

TECHNICAL SPECIFICATION

NICKEL ALLOY PIPE (AMENDMENTS/SUPPLEMENTS TO ASTM B 423)

MESC SPE 74/019

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MESC SPECIFICATION DOCUMENT



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All administrative queries should be directed to the MESC SPE Administrator in Shell GSI.

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PART I INTRODUCTION

1.1 SCOPE

This MESC SPE specifies requirements for nickel alloy pipe.

This specification shall apply in addition to the applicable MESC Buying Description, purchase order or requisition sheet.

This specification only applies to nickel alloy pipe to ASTM B 423, Grade UNS N08825 (Alloy 825).

This specification is written as amendments and supplements to ASTM B 423: **2011**, which are covered in Part II of this MESC SPE. The clause numbering of ASTM B 423: **2011** has been retained and any amendments are identified as 'Add', 'Modify to read' or 'Delete'. Any clauses of ASTM B 423: **2011** that are not amended or supplemented by this MESC SPE, shall apply as written.

1.2 DISTRIBUTION, INTENDED USE AND REGULATORY CONSIDERATIONS

Unless otherwise authorised by Shell GSI, the distribution of this MESC SPE is confined to Shell companies and, where necessary, to Contractors and Manufacturers/Suppliers nominated by them.

This MESC SPE is intended for use in oil refineries, chemical plants, gas plants, exploration and production facilities and, where applicable, supply/distribution installations.

If national and/or local regulations exist in which some of the requirements may be more stringent than in this MESC SPE the Contractor shall determine by careful scrutiny which of the requirements are the more stringent and which combination of requirements will be acceptable with regards to safety, environmental, economic and legal aspects. In all cases the Contractor shall inform the Principal of any deviation from the requirements of this MESC SPE which is considered to be necessary in order to comply with national and/or local regulations. The Principal may then negotiate with the Authorities concerned, the objective being to obtain agreement to follow this MESC SPE as closely as possible.

1.3 DEFINITIONS

The **Contractor** is the party that carries out all or part of the design, engineering, procurement, construction, commissioning or management of a project, or operation or maintenance of a facility. The Principal may undertake all or part of the duties of the Contractor.

The **Manufacturer/Supplier** is the party that manufactures or supplies equipment and services to perform the duties specified by the Contractor.

The **Principal** is the party that initiates the project and ultimately pays for its design and construction. The Principal will generally specify the technical requirements. The Principal may also include an agent or consultant authorised to act for, and on behalf of, the Principal.

The word **shall** indicates a requirement.

The word **should** indicates a recommendation.

1.4 CHANGES SINCE PREVIOUS EDITION

The previous edition of this MESC SPE was dated **June 2007**. The change is to **incorporate new section on "Length" for pipes and to update email address of MESC SPE administrator**.

1.5 COMMENTS ON THIS MESC SPE

Comments on this MESC SPE may be sent to the MESC SPE Administrator at MESC@shell.com. Shell staff may also post comments on this MESC SPE on the Surface Global Network (SGN) under the Standards folder.

PART II AMENDMENTS/SUPPLEMENTS TO ASTM B 423: 2011

3.2 *Add* Jointers are not allowed.

6.3 *Add* **Condition**

Condition X.2.2.2 shall be supplied.

Pickling shall be in accordance with ASTM A 380.

Heat treatment procedures shall be subject to statistical process control to ensure that the final material properties comply with the material standard and this specification. The process control data and related periodic quality control checks shall be documented.

9.1.1 *Modify to read:*

The pipe shall undergo a hydrotest at a pressure equivalent to 1.5 times the allowable fibre stress given in clause 9.1.

11 *Add* **Product marking**

In addition to the requirements for product marking specified in ASTM B 829, marking shall also include the schedule number or specified wall thickness (mm).

Marking shall also include the charge number and, where applicable, the heat number.

12 *Add* **Certification**

Unless specified otherwise, inspection and test certificates shall be supplied to the Principal.

13 *Add* Length

Unless specified otherwise in the purchase order, the Unit of Length (UoL) for pipe is in meter or feet. The form of delivery shall be in single random length (SRL or double random length (DRL). The specified quantities of random lengths on the purchase order shall be converted to aggregate length on the basis of 6.1 m (20 ft) for single random length and 12.2 m (40 ft) for double random length.

To satisfy the purchase order required pipe length, the delivered quantities of random lengths shall amount to at least the calculated aggregate length.

PART III REFERENCES

In this MESC SPE, reference is made to the following publications:

NOTES:

1. Unless specifically designated by date, the latest edition of each publication shall be used, together with any amendments/supplements/revisions thereto.
2. Most of the referenced external standards are available to Shell staff on the SWW (Shell Wide Web) at <http://sww05.europe.shell.com/standards>.

AMERICAN STANDARDS

Standard Practice for Cleaning, Descaling, and
Passivation of Stainless Steel Parts, Equipment, and
Systems

ASTM A 380

Standard Specification for Nickel-Iron-Chromium-
Molybdenum-Copper Alloy (UNS N08825 and N08221)*
Seamless Pipe and Tube

ASTM B 423: **2011**

Standard Specification for General Requirements for
Nickel and Nickel Alloys Seamless Pipe and Tube

ASTM B 829

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