

	<b>TECHNICAL SPECIFICATION</b>		N°: I-ET-3010.2Q-1200-695-P4X-001						
	CLIENT: AGP		SHEET 1 of 6						
	JOB: BASIC PROJECT REVIT I								
	AREA: MLL/MLS								
SRGE	<b>WORKSHOP EQUIPMENT AND TOOL LIST</b>		UN-BC						
			INTERNAL						
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## 1 OBJECTIVE

The objective of this Technical Specification is to present the requirements to the SELLER provides and installs all **WORKSHOP EQUIPMENT AND TOOLS LIST** to be supplied to FPSO PETROBRAS UNIT.

This Technical Specification lists the tools to be provided and installed by SELLER according to I-DE-3010.2Q-1350-190-P4X-016 to be used by the Maintenance and Operation Teams during long life of FPSO UNIT.

The complete list of equipment and tolls, according to locations and appliance is in ANNEX I.

The equipment herein listed shall be compatible to the Arrangement Plant.

SELLER shall furnish the itens listed according to I-DE-3010.2Q-1350-190-P4X-016.

The quantities described in these documents refer to one (1) FPSO.

### 1.1 BRAZILIAN LABOR AUTHORITY RULES


SELLER shall comply with NR-12 and others Brazilians regulations.

SELLER shall also comply with:

- DIN EN 60900 VDE 0682-201 - Hand tools for use up to 1 000 V a.c. and 1 500 V d.c.
- NBR5410 - Instalações elétricas de baixa tensão (Low voltage electrical installations).

### 1.2 WORKSHOPS AND TOOLSHOP COMMISSIONING

For commissioning purpose, Maintenance Workshops and Tool shop Systems will be completed after all items listed herein in this Technical Specification are tested according TAP procedures, all equipment, manuals and tools are handed over, and Workshops and Tool shop custody transferred to BUYER.

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## 2 TOOL SHOP

### 2.1 MECHANICAL

See annex 1 of this document.

### 2.2 ELECTRIC

See annex 1 of this document.

### 2.3 INSTRUMENTATION

See annex 1 of this document.

## 3 ELECTRICAL WORKSHOP EQUIPMENT LIST

See annex 1 of this document.

## 4 INSTRUMENT AND CALIBRATION WORKSHOP EQUIPMENT LIST

See annex 1 of this document.

## 5 MECHANICAL WORKSHOP EQUIPMENT LIST

See annex 1 of this document.

## 6 PRESSURE SAFE VALVE CALIBRATION WORKSHOP EQUIPMENT LIST


See annex 1 of this document.

## 7 WELDING WORKSHOP EQUIPMENT LIST

See annex 1 of this document.

## 8 PAINTING WORKSHOP EQUIPMENT LIST

See annex 1 of this document.

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## **9 NAVY STORE EQUIPMENT LIST**

See annex 1 of this document.

## **10 CARGO STORE EQUIPMENT LIST**

See annex 1 of this document.

## **11 TOOLBOXES EQUIPMENT LIST**

### **11.1 MECHANICAL TOOL-BOX SET:**

See annex 1 of this document.

### **11.2 ELECTRICAL TOOL-BOX SET:**

See annex 1 of this document.

### **11.3 INSTRUMENTATION TOOL-BOX SET:**

See annex 1 of this document.

### **11.4 OPERATION TOOL BOX SET:**

See annex 1 of this document.

## **12 EXTERNAL CABINETS**

### **12.1 EXTERNAL PRESERVATION CABINETS**

See annex 1 of this document.

### **12.2 EXTERNAL PRESERVATION STORE CABINETS**


See annex 1 of this document.

### **12.3 LIBRA CABINETS**

See annex 1 of this document.

### **12.4 SIGNALING MATERIALS CABINETS**

See annex 1 of this document.

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## 12.5 OPERATORS TOOLS CABINETS

See annex 1 of this document.

## 12.6 EXTERNAL SERVICES BENCHES

See annex 1 of this document.

## 12.7 CABINETS FOR TURBOMACHINERY TOOLS.

See annex 1 of this document.

## 13 MISCELANEOUS

See annex 1 of this document.

## 14 ANNEX I

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ANNEX-I  
I-ET-3010.2Q-1200-6