

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

Fax: 210 6501551

## TECHNICAL JOB SPECIFICATION

559/1

**REVISION 0** 

DATE 05/04/2011

# HIGH PRESSURE (HP) TRANSMISSION SYSTEMS

WELDING NOZZLES FOR BRANCH CONNECTIONS



Job Spec. No 559/1 Revision 0

Date

05-04-2011

Page

2/11

#### **QUALITY ASSURANCE PAGE**

**CHANGES LOG** 

#### **REVISIONS LOG**

0	05-04-2011	FIRST ISSUE	PQ DPT	V.G.
Rev. No	Rev. Date	REASON FOR CHANGE	Made By	Approved By



Job Spec. No 559/1

Revision

0

Date

05-04-2011

Page

3/11

#### **CONTENTS**

#### REFERENCE DOCUMENTS

1.0	SCOPE
-----	-------

- 2.0 GENERAL REQUIREMENTS
- 3.0 TECHNICAL DOCUMENTATION
- 4.0 INSPECTION AND CERTIFICATION



Job Spec. No 559/1 Revision 0

Date

05-04-2011

Page

4/11

#### REFERENCE DOCUMENTS

Job Spec. No. 180/1 [Welding Inspection]

Job Spec. No. 199/4

[Welding]

Job Spec. No. 970/2

[Shop Inspection of Equipment and Materials for NGT Project]

Job Spec. No. 970/3

[Inspection and Test Instruction]

ELOT EN 10045-1

[Charpy Impact test on metallic materials-part 1: test method]

**ELOT EN 10222-4** 

[Steel forgings for pressure purposes - Part 4: Weldable fine grain steels with high proof strength]

**ELOT EN 10216-2** 

[Seamless steel tubes for pressure purposes - Technical delivery conditions - Part 2: Non alloy and alloy steel tubes with specified elevated temperature properties]



Job Spec. No 559/1

Revision

Date

05-04-2011

Page

5/11

#### 1.0 SCOPE

#### 1.1 ITEM

Welding nozzles for branch connections DN < 80.

#### 1.2 SERVICE

Sweet, natural gas with sporadic passage of water and glycol.

#### 1.3 APPLICATION INFORMATION

Additional information may be given in the Material Requisition and Purchase Order Specification and these documents should be read in conjunction with the general specification herein.

#### 2.0 GENERAL REQUIREMENTS

#### 2.1 DESIGN

In accordance with the "type" sketches herein, or of standard "O" let design. Refer to Material Requisition for requirement.

#### 2.2 UNITS

Metric

#### 2.3 DIMENSIONS

Refer to Material Requisitions for nominal diameter, schedule number and main pipe diameter, otherwise in accordance with the sketches herein.

#### 2.4 MATERIAL

For each material used impact tests shall be performed according to **ELOT EN 10045-1** consisting of one set of three test specimens. Testing shall be carried out at -20°C. Minimum average absorbed energy shall be 31 Joules, with the lowest single value 24 joules.

#### 2.4.1 STANDARD "O" LETS

P285NH/1.0477 (ELOT EN 10222-4) normalized or equivalent.

#### 2.4.2 WELDING NOZZLES:

P265NH (ELOT EN 10216-2).

#### 2.5 WELDING

According to Job Spec. No. 199/4.

#### 2.6 NON DESTRUCTIVE EXAMINATION

All welding surfaces shall be magnetic particle or dye penetrant examined. Welding inspection to comply with **Job Spec. No. 180/1**.

#### 2.7 MARKING

As a minimum the Material grade shall be die stamped using round nose dies. Owner Purchase Order Number and Manufacturer's mark will be paint stenciled.



Job Spec. No 559/1

Revision

05-04-2011

Date Page

6/11

3.0 TECHNICAL DOCUMENTATION

3.1 QUANTITY

Four copies of each inclusive of original for all documents and certificates.

Also electronic files of all Documents and Certificates must be submitted by Contractor to the Owner.

3.2 DOCUMENT REQUIREMENTS

3,2.1 ON DELIVERY

Nozzle Certification Package as listed above. Owner Inspection Release Note (IRN).

4.0 INSPECTION AND CERTIFICATION

Inspection will be performed by a third party independent inspection company to be appointed by Owner.

Inspection requirements are defined in the following documents:

- a) Material Requisition.
- b) Job Spec. No. 970/2 "Shop Inspection of Equipment and Materials for NGT Project".
- c) Job Spec. No. 970/3 "Inspection and Test Instruction"
- d) Relevant Project Specifications.
- e) Inspection Clauses of Applicable Standards.



Job Spec. No 559/1

Revision

0

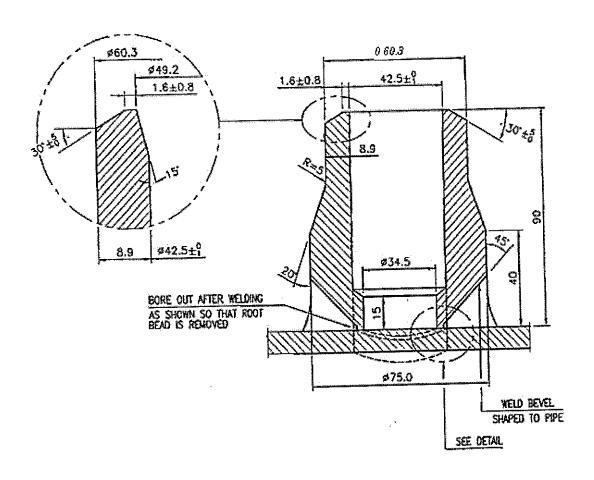
Date

05-04-2011

Page

7/11

### **WELDING NOZZLES 80 BAR**



**TYPE 1: NPS 2"** 



Job Spec. No 559/1

Revision

O

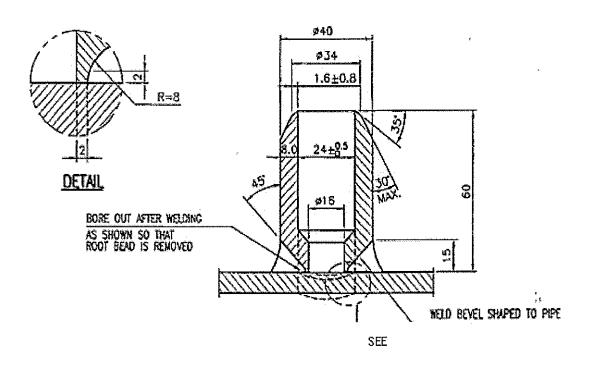
Date

05-04-2011

Page

8/11

#### **WELDING NOZZLES 80 BAR**



**TYPE 2: NPS 1"** 



Job Spec. No 559/1

Revision

0

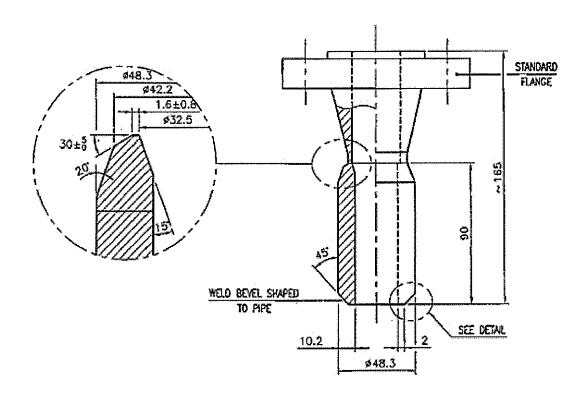
Date

05-04-2011

Page

9/11

#### **DETAILS**



TYPE 3: FLANGE NOZZLE NPS 1 1/4" FOR TEMPORARY USE ONLY



Job Spec. No 559/1 Revision 0

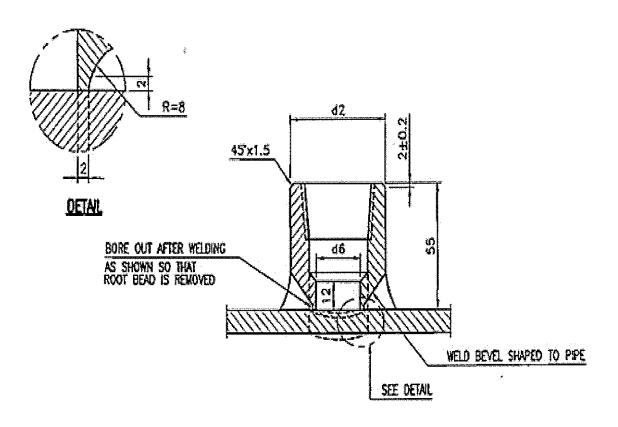
Date

05-04-2011

Page

10/11

#### **DETAILS**



**TYPE 4: THREADED NOZZLES FOR INSTRUMENTATION** 



Job Spec. No 559/1

Revision

0

Date

05-04-2011

Page

11/11

### **DETAILS**

NOM. PIPE SIZE	THREAD	d2 mm	d6 mm
1/2	ANSI B1.20.1	48	10
3/4	ANSI B1.20.1	53	14
1-1-	ANSI B1.20.1	63	20
1 1/4	ANSI B1.20.1	73	28