solutions are always turn-key supply, by following directly each phase of the project, from initial feasibility study, detailed engineering, procurement to construction, delivery and final performance tests

