



**HELLENIC GAS  
TRANSMISSION SYSTEM  
OPERATOR**

**357-359, MESSOGION  
AVE.,  
15231 ATHENS, GREECE  
Tel.: 210 6501258  
Fax : 210 6501551**

**TECHNICAL JOB SPECIFICATION**

**900/7**

**REVISION 0**

**DATE 12/10/2011**

# **LNG PLANT**

# **MECHANICAL CATALOGUE**

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QUALITY ASSURANCE PAGE

CHANGES LOG

REVISIONS LOG

Rev. No	Rev. Date	REASON FOR CHANGE	Made By	Approved By
0	12-10-2011	FIRST ISSUE	PQ DPT	VG

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## 1.0 GENERAL

- A. This specification covers the mandatory requirements regarding the final and bookbound documentation to be delivered at the end of a job to the Owner to be used by the operators and the maintenance people of the plant.
- B. Mechanical Catalogue Books (also referred as Data Books), which are a compilation of basic project data, flow sheets, requisitions, specifications, drawings and manufacturer's data, will be assembled for each unit separately.

## 2.0 RESPONSIBILITY

- A. Detail Engineering and Procurement.

The Contractor performing detail engineering and procurement activities is responsible for assembly and distribution of the Mechanical Catalogue Books. Project and Specialty Engineers are responsible for obtaining manufacturers' drawings and data for the pieces of equipment they specify.

- B. L.S.T.K. Contract

In case of L.S.T.K. contract, it is the Contractor's responsibility to assemble and submit the Mechanical Catalogue books. The complete Catalogues will be submitted to DESFA before issue of the Provisional Acceptance Certificate.

## 3.0 FORMAT

- A. Size of Components.

All pages, drawings, data, etc. shall have suitable size for insertion in an 210 mm 8-1/2" hard cover binder. In general, drawings will be reduced to 29,7 mm 11" X random length size for convenience in handling. If larger drawings are included in the Catalogue, they shall be folded to fit into a plastic pocket page.

- B. Identification.

Lettering shall be provided on the front cover and backbone of the binder, giving project title, client, location, DESFA and contract number (see page 8).



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#### 4.0 CONTENTS

In general, the Catalogues shall contain the following data in the order presented. The arrangement of data in the "Equipment" section shall have a numerical sequence. The headings listed represent the most common categories. Other headings may be included as required.

##### A. Index of Contents

##### B. Process Data

1. Basis of Design
2. Description of Flow
3. Utilities
4. Process Schematics

##### C. General

1. Engineering Flow Diagrams
2. Equipment List
3. Line Classification List
4. Plot Plan
5. Requisition Index
6. Drawing Index

##### D. Job Specifications

##### E. Equipment

##### 1. Vessels (Towers, Drums, Tanks)

- a. Requisitions
- b. Outline Drawings
- c. Fabrication Drawings
- d. Requisitions for Internals

##### 2. Tubular Heat Exchangers

- a. Requisitions
- b. Outline Drawings
- c. Fabrication Drawings
- d. Gasket Details

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### 3. Air cooled Heat Exchangers

- a. Requisitions
- b. Outline Drawings
- c. Fabrication Drawings
- d. Gasket Details
- e. Complete parts list showing the number of each part, plus sectional drawings with parts identified.
- f. Installation, operating and maintenance instructions.

### 4. Vaporizers

- a. Requisitions
- b. General Arrangement and Tube Layout Drawings.
- c. Burner Drawings
- d. Burner Performance Data
- e. Burner Parts List showing the number of each part.
- f. Burner installation, operating and maintenance instructions.

### 5. Pumps

- a. Requisitions
- b. Outline Drawings (pump and driver)
- c. Complete parts list showing the number of each part, plus sectional drawings with parts identified.
- d. Lube oil schematic drawings, if applicable.
- e. Test Performance Curves.
- f. Installation, operating and maintenance instructions of the main pump & the auxiliary equipment.
- g. Seal sectional drawings.

### 6. Compressors & Fans

- a. Requisitions
- b. General Assembly Drawings (including driver).
- c. As applicable, foundation plan, cylinder or rotor assembly drawings, details of stuffing box, etc.
- d. Schematic drawings and P & I diagrams for gas, lube and seal oil system, cooling system etc.
- e. Compressor and driver certified performance curves and data.
- f. Descriptive literature on all accessories and controls and wiring diagrams.
- g. Complete parts list showing the number of each part plus sectional drawings with parts identified.
- h. Installation, operating and maintenance instructions, including information on starting compressor unit.
- i. Installation, operating and maintenance instructions for pumps, coolers and all auxiliaries furnished as an integral part of the compressor unit.

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## 7. Motors

- a. Requisitions
- b. Outline Drawings
- c. Test certificates and curves
- d. Lube oil diagrams as/if applicable
- e. Installation, operation and maintenance instructions for the main unit and all auxiliaries involved as applicable.
- f. Complete parts list showing the number of each part.

## 8. Turbines

- a. Requisitions
- b. General Assembly Drawings
- c. Complete parts list showing the number of each part, plus sectional drawings with parts identified.
- d. Schematic drawings and P & I diagrams for Lube oil, control oil, cooling water system etc.
- e. Test certificates and curves.
- f. Installation, operating and maintenance instructions for the main unit Including information all auxiliaries.
- g. Descriptive literature on all accessories and controls including wiring diagrams for panels etc.

## 9. Diesel Engines

- a. Requisitions.
- b. General Assy drawings.
- c. Complete parts lists plus sectional drawings with parts identified.
- d. Schematic diagrams as follows: Fuel, Lube, Cooling, Wiring.
- e. Test certificates and performance curves.
- f. Installation, operating and maintenance instructions for the main unit including all auxiliaries.

## 10. Instruments

- a. Master Instrument Index.
- b. Requisitions.
- c. Electronic Instrument Loop Diagrams.
- d. Outline drawings, including panel board layout if applicable.
- e. Vendor drawings.
- f. Complete parts list showing the number of each part.
- g. Installation, operating and maintenance instructions.

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- h. Orifice plate, control valves, relief valves calculation sheets.

### 11. Electrical

- a. Requisitions (major equipment only - transformers, switchgear, etc.).
- b. One - line diagrams and elementary wiring diagrams.
- c. Outline and layout drawings, including switchboard layout.
- d. Complete parts list showing the number of each part and components.
- e. Installation, operating and maintenance instructions.
- f. Studies and relays setting curves.
- g. Certified test reports.

### 12. Miscellaneous Equipment

- a. Requisitions
- b. Outline Drawings
- c. Complete parts list showing the number of each part, including sectional drawings (if standard practice) with parts identified.
- d. Performance Curves or Data (as required).
- e. Schematic Diagrams, as required, i.e. lubrication, cooling, etc;
- f. Installation, operating and maintenance instructions.

## 5.0 DISTRIBUTION

- A. Contractor will submit to the Owner six (6) copies of the complete Mechanical Catalogue Books.
- B. In case of a L.S.T.K. Contract, Contractor shall submit two (2) full copies to ASPROFOS for comments/approval prior to the final submission of the six (6) copies required by the Owner.
- C. The quantities of drawings, manufacturer's literature or other data required for these catalogs are in addition to those otherwise required for normal distribution specified for the Project.

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<p>HELLENIC GAS TRANSMISSION SYSTEM OPERATOR (DESFA S.A.) LNG TERMINAL MECHANICAL CATALOGUE UNIT.....  PREPARED BY:.....  CONTRACT:.....  VOL.</p>	<p>HELLENIC GAS TRANSMISSION SYSTEM OPERATOR (DESFA S.A.) LNG TERMINAL MECHANICAL CATALOGUE UNIT.....  VOL.  PREPARED BY:..... CONTRACT:.....</p>
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