



**HELLENIC GAS
TRANSMISSION
SYSTEM OPERATOR**

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**TECHNICAL JOB
SPECIFICATION**

100/2

REVISION 0

DATE 29-06-2011

LNG PLANT

CODING AND LABELLING OF TECHNICAL DOCUMENTS



Job Spec. No 100/2
 Revision 0
 Date 29-06-2011
 Page 2/21

QUALITY ASSURANCE PAGE

CHANGES LOG

REVISIONS LOG

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| 0 | 29-06-2011 | FIRST ISSUE | PQ DPT | V.G. |
| Rev. No | Rev. Date | REASON FOR CHANGE | Made By | Approved By |



Job Spec. No 100/2
Revision 0
Date 29-06-2011
Page 3/21

CONTENTS

- 1.0 GENERAL
- 2.0 FILING SYSTEM

- 3.0 CODING OF DOCUMENTS
- 4.0 LABELLING



Job Spec. No 100/2
 Revision 0
 Date 29-06-2011
 Page 4/21

1.0 **GENERAL**

This specification is used for all projects undertaken by Contractor. It contains the numbering and labelling of all technical documents (i.e. Drawings, Material requisitions, Studies, Purchase Orders and Technical Descriptions).

This document is issued for Contractor's use for the provision of documents as per Contract and their submission to Owner for approval.

2.0 **FILING SYSTEM**

Owner Document Control Center (DCC) personnel are responsible for the filing the specified documents on behalf of Owner.

3.0 **CODING OF DOCUMENTS**

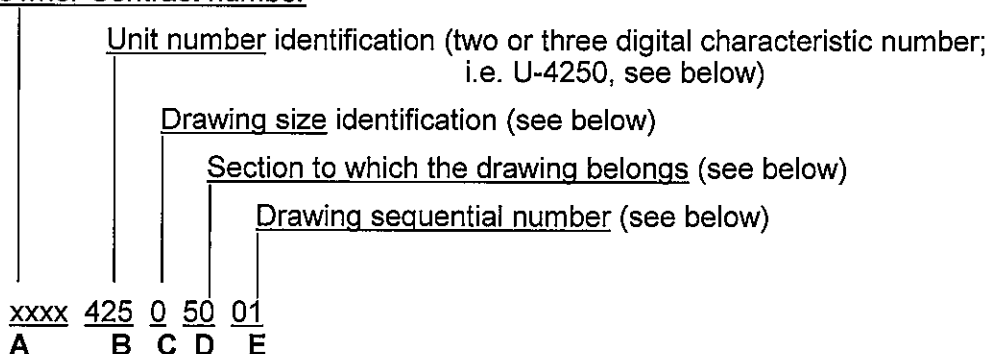
Coding of documents shall be made according to the following paragraphs.

3.1 **CODING OF DRAWINGS**

Drawings are coded as follows:

Example: Dwg No. xxxx-425-0-50-01

Owner Contract number



B : 42 : two digital characteristic number; i.e. U-4200
 425 : three digital characteristic number; i.e. U-4250
 STD : three digital characteristic for standard drawings

C : represents the drawing size according to UNIT standard:

- SIZE 0: is equal to mm. 841 x 1189 (A0)
- SIZE 1: is equal to mm. 594 x 841 (A1)
- SIZE 2: is equal to mm. 420 x 594 (A2)
- SIZE 3: is equal to mm. 297 x 420 (A3)
- SIZE 4: is equal to mm. 210 x 297 (A4)
- SIZE 00: refers to non-standard drawing sizes

Job Spec. No 100/2
Revision 0
Date 29-06-2011
Page 5/21

D : represents the group to which the drawing belongs (according to the relevant Account Code), as follows:

| | |
|---|----------------------------|
| Document Indexes (Dwg, Material Requisition, Job Spec, Study, Vendor dwg, Process doc, Erection Requisition, General Project doc) | 00 (Usually issued by DCC) |
| Plot Plan and elevations | 01 (Usually issued by PIP) |
| Model | 02 (Usually issued by PIP) |
| Process Flow Diagrams | 03 (Usually issued by PRS) |
| Engineering Flow Diagrams (Process Issue) | 03 (Usually issued by PRS) |
| Other Process Diagrams | 03 (Usually issued by PRS) |
| Equipment List / Valve List | 08 (Usually issued by PEN) |
| Towers | 11 (Usually issued by TEC) |
| Pressure Vessels | 11 (Usually issued by TEC) |
| Storage Tanks (Atmospheric) | 11 (Usually issued by TEC) |
| Pipeline Mechanical Details | 11 (Usually issued by TEC) |
| Heat Exchangers | 21 (Usually issued by TEC) |
| Geological drawings | 40 (Usually issued by CIV) |
| Site Development drawings-Paving | 41 (Usually issued by CIV) |
| Concrete Structures | 43 (Usually issued by CIV) |
| Foundations | 43 (Usually issued by CIV) |
| Sewer System | 45 (Usually issued by CIV) |
| Steel Structures | 46 (Usually issued by CIV) |
| Buildings | 47 (Usually issued by CIV) |
| Engineering Flow Diagrams (Project Issue) | 50 (Usually issued by PEN) |
| Line Lists, Tie-in Lists | |
| A/G Piping Arrangement drawings (incl. Fire fighting & Pump-out dwgs) | 51 (Usually issued by PIP) |
| Piping Isometrics | 52 (Usually issued by PIP) |
| Piping MTO | 53 (Usually issued by PIP) |
| Piping Stress Analysis | 54 (Usually issued by STR) |
| Pipeline plans & Longitudinal sections | 55 (Usually issued by PIP) |
| Piping Layout | 56 (Usually issued by PIP) |
| Pipeline Crossings | 58 (Usually issued by CIV) |
| Pipe Supports | 59 (Usually issued by STR) |
| Instrument drawings | 65 (Usually issued by INS) |
| Underground Electrical drawings | 71 (Usually issued by ELE) |
| Electrical power Distribution, Area Classification | 73(Usually issued by ELE) |
| Electrical Lighting drawings | 74 (Usually issued by ELE) |
| Electrical Communication and Fire Alarm | 75 (Usually issued by ELE) |
| Cathodic Protection | 78 (Usually issued by ELE) |
| Survey dwgs - Scale 1:1000 | 91 (Usually issued by TOP) |
| Survey dwgs - Details | 92 (Usually issued by TOP) |
| Survey dwgs - Scale 1:5000 | 93 (Usually issued by TOP) |
| Survey dwgs - Scale 1:50000 | 94 (Usually issued by TOP) |
| Survey maps | 95 (Usually issued by TOP) |
| Survey lists | 96 (Usually issued by TOP) |

E : represents the order number of drawing of (01,02, 10 etc).

HELLENIC GAS TRANSMISSION SYSTEM OPERATOR



Job Spec. No 100/2
Revision 0
Date 29-06-2011
Page 6/21

Note 1: For isometrics, E will be the four-digit number assigned to the relevant line.

Note 2: For Survey lists: The order numbers are:
01: list of tangential intersection points.
02: class location list
03: list of stations (LV, scraper, etc)

Note 3: For Engineering Document Register (EDR) the order numbers are:

| | |
|----|----------------------------------|
| 00 | All Documents |
| 01 | Drawing Index |
| 02 | Material Requisition Index |
| 03 | Job Specification Index |
| 04 | Studies index |
| 05 | Vendor Document's Index |
| 06 | Erection Requisition Index |
| 07 | General Project Document's Index |
| 08 | Process Document's Index |

Note 4: 03 group drawing sequential numbers are assigned as follows:

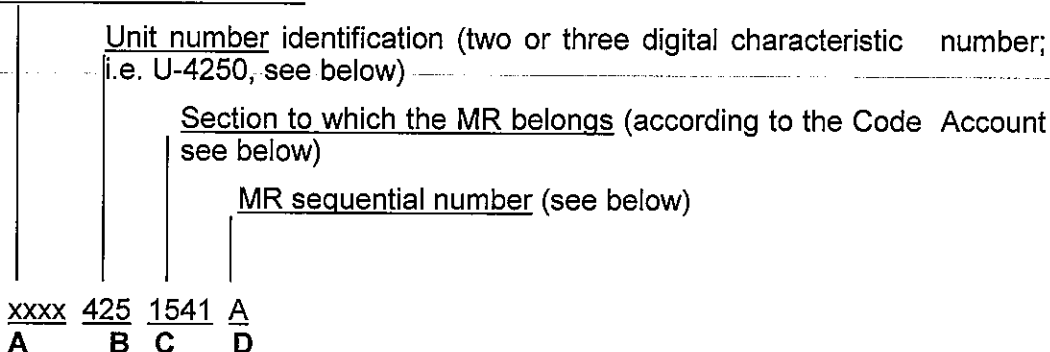
| <u>Sequential Number</u> | <u>Type and Title</u> |
|--------------------------|--|
| 01, 02, etc. | Engineering Flow Diagrams |
| 101, 102, etc. | Process Flow, Utility Balance, Block Flow Diagrams |
| 201, 202, etc. | Materials of Construction Diagrams |
| 301, 302, etc. | Design Pressure/Temperature Diagrams |
| 401, 402, etc. | Packaged Unit Diagrams |

3.2 Coding of Material Requisitions

Material Requisitions are coded as follow:

Example: Material Requisition No. xxxx-425-1541/A

Owner Contract number



C:

| 1000 DIRECT MATERIALS | | |
|------------------------------|-----------------------|-------------------------|
| 1100 | VESSELS | (Usually Issued by TEC) |
| 1200 | HEAT TRANSFER | (Usually issued by TEC) |
| 1300 | MECHANICAL EQUIPMENTS | (Usually issued by MAC) |
| 1400 | CIVIL | (Usually issued by CIV) |
| 1500 | PIPING | (Usually issued by PIP) |
| 1600 | INSTRUMENTS | (Usually issued by INS) |
| 1700 | ELECTRICAL | (Usually issued by ELE) |
| 1800 | MATERIAL PROTECTIVE | (Usually issued by TEC) |
| 1900 | MISCELLANEOUS | |

| 2000 ERECTION SUBCONTRACT | | |
|----------------------------------|--------------------------|-------------------------|
| 2100 | VESSELS | (Usually Issued by TEC) |
| 2200 | HEAT TRANSFER EQUIPMENT | (Usually issued by TEC) |
| 2300 | MECHANICAL EQUIPMENT | (Usually issued by MAC) |
| 2400 | CIVIL WORKS | (Usually issued by CIV) |
| 2500 | PIPING ERECTION | (Usually issued by PIP) |
| 2600 | INSTRUMENTS INSTALLATION | (Usually issued by INS) |
| 2700 | ELECTRICAL INSTALLATION | (Usually issued by ELE) |
| 2800 | PROTECTIVE COVER | (Usually issued by TEC) |
| 2900 | MISCELLANEOUS | |

D : represents the order letter in each category of material only

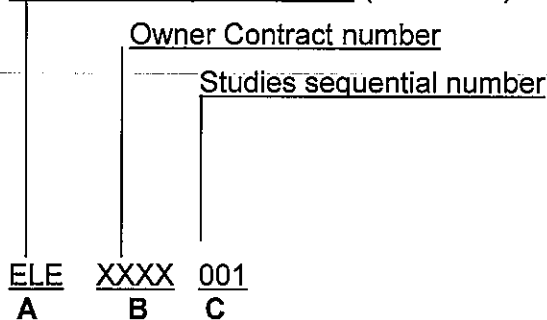
i.e. 1611A Thermocouples
1611B Thermo wells
1611C Temperature Indicators etc

3.3 Coding of Studies

3.3.1 Studies (except Cost Estimating Discipline) are coded as follows:

Example: Study No. ELE-XXXX-001

Involved Disciplines initials (see below)



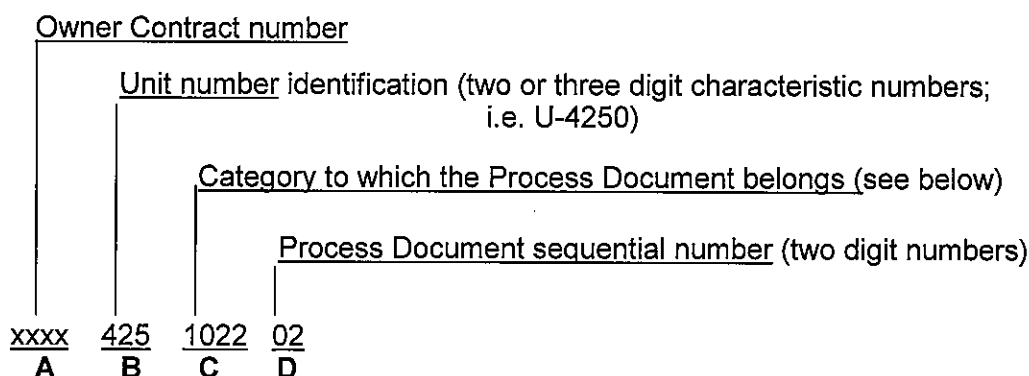
A: represents the initials of each Discipline / Section as follows:

| | |
|-----|--|
| PEN | Project Engineering Discipline |
| ELE | Electrical Discipline |
| INS | Instrument Discipline |
| CIV | Civil Discipline |
| GEO | Geological Section |
| TEC | Technological Discipline |
| MAC | Machinery Discipline |
| STR | Stress Analysis Discipline |
| TOP | Topographical Discipline |
| PIP | Piping Discipline |
| MTO | Piping Material Discipline |
| DCC | Document Control Center Discipline |
| PMN | Project Management |
| PRC | Project Control Discipline |
| PAS | Purchasing and Subcontracting Discipline |
| ISP | Inspection and Expediting Discipline |
| CES | Cost Estimating Discipline |
| COA | Contract Administration Discipline |
| AUT | Permits Engineering and Environmental Studies Discipline |
| PRS | Process Discipline |
| OTH | Others |

3.4 Coding of Process Documents

Process Documents are coded as follows:

Example: Process Document No. xxxx-425-1022-02



C : represents the document category as follows:

| | |
|------|---|
| 1010 | PROCESS DESIGN MEMORANDUM |
| 1020 | EQUIPMENT SPECIFICATIONS |
| 1030 | PROCESS LINE SUMMARY LIST |
| 1040 | INSTRUMENT SPECIFICATIONS |
| 1050 | SAFETY VALVES SPECIFICATIONS |
| 1060 | SAFETY VALVES LOAD SUMMARY |
| 1070 | DATA FOR AREA CLASSIFICATION & HAZARDOUS MATERIAL CHARACTERISTICS |
| 1080 | UTILITIES, CATALYST AND CHEMICALS CONSUMPTION |
| 1090 | OPERATING MANUAL |

Process Equipment Specifications (document category 1020) are as follows:

| | |
|------|---------------------------------|
| 1021 | VESSELS |
| 1022 | REACTORS |
| 1023 | COLUMNS |
| 1024 | HEAT EXCHANGERS AND AIR COOLERS |
| 1025 | FURNACES |
| 1026 | COMPRESSORS |
| 1027 | PUMPS |
| 1028 | STORAGE TANKS |
| 1029 | OTHER EQUIPMENT |

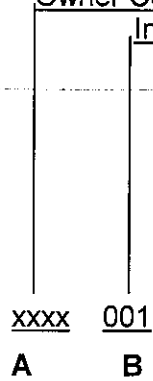
3.5 Coding of Inquires

Inquires are coded as follows:

Example : Inquiry No. xxxx-001

Owner Contract number

Inquiry sequential number



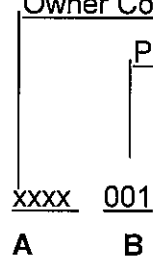
3.6 Coding of Purchase Orders

Process Purchase Orders are coded as follows:

Example : Purchase Order No. XXXX-001

Owner Contract number

Purchase Order sequential number



3.7 Coding of Technical Descriptions

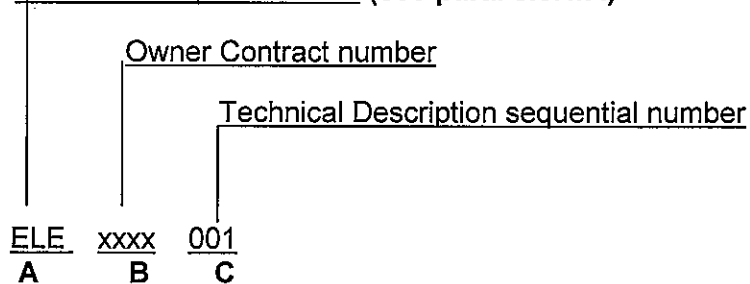
Technical Descriptions are coded as follows:

Example : Technical Description No. ELE-118100-001

Involved Disciplines initials (see para. 3.3.1/A)

Owner Contract number

Technical Description sequential number



Job Spec. No 100/2
Revision 0
Date 29-06-2011
Page 11/21

4.0 LABELING

The labels of the technical documents shall be prepared as follows:

4.1 Labeling of Drawings

- a) All sizes
Drawings shall follow "**Attachments A or B**"
depending on the kind of the document.
- b) Sizes A3 and A4
Isometric drawings shall follow "**Attachment C**".

4.2 Labeling of Material Requisitions

Material Requisitions shall follow "**Attachment D**".

4.3 Labeling of Studies

Technical Studies shall follow "**Attachment E1, E2, E3**".

4.4 Labeling of Process Documents

Individual Process Documents labelling shall be as per the sample forms included in the Process Discipline Guidelines.

4.5 Labeling of Inquiries

Individual Inquiries labelling shall be as per the sample forms included in the Inspection and Expediting Discipline Guidelines.

4.6 Labeling of Purchase Orders

Individual Purchase Orders labeling shall be as per the sample forms included in the Purchasing and Subcontracting Discipline Guidelines.

4.7 Labelling of Technical Descriptions

Individual Technical Description labeling shall follow "**Attachment F1, F2**".

Job Spec. No 100/2
Revision 0
Date 29-06-2011
Page 12/21

5.0 ATTACHED DOCUMENTS


1. Labeling of Drawings (**Attachments A, B, C**)
2. Labelling of Material Requisitions (**Attachment D**)
3. Labeling of Studies (**Attachments E1, E2, E3**)
4. Labeling of Process Documents
5. Labelling of Inquiries
6. Labelling of Purchase Orders
7. Labelling of Technical Descriptions (**Attachments F1, F2**)

Job Spec. No 100/2
Revision 0
Date 29-06-2011
Page 13/21

(example)

ATTACHMENT "A"


| | | |
|--|--|----------------|
| AP. ΣΧΕΔΙΟΥ DWG No: ΣΗ. ΟΥ REV. | ΣΧΕΤΙΚΑ ΣΧΕΔΙΑ / REFERENCE DRAWINGS | |
| | AP. ΣΧΕΔΙΟΥ / DWG No | ΤΙΤΛΟΣ / TITLE |
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| ΑΡΙΘΜΟΣ REVISION | ΗΜΕΡΟΜΗΝΙΑ DATE | ΠΕΡΙΓΡΑΦΗ DESCRIPTION | ΠΡΟΕΒΛΕΠΟΜΕΝΗ PREPARED | ΣΥΜΠΛΗΡΩΣΗ DRAWN | ΕΛΕΓΧΟΣ CHECKED | ΣΤΕΦΑΝΟΣ APPROVED |
|  | | TO ΕΤΗΣΙΑΣ ΕΡΓΑΣΙΑΣ (ΕΤΕΡΩΤΗΧΙΑ ΜΕΤΡΗΣΗ) THE ANNUAL ASSESSMENT (ANNUAL MEASUREMENT) ΑΝΤΙΣΤΡΩΦΗ ΚΑΤΑΣΤΑΣΗ ΚΑΙ ΜΕΤΡΗΣΕΙΣ ΤΡΟΦΟ ΜΕΤΡΗΣΕΩΝ ΤΩΝ ΣΧΕΤΙΚΩΝ ΤΩΝ ΣΧΕΔΙΩΝ ΤΩΝ ΟΡΓΑΝΩΣΕΩΝ. | ΕΓΚΡΙΣΗ ΓΙΑ ΣΑΡΑΝΕΥΣΗ APPROVED FOR CONSTRUCTION | | | |
| CONTRACTOR: | | THIS DOCUMENT IS THE PROPERTY OF DESFA S.A. AND IT SHALL NOT BE REPRODUCED, COPIED OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SPECIFICALLY PROVIDED. | ΑΝΤΙΣΤΡΩΦΗ ΕΡΓΑΣΙΑ PROJECT MANAGER | | | |
| TRACE-WIRE | | | | PROJECT MANAGER SIGNATURE ΟΝΟΜΑ ΟΝΟΜΑ | | AP. ΣΧΕΔΙΟΥ CONTRACT No: |
| | | | | ΑΝΤΙΣΤΡΩΦΗ ΕΡΓΑΣΙΑ SUPERSEDED BY: | | ΑΝΤΙΣΤΡΩΦΗ ΕΡΓΑΣΙΑ SUPERSEDES THE: |
| ΚΑΙΜΑΚΑ SCALE | AP. ΣΧ. DWG No: | | | ΣΤΟΙΧ. SHEET | ΑΝΤΙΣΤΡΩΦΗ REVISION | |
| | | AP. ΣΧ. ΠΕΛΑΤΗ: CLIENT DWG No: | | ΣΤΟΙΧ. SHEET | ΑΝΤΙΣΤΡΩΦΗ REVISION | |
| ΕΛΕΓΧΟΣ ΗΜΕΡΟΜΗΝΙΑ ELECTRONIC FILE Code | | | ΤΕΛΕΤΗ ΗΜΕΡΟΜΗΝΙΑ LAST ACCESS DATE | | | |

Job Spec. No 100/2
Revision 0
Date 29-06-2011
Page 14/21

(example)

ATTACHMENT "B"


| ΣΧΕΤΙΚΑ ΣΧΕΔΙΑ / REFERENCE DRAWINGS | | | | | | | | | |
|---|----------------------|---|-----------------------|--------------------|--|-----------------|---------------------|-----------------------|--|
| AP. ΣΧΕΔΙΟΥ REV. SH. OF DWG No: | AP. ΣΧΕΔΙΟΥ / DWG No | ΤΙΤΛΟΣ / TITLE | | | | | | | |
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| ΑΝΑΒΕΒΗ REVISION | ΗΜΕΡΟΜΗΝΙΑ DATE | ΠΕΡΙΓΡΑΦΗ DESCRIPTION | ΠΡΟΕΤΟΙΜΑ PREPARED | ΕΞΕΛΑΜΕΝΟ DRAWN | ΤΕΧΝΕ STRESS | ΥΛΙΚΑ M.T.S. | ΕΛΕΓΧΟΣ CHECKED | ΕΤΙΜΟΤΗΤΑ APPROVED | |
|  <small>Δημοκρατική Επιχείρηση Διακίνησης Αερίων Α.Ε.</small> | | TO ΕΓΧΡΩΜΟ ΑΥΤΟ ΕΙΝΑΙ ΠΡΟΪΟΝ ΤΗΣ ΕΡΕΥΝΑΣ ΚΑΙ ΤΗΣ ΑΝΑΠΤΥΞΗΣ ΤΗΣ ΔΕΣΦΑ Α.Ε. ΚΑΙ ΑΝΑΓΟΡΕΥΕΤΑΙ Η ΑΝΑΓΝΩΣΤΗ, ΑΝΤΙΓΡΑΦΗ ΚΑΘΩΣ ΚΑΙ Η ΜΕ ΟΡΘΟΛΟΓΙΣΤΕ ΤΡΟΠΟ ΣΥΜΠΛΗΡΩΣΗ ΤΟΥ ΚΑΤΟΣ ΑΠΟ ΤΟΝ ΣΧΟΛΟ ΓΙΑ ΤΟΝ ΟΤΙΟΝ ΚΑΛΩΘΕΙΣ. | | | ΕΓΚΡΙΘΗΚΕ ΓΙΑ ΚΑΤΑΣΚΕΥΗ APPROVED FOR CONSTRUCTION | | | | |
| | | THIS DOCUMENT IS THE PROPERTY OF DESFA S.A. AND IT SHALL NOT BE REPRODUCED, COPIED OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SPECIFICALLY SUBMITTED. | | | ΑΝΑΒΕΒΗ DWG REV. | | | | |
| CONTRACTOR: | | ΔΙΕΥΘΥΝΤΗΣ ΕΡΓΟΥ PROJECT MANAGER | | | ΗΜΕΡΟΜΗΝΙΑ DATE | | | | |
| TITLAGE-TITLE | | | | | ΟΝΟΜΑ NAME | | | | |
| ΚΑΙΜΑΚΑ SCALE | | AP. ΣΧ. DWG No 1 | | | ΦΥΛΛΟ SHEET | | ΑΝΑΒΕΒΗ REVISION | | |
| AP. ΣΧ. ΠΕΛΑΤΗ: CLIENT DWG No: | | | | | ΦΥΛΛΟ SHEET | | ΑΝΑΒΕΒΗ REVISION | | |
| ΚΩΔ. ΗΛΕΚΤΡ. ΑΡΧΕΙΟΥ ELECTRONIC FILE Code | | | | | ΤΕΛΕΥΤ. ΗΜΕΡ. ΠΡΟΣΒΑΣΗΣ LAST ACCESS DATE | | | | |

Job Spec. No 100/2
Revision 0
Date 29-06-2011
Page 16/21

ATTACHMENT "D"

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|---|------|----------|-------------------------|----|------|----|------|----|----|----|----|----|----|------|----|----|----|----|----|----|--|
| CLIENT MATERIAL SERVICE ITEM VENDOR | SITE | CONTRACT | REQUISITION No. | | DATE | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | SUPERSEDED BY CHANGE No | | | | | | | | | | | | | | | | | | |
| | | | 1 | | 3 | | 5 | | | | | | | | | | | | | | |
| | | | | 2 | | 4 | | 6 | | | | | | | | | | | | | |
| CHANGE INDEX | | | | | | | | | | | | | | | | | | | | | |
| PAGE | C1 | C2 | C3 | C4 | C5 | C6 | PAGE | C1 | C2 | C3 | C4 | C5 | C6 | PAGE | C1 | C2 | C3 | C4 | C5 | C6 | |
| | | | | | | | | | | | | | | | | | | | | | |
| REFERENCED DOCUMENTS | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| PREPARED BY : | | C1 | | C2 | | C3 | | C4 | | C5 | | C6 | | | | | | | | | |
| APPROVED BY : | | C1 | | C2 | | C3 | | C4 | | C5 | | C6 | | | | | | | | | |

ATTACHMENT E1 (example)

| | | |
|---|--|---|
|  <p>DESFA Hellenic Gas Transmission System Operator</p> | <p>HELLENIC GAS TRANSMISSION SYSTEM OPERATOR</p> | <p>357-359, MESSOGION AVE., 15231 ATHENS, GREECE Tel.: 210 6501258 Fax: 210 6501551</p> |
| <p>(Study No. / Rev.)</p> | | |
| <p>STUDY FOR (Title)</p> | | |
| <p>PROJECT:</p> | | |
| <p>CONTRACT No:</p> | | |

Job Spec. No 100/2
 Revision 0
 Date 29-06-2011
 Page 18/21

ATTACHMENT E2 (example)

Document No :
 Revision :
 Date :
 Page :

SUMMARY OF CHANGES

CHANGES LOG

REVISIONS LOG

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| Rev. No | Rev. Date | REASON FOR CHANGE | Made By | Approved By |

ATTACHMENT E3 (example)



(Title)


DESFA JOB NUMBER.....

DESIGN BASIS REPORT

Document No.:

| | | | | |
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| | | | | |
| Rev. No | Rev. Date | REASON FOR CHANGE | Made By | Approved By |

ATTACHMENT F1 (example)

| | | |
|---|--|---|
|  <p>DESFA Hellenic Gas Transmission System Operator</p> | <p>HELLENIC GAS TRANSMISSION SYSTEM OPERATOR</p> | <p>357-359, MESSOGION AVE., 15231 ATHENS, GREECE Tel.: 210 6501258 Fax: 210 6501551</p> |
| <p>(Technical Description No. / Rev.)</p> <p>TECHNICAL DESCRIPTION FOR (Title)</p> | | |
| <p>PROJECT:</p> <p>CONTRACT No:</p> | | |

Job Spec. No 100/2
Revision 0
Date 29-06-2011
Page 21/21

ATTACHMENT F2 (example)

Document No :
Revision :
Date :
Page :

SUMMARY OF CHANGES

CHANGES LOG

REVISIONS LOG

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|---------|-----------|-------------------|---------|-------------|
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| Rev. No | Rev. Date | REASON FOR CHANGE | Made By | Approved By |