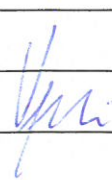


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NET4GAS, s.r.o

Inspection Requirements

	Prepared by	Approved by
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Date	8.10.2017	10.11.2017

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1 GENERAL

1.1 Scope of the Document

This document covers the inspection and tests planning, performing and reporting phenomena applicable for all the entities performing the inspection and testing activities throughout the life cycle of the Project.

1.2 Definitions of the project entities

Term	Explanation
Project	C4G
Employer	NET4GAS
Supplier	Company having signed contract with Employer for supply of the equipment and materials
Sub-supplier	Company having signed contract with Supplier for supply of the raw materials or components for production of the by Supplier produced equipment and materials
Contractor	Company having signed contract with Employer for realization of the construction of the Project
Sub-contractor	Company having signed contract with Contractor for partial realization of the construction of the Project
Consultant	Supplier for engineering, procurement and supervision authorized to act for and on behalf of the Employer

1.3 Abbreviations

Term	Explanation
QA/QC	Quality Assurance / Quality Control
ČSN	Czech National Norm
ISO	International Organization for Standardization
EN	European Norm
NDT	Non-Destructive Testing
ITP	Inspection and Test Plan
TPI	Third Party Inspection / Third Party Inspector

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1.4 Codes and Standards

No.	Number	Title
1	ČSN EN ISO 9000	Quality management systems – Fundamentals and vocabulary
2	ČSN EN ISO 9001	Quality management systems – Requirements
3	ČSN EN ISO 9004	Managing for the sustained success of an organization – A quality management approach
4	ČSN EN 10204	Metallic products - Types of inspection documents
5	ČSN EN 12266	Industrial valves – Testing of valves
6	ČSN EN 13942	Pipeline transportation system – Pipelines valves
7	ČSN EN 14141	Valves for natural gas transportation in pipelines – Performance
8	ČSN EN 1594	Gas supply systems - Pipelines for maximum operating pressures over 16 bar – Functional requirements
9	ČSN EN 10253-2	Butt-welding pipe fittings – Part 2: Non alloy ferritic steels with specific inspection requirements
10	PED 2014/68/EU	Pressure Equipment Directive
11	AD 2000 Merkblatt	German code for pressure vessels
12	ASME B31.8	Gas Transmission and Distribution Piping Systems
13	ČSN EN ISO 3183	Petroleum and natural gas industries – Steel pipe for pipeline transportation systems

2 INSPECTION AND TESTING REQUIREMENTS

Inspection and Testing activities for the Project shall be performed for specific Inspection and Testing areas, involving specific and specified inspection and testing activities, that are performed by various entities and organizations involved in the execution of the Project.

The following section provides an introduction to:

- Entities performing of inspection and testing
- Inspection and testing areas
- Inspection and testing activities

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2.1 Entities performing Inspection and Testing Activities

Inspection and Testing activities may be performed by various entities participating in the Project, including Regulatory Authorities and Entities.

All inspection and testing as well as the corresponding results shall be recorded and documented and kept as part of the Project quality documentation.

In accordance with applicable regulatory requirements, inspection and testing may be witnessed by other entities.

For cases where certification of inspection and testing results is required, the relevant activity shall be performed by the appropriate entity or inspection agency.

Third party activities in compliance assessment – notified person pursuant to the provisions of EN ISO/IEC 17020 – Type A inspection authority, within the required scope Inspection of pressure, gas, machinery, and electrical equipment.

2.2 Inspection and testing areas

Inspection and testing activities are performed for all areas of the Project.

Overview over the inspection and testing areas:

- raw materials
- components
- manufacturing processes
- completed products.

2.3 Inspection and Testing Activities

Supplier's Inspection and Testing

Supplier's Inspection and Testing is performed in addition to specified certification requirements for materials and equipment delivered for the Project. Supplier's inspection and testing is performed at defined production stages for materials and equipment and may be extended to the supplier(s) of raw materials.

The requirements for the Supplier's inspection and testing activities shall be defined in the Supplier's Inspection and Test Plan.

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2.4 Employer's Right of Access

Supplier shall ensure that the Employer and any other third party nominated by the Employer shall have full access to all work sites, including Sub-supplier's work and manufacturing sites, throughout the entire duration of the Project.

2.5 Employer's Right to perform Inspection and Testing

Supplier shall ensure that the Employer and any other third party nominated by the Employer shall have the right to perform supplementary inspection and testing activities pertaining to the works, materials and equipment.

2.6 Employer's right to establish Inspection Requirements

The Employer has the expressive right to formulate inspection requirements that must be followed and implemented by the Supplier. This right specifically includes the right to introduce inspection and testing activities and inspection frequencies for the Supplier and to define witness and hold points for Supplier's inspection.

2.7 Accessibility for Inspection and Testing

Supplier shall ensure safe accessibility for all work areas for the performance of inspection and testing activities, with secure temporary platforms, ladders, hand railing lighting and others, as applicable for such Inspections.

2.8 Equipment for Inspection and Testing

Supplier shall provide all measuring and test equipment, devices and tools, accompanied with current calibration certificates, and qualified and trained operators, readily available to perform relevant inspection and testing and to assist the Employer's Inspection and testing personnel.

3 Material Certification

3.1 Principle Requirements

All materials used for the performance of the works and incorporated into the Project shall be accompanied by material certificates as specified in this section, as per the relevant material specifications and/or data sheets.

All Suppliers of the equipment and materials for the Project shall employ a quality assurance and control system to ensure the quality and conformity of the delivered

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materials with the order specifications and Project requirements.

The Employer reserves the right to inspect or audit the manufacturing and quality management systems employed for the manufacturing of any materials for the Project regardless whether the materials are purchased by the Employer, Contractor, Sub-contractor, Supplier or Sub-suppliers employed for the Project. The right for Employer's inspection must be expressively entered into each purchase contract for supply of equipment and materials of the Project.

3.2 Inspection Documents

All inspection documents for materials that are supplied to the Employer shall comply with the requirements as defined in "ČSN EN 10204 Metallic products – Types of Inspection Documents".

All materials used for the performance of the works, including consumables and bulk materials, incorporated into the Project shall be accompanied by material certificates as specified in this document and as per the relevant material specifications or data sheets.

The following table specifies minimum inspection and certification requirements in accordance with the types of certification defined in ČSN EN 10204:2005 "Metallic products – Types of Inspection Documents":

Type	Designation	Content
2.1	Declaration of Compliance	Not applicable for the Project
2.2	Test Report	All materials for which no other certificate type has been specified
3.1	Inspection Certificate 3.1	All materials, base materials and accessories All materials including base materials in pressurised systems above 0.5 barg All materials including base materials and accessories in contact with flammable or hazardous media All materials incorporated into control systems
3.2	Inspection Certificate 3.2	All materials including base materials* and accessories in contact with flammable or hazardous media in pressurised systems above 0.5 barg All materials in incorporated in safety systems

Note*: The requirement for base material certification in accordance to Type 3.2 Inspection Certificate may be replaced by a Type 3.1 Inspection Certificate upon request and specific written approval by the Employer.

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3.3 Requirements on final inspection certificates

Requirement structure of documentation (final inspection certificates):

Data book/ mechanical completion dossier

1. Cover sheet – attachment 1
2. List of documentation [Table of contents]
3. Certificate of quality and completeness - Certificate of conformity
4. Certificates
5. Inspection and test plan
6. Drawings, wiring diagram
7. Inspection certificate
8. Certificate about material Quality
- 8.1. List of material certificate - material specification
- 8.2. Material certificate
- 8.3. Heat treatment records
9. Protocol of testing
- 9.1. NDT protocols
- 9.2. Pressure tests
- 9.3. Functional tests
10. Confirmation of dimensional and visual inspection
11. Confirmation of painting and marking inspection
12. Installation, operation and maintenance instruction

4 General Requirement for Inspection and Test Plans (ITPs)

4.1 Preparation and Submission

Supplier is required to prepare and submit all ITPs (see Attachment 2) for review and approval by the Employer.

The minimum period for the submission of the associated ITP shall be 4 calendar weeks after contract signature unless otherwise specified in the relevant material specification.

4.2 Approval

All ITPs are subject to approval by the Employer.

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4.3 Inspection and Test Schedule

ITPs shall be accompanied by an Inspection and Test Schedule providing a look-ahead of all planned inspection and test activities within at least the following eight (8) weeks. Supplier shall update his inspection and test schedule from time to time and as required to reflect the current/actual progress of the works.

4.4 Specific Requirements for Inspection and Test Plans (ITPs)

The ITP shall identify at least, but not limited to the following items:

- . Description of Contract - front page
 - o Purchase Order
 - o Specification
 - o Type of material
 - o Datasheet No.
 - o Drawing No.
 - o Type of Report
 - o Object and type of inspection, Work specification
 - o Standard, specification
 - o Acceptance Criteria
 - o Extent of inspection, testing frequency - Frequency for specified Inspection and Test Activity (100% unless otherwise specified; in case of random Checks, Spot-Checks the Employer will set the percentage)
 - o Type of report, record, certificate, Documents
 - o Inspection stage, Type of procedure (manufacturer, TPI, N4G) – Classification of Inspection and Test Activity (Inspection, Certification, Witness, Hold)
 - o Remarks

The final format of the Inspection and Test Plan is the table. See Attachment 2 as an ITP example.

Table provides a sample Inspection and Test Plan to be adapted for works inspection and testing, Supplier's inspection and testing and completion of inspection and testing.

The final format of the Inspection and Test Plan is subject to approval by the Employer.

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5 Inspection Requirements / Abbreviations

Inspection Classification - Type of Inspection Activity

"I" INSPECTION

A point at which work shall be inspected by the Supplier's inspection resources. Inspection activities shall be notified to the Employer in Supplier's Inspection and Test Schedule.

"C" CERTIFICATION

A point at which work shall be inspected by an authorized, independent Third Party Inspector (TPI) issuing an inspection certificate covering the performed inspection and testing activity.

"W" WITNESS

A point beyond which work shall be inspected by Supplier's inspection resources and work may proceed without formal documented approval by the Employer or its designated TPI. Achievement of "W" points shall be notified to the Employer.

"H" HOLD

A point beyond which work shall be inspected by Supplier's inspection resources and the Employer or its designated TPI. Work shall not proceed without formal approval by the Employer or its designated TPI. Achievement of "H" points shall be notified to the Employer.

Inspection Frequency

"A - 100%" ACTUAL - 100% 100% inspection of all items or works.

"R - X%" RANDOM - X%

Random Inspection sets the percentage of inspection and testing. Indicated percentage value of inspection shall be increased based on observed failure rates and as requested by the Employer.

Inspection Documentation

"I" INFORMATION

Inspection documents shall be submitted to the Employer for Information only.

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“R” REVIEW

The documents of the inspection performed shall be submitted to the Employer or its designated TPI for review. Works may proceed at Supplier's own risk.

“A” APPROVAL

The documents of the inspection performed shall be submitted to the Employer for approval. Work shall only proceed after approval of inspection documents by the Employer.

6 Attachment

Attachment 1 - Cover sheet - Final inspection certificates - Databook

Attachment 2 – Minimum requirements on Inspection and Test Plan (ITP)

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Attachment 1

Cover Sheet

Supplier	
Purchaser	NET4GAS,s.r.o
Contract No. Purchase Order no.	
Project	
Type of material	
Serial No.	
Type / Marking	
Material	
Tag No.	
Mark of manufacturer	
Terms of delivery	
Certificate No.	