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**TECHNICAL JOB
SPECIFICATION**

246/1

REVISION 0

DATE 05/04/2011

HIGH PRESSURE (HP) TRANSMISSION SYSTEMS

BURNERS

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REFERENCE DOCUMENTS

- Job Spec. No. 247/1
[Boilers]
- Job Spec. No. 900/4
[Noise Control]
- ELOT EN 298
[Automatic gas burner control systems for Gas Burners and Gas Burning Appliances with or without fans]
- ELOT EN ISO 13850
[Safety of machinery - Emergency stop - Principles for design]
- ELOT EN 746-1
[Industrial thermoprocessing equipment - Part 1: Common safety requirements for industrial thermoprocessing equipment]
- ELOT EN 746-2
[Industrial thermoprocessing equipment - Part 2: Safety requirements for combustion and fuel handling systems]
- ELOT EN 746-3
[Industrial thermoprocessing equipment - Part 3: Safety requirements for the generation and use of atmospheres gases]

1.0 **SCOPE**

This specification covers natural gas draft burners for installation at Metering and Regulating Stations in the Greek Natural Gas Transmission System.

2.0 **CODES AND STANDARDS**

Burners covered by this specification shall be manufactured in accordance with:

- ELOT EN 298
- ELOT EN ISO 13850
- ELOT EN 746-1
- ELOT EN 746-2
- ELOT EN 746-3

3.0 **REFERENCES**

The following specification forms an integral part of this specification: DESFA Job Specification **Job Specification No. 247/1** (for Boilers).

4.0 **MATERIALS**

The materials and elements of construction used shall be able to withstand the mechanical, chemical and thermal influences, which may occur during normal operation.

5.0 **TECHNICAL REQUIREMENTS**

The burners shall be of natural or forced draft type. The burners shall be of two stage type.

The burners shall be accessible without having to dismantle a major part of the boiler.

If the burner is removable without using special tools, the burner control device shall include a microswitch, which shuts off the gas supply if the burner is dismantled.

The burner equipment shall as a minimum include:

- Block valve.
- Filter.
- Pressure regulator.
- Gas pressure failure shut-off device.
- Pressure gauge.
- Safety solenoid valve.
- Gas leak control device.
- 2 solenoid valves (fail-close in the event of power failure).
- Gas ignition device.
- Flame failure control device.

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The burners shall be suitable for operation/installation under the following conditions:

- Inlet pressure range at the block valve ahead of the pressure regulator: 100 - 35 mbar (gauge). Upset pressure is 200 mbar.
- The burner capacity shall be adjustable between 35% and 100% of full load.

The required heat capacity of the burners will be nominal:

- as shown in the relevant Process spec, depending on the M/R station category in question.

The control device for the burners shall include all equipment necessary for a safe and proper function. The control device shall at least include :

- Main switch.
- Controller.
- Control lamp.
- Push-button for reset.
- Auxiliary relays.
- Fuse element for the motor
- Motor starter with overload relay.
- Terminals for all cables.
- Potential free contacts for alarm purposes included contacts for flame failure and overload relay tripped.
- Controls for gas leak detecting device.
- Operation-time counter.
- Enclosure protection min IP 44.

The power supply will be 380V/220V + 10%/15%, 50 Hz +/- 2 Hz.

The noise level limit will be in accordance with **Job Spec. No. 900/4**.

6.0 DOCUMENTATION

All documentation shall be in SI-units and shall be in English and/or Greek language. The following documentation shall be provided at the times indicated:

6.1 WITH THE TENDER

- Data sheet indicating dimensions, calculations, etc. necessary for the evaluation of the design.
- Assembly drawings showing internal design.
- List of materials.
- List of consumable spare parts.

6.2 AFTER CONTRACT AWARD

At the latest, three weeks after entering into the supply contract, the following shall be submitted:

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- Detailed drawings indicating all dimensions, locations of outlets, etc.
- Burner control diagrams.
- List of materials and certifying authorities.
- Test specification.
- Name plate text.

This material shall be forwarded in three sets, one of which will be returned following approval by Owner.

The approved material shall also, if required, be approved by the relevant Greek authorities before construction is commenced. This approval shall be obtained by the Contractor and a copy of the approved material shall be forwarded to the Owner.