

 ISOICO	 PETROPARS	SOUTH PARS GAS FIELD DEVELOPMENT PHASE 11 EPCI Contract for Topside, Ancillaries and Tripods (SP11A)	 N.I.O.C. Pars Oil & Gas Company
 SLT INTERNATIONAL			
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Electrical Material Take-Off for Earthing and Lightning Materials

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SOUTH PARS GAS FIELD DEVELOPMENT PHASE 11

EPCI Contract for Topsides, Ancillaries and Tripods (SP11A)



N.I.O.C.
Pars Oil & Gas Company

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1. INTRODUCTION

1.1 General

The South Pars field is located in the Persian Gulf approximately 130 km South West of Assaluyeh and 175km West of Kish Island. The South Pars Phase 11 development facilities comprise 2 wellhead platforms named SP11A and SP11B and located around 70m water depth, two 32" sea lines associated with their 4" piggy-back returned lines, exporting the gas to the existing onshore plants. The Phase 11 development of the South Pars gas field (SP11A and SP11B) is designed for a production of 2000 MMSCFD of reservoir fluid (1000 MMSCFD for each SP11A and SP11B).

The development of SP11A is based on new 15 slots Wellhead platform and sea-line. The sea-line from SP11A Wellhead Platform (SPD11A) will send SP11A production to SP12 onshore facilities in TOMBAK via the 32" sea line. When the field starts to be depleted, a compression phase will be implemented (out of Project SOW).

In addition to the wellhead platform (SPD), a Relief platform (RP), equipped with a vertical Flare, will be connected by 2 bridges (BR1 & BR2) to the SP11A platform for personnel access. One Bridge Support Platform (BSP), supports the two bridges that allow access from SPD to RP. Typically, The SP11A Platform consists of:

1. The wellhead platform dedicated to drilling with a jack-up rig. [SPD]
2. The Relief platform, which is equipped with a vertical Flare. [RP]
3. The Bridge Support Platform [BSP]
4. The two Bridges, which connect SPD to RP through BSP [BR1, BR2]

Iran Shipbuilding & Offshore Industries Complex Co. known as ISOICO (CONTRACTOR) has been awarded to conduct and to perform the Engineering, Procurement, Supply, Fabrication, Construction, Load Out, Sea Fastening, Transportation and Installation of the SP11A Wellhead topside, ancillaries and Tripods and the commissioning of installed equipment on it, hereinafter referred to as "Project".

Scope of SLT International (ENGINEER) involvement in the Project is detail design engineering and procurement engineering services.

1.2 Purpose of the Document

The purpose of this specification is to define the quantity of Earthing and Lightning Materials for offshore facilities of South Pars field development, Phase 11.

Installations concerned are the wellhead platforms named SPD11A, and its respective bridge and flare platform, RP11A.

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1.3 Key Definitions

OWNER	National Iranian Oil COMPANY (NIOC) Pars Oil and Gas COMPANY (POGC)
COMPANY	Petropars Ltd. (PPL)
CONTRACTOR	Iran Shipbuilding & Offshore Industries Complex Co. (ISOICO)
ENGINEER	SLT International;
VENDOR	Shall be considered to be synonymous with the term SUPPLIER as defined below
SUPPLIER	Firm or corporation who submit a quotation for the supply of the equipment
PURCHASER	Party who receives the quotation from the SUPPLIER

1.4 Abbreviations

DDE	Detailed Design Engineering;
SOW	Scope Of Work;
TBA	To Be Advised;
TBC	To Be Confirmed;
WHP	Well Head Platform;
AC	Alternating Current
CT	Current Transformers
DC	Direct Current
DLE	Dry Low Emissions
DG	Diesel Generator Package XX20-U-101 A or B
DVT	Design Validation Test
ESD	Emergency Shutdown
FAT	Factory Acceptance Test
FGS	Fire and Gas System
GPA	General Platform Alarm
HVAC	Heating Ventilation and Air Conditioning
ICSS	Integrated Control and Safety Systems (Global) including PCS, PSS, ESD & Fire and Gas system
ITP	Inspection and Test Plan
NAVAIDS	Navigation Aids

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HMI	Human Machine Interface
PCS	Process Control System
PDC	Power Distribution Control
PGCS	Power Generation Control System
PLC	Programmable Logic Controller
PSS	Plant Safety System
SPIR	Spare Parts Interchangeably Record
SSS	Safety Shutdown System
UCP	Unit Control Panel
UPS	Uninterruptible Power Supply
VDRS	VENDOR Document Requirement Schedule
WP	Wellhead Platform
WPTR	Wellhead Platform Technical Room

1.5 References

All work specified shall be in accordance with all applicable sections of the latest edition of the Standards, Professional Documents, Regulations and Codes (and their current amendments) listed below and in the applicable TOTAL General Specifications, and shall form an integral part of this project.

1.5.1 Project References

[1]	SP11-23-D-15-8-206	Electrical Earthing & Lightning Layout for Upper Deck (EL. +26.0)
[2]	SP11-23-D-15-8-207	Electrical Earthing & Lightning Layout for Mezzanine Deck (EL. +20.3)
[3]	SP11-23-D-15-8-208	Electrical Earthing & Lightning Layout for Lower Deck (EL. +15.4)
[4]	SP11-23-D-15-8-209	Electrical Earthing & Lightning Layout for Drain Deck (EL. +11.4)
[5]	SP11-23-D-15-8-210	Electrical Earthing & Lightning Layout for Top of Jacket (EL. +4.8)
[6]	SP11-23-D-15-8-211	Electrical Earthing & Lightning Layout for Technical Building
[7]	SP11-10-D-15-4-040	Specification for Earthing and Lightning Protection

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2. FACILITY DESCRIPTION

The SP11A gas field shall be developed to produce 1000 MMSCFD reservoir fluid to supply gas to Tombak (SP 12 part) with a 32" export pipeline.

The SPD11A wellhead platform consist of a four-legged jacket substructure and a topside consist of a truss-framed structure. Facilities to be designed during the engineering phase are as follows.

2.1 Jacket Tripods

Tripods facilities to be installed at SP11A location are as follows:

- Tripod support structure for Bridge Support Platform, including piling (BSP 11A);
- Tripod support structure for Flare Support Platform, including piling (RP 11A);

2.2 Topside and ancillaries

A brief description of topside facilities to be installation at SPD11A location is as follows:

- 1) One WHP (SPD11A) with 15 slots; with below main equipment:
 - Well Heads;
 - Production/Test manifold;
 - Test separator;
 - Export metering system;
 - Scraper launcher;
 - HP relief KO drum;
 - Closed drain/LP flare drum;
 - Open drain system;
- 2) Associated utilities (Diesel, MEG, Methanol, KHI, Chemicals, Nitrogen, Fresh Water);
- 3) One Relief Platform (RP), including deck and flare tower, installed on the RP11A being connected by bridge to BSP11A;
- 4) One Deck installed on the BSP11A, being connected by bridges to the wellhead platform and RP11A;
- 5) Two bridges connecting SPD11A to BSP11A and BSP to RP11A;

2.3 Onshore Facilities

An Onshore Facility after sealine onshore tie-in that includes:

- Valve station;
- Pig Receiver;
- Onshore pipeline to Phase 12 Plant;
- ICSS and Telecommunication;

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Appendix A – Electrical Material Take-Off for Earthing and Lightning Materials

