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## TECHNICAL SPECIFICATION

Doc No: DSF-SPC-PIP-032

Rev. 1

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## HIGH PRESSURE (HP) TRANSMISSION SYSTEMS

# WELDING NOZZLES FOR BRANCH CONNECTIONS

JUNE 2021

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## **REFERENCE DOCUMENTS**

Tech. Spec. No. DSF-SPC-PIP-004

[Welding Inspection]

Tech. Spec. No. DSF-SPC-PIP-012

[Welding]

Tech. Spec. No. DSF-SPC-QAC-005

[Shop Inspection of Equipment and Materials for NGT Project]

Tech. Spec. No. DSF-SPC-QAC-006

[Inspection and Test Instruction]

ELOT EN ISO 148-1

[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]



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## 1. 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. 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 ISO 148-1** 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 **Tech. Spec. No. DSF-SPC-PIP-012.**

### 2.6 NON DESTRUCTIVE EXAMINATION

All welding surfaces shall be magnetic particle or dye penetrant examined. Welding inspection to comply with **Tech. Spec. No. DSF-SPC-PIP-004.**



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### 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.

## 3. 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. INSPECTION AND CERTIFICATION

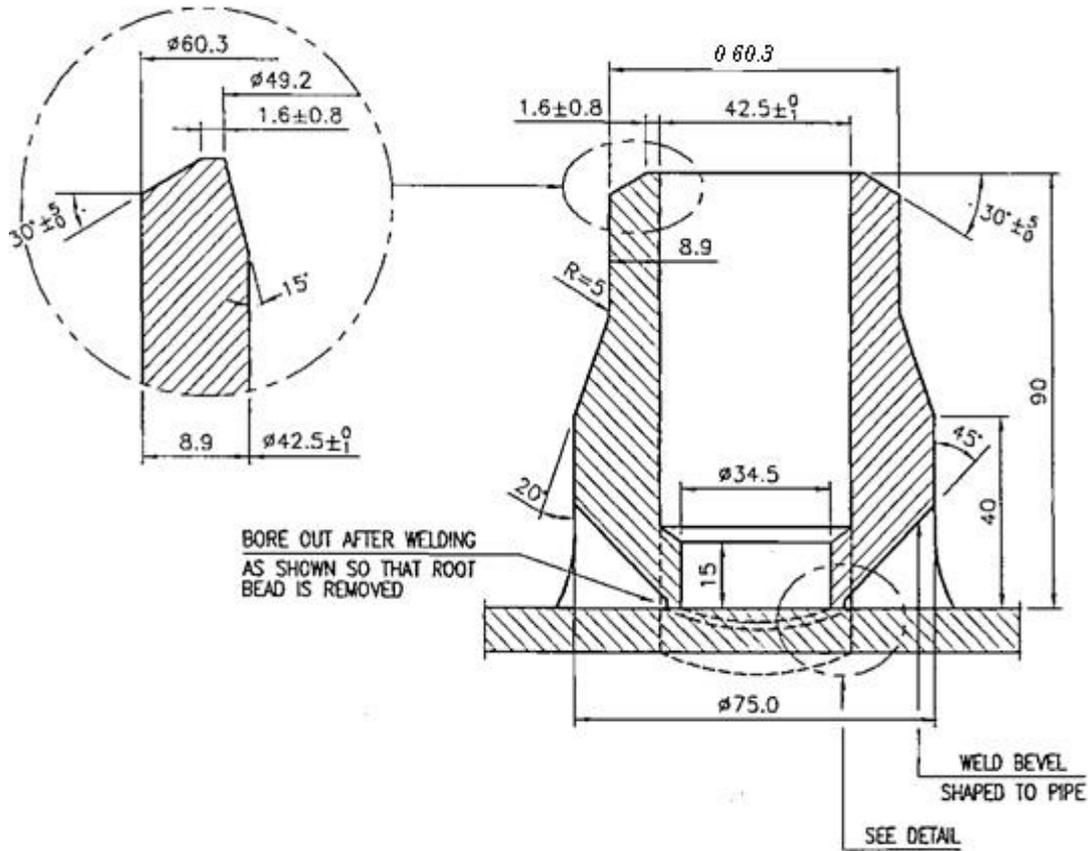
Inspection will be performed by a third party independent inspection company to be appointed by Owner.

Inspection requirements are defined in the following documents:

- a) Material Requisition.
- b) **Tech. Spec. No. DSF-SPC-QAC-005** "Shop Inspection of Equipment and Materials for NGT Project".
- c) **Tech. Spec. DSF-SPC-QAC-006** "Inspection and Test Instruction"
- d) Relevant Project Specifications.
- e) Inspection Clauses of Applicable Standards.



**WELDING NOZZLES 80 BAR**



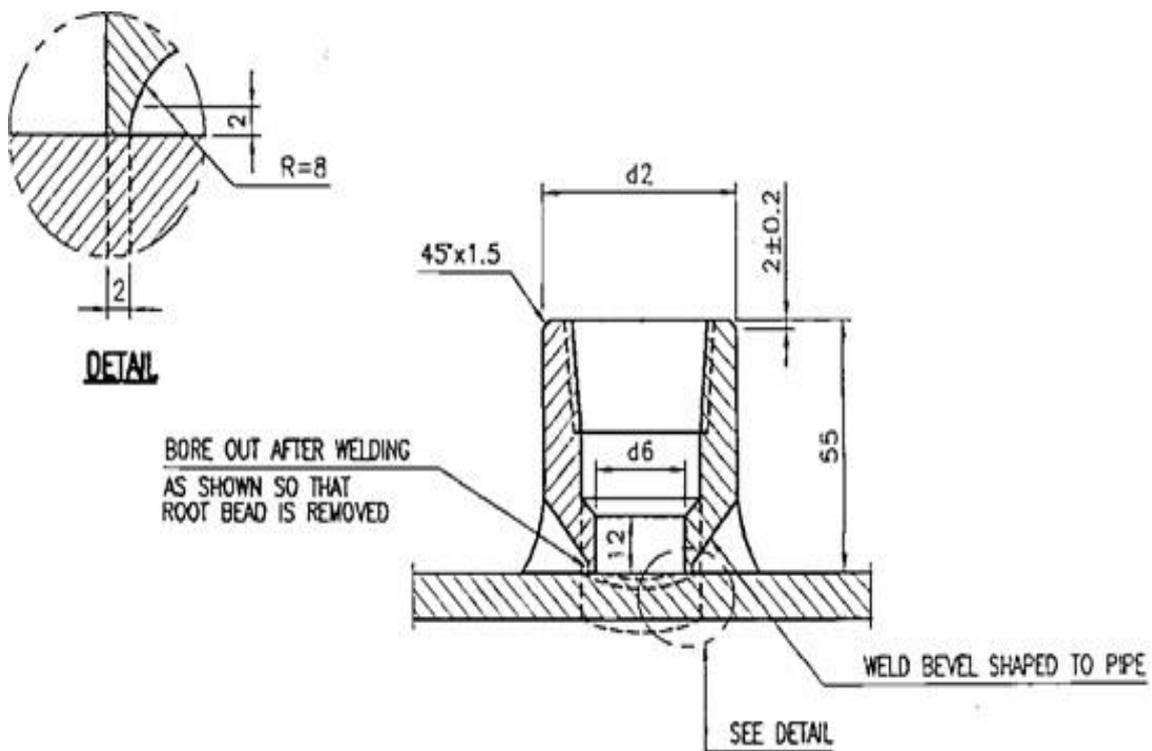
**TYPE 1: NPS 2"**







**DETAILS**



**TYPE 4: THREADED NOZZLES FOR INSTRUMENTATION**



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### 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"	ANSI B1.20.1	63	20
1 1/4"	ANSI B1.20.1	73	28