

Specification

# TRACEBILITY & PART MARKING

970120234

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## TRACEABILITY &amp; PART MARKING

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## 1 Introduction

This specification describes the requirements for identification and marking on individual components and assemblies.

## 2 Definitions

PO Purchase Order

## 3 General marking requirements

Position of marking is shown on drawing.

Marking requirements shall be found on drawing, document requirement list (DRL) or Article Data Sheet (ADS).

## 4 Marking.

### Part Number (PN)

Is the same as drawing no. To be used for all traceability marking

### Revision no. (Rev)

Rev no is in the lower right corner on drawing.

### Serial Number (SN)

Is unique marking/identification on a part and consists of an Oceaneering PO no, line no in that PO followed by a sequential number that gives the individual part a unique Serial Number. The PO reference is not required to be linked to the PO that the item is purchased, on as long as the documentation is traceable from the number marked on the physical part.

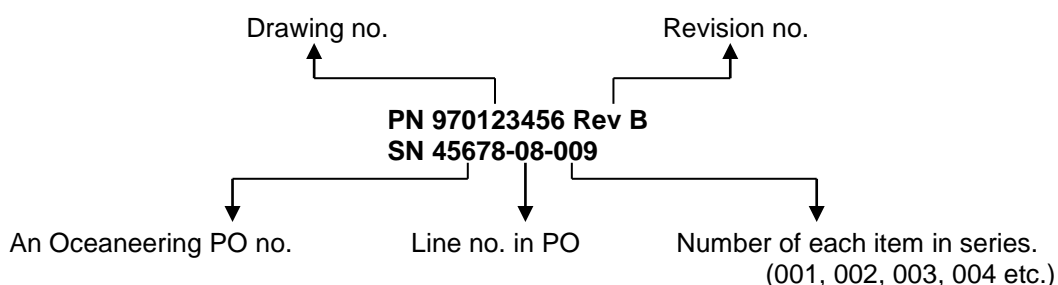
### LOT Number (LOT)

Is marking/identification of several parts in a series and consists of an Oceaneering PO no, line no in that PO, and number of produced series on this line in that PO. The PO reference is not required to be linked to the PO that the item is purchased, on as long as the documentation is traceable from the number marked on the physical part.

### Heat no (HT)

Is a unique Heat/charge number in actual material certificate.

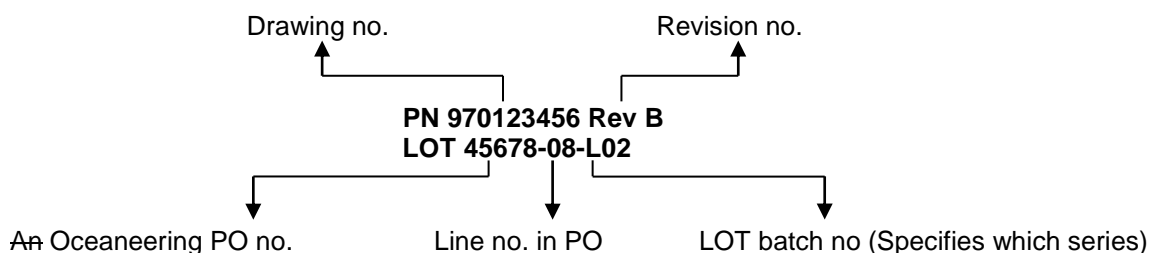
### 1. Example with Part Number (PN) and Serial Number (SN) requirements:



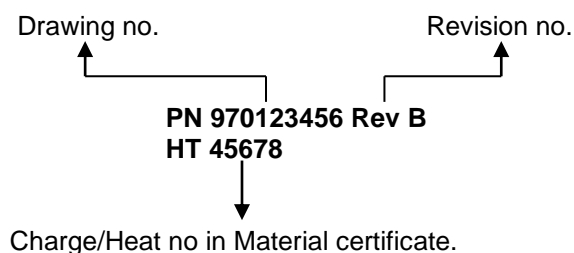
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### 2. Example with Part Number (PN) and LOT number requirements:



### 3. Example with Part Number (PN) and Heat no (HT) requirements:



## 5 Traceability

If a complete assembly is ordered on one line in the PO, then all underlying components shall be described in the traceability list.

## 6 Visual Appearance of marking

Permanent marking shall be performed prior to surface hardening or coating of the part.

When components are to be coated with multi-layer paint that would hide the permanent marking the use of other permanent marking methods or tag can be used after express approval from company buyer.


Tag to contain marking according to requirements stated on drawing.

Tag should be of a corrosion resistant material and attachment method suitable to provide visibility during the equipment's service life in operation.

If the size does not allow permanent marking, then a durable tag, sealed bag or other suitable package shall be used with clear marking.

If the marking requirements state serial number, then each item shall be packed and tagged individually.

**Note! All marking shall be clearly visible**

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## 7 Marking Methods

### 7.1 Permanent Marking

Preferred methods of permanent marking are low stress stamps or punches. Low stress interrupted dot automated dot-pen marking, laser etching, electro-chemical marking or other such low-stress systems are acceptable.

Preferred methods for small parts which not suited for stamping are vibratory pen or similar method.

When permanent marking is required for Duplex or Austenitic Stainless Steels and Nickel based alloys, then only vibratory pen or stamp with Carbide or Diamond tip shall be used.

**Note! All marking shall be clearly visible**

### 7.2 Welding as marking

When welding is specified for marking, then marking shall be clear and visible with a typically letter height of 50mm.

### 7.3 Tagging of part or package

If the size of the part does not allow permanent marking, then a durable tag, sealed bag or other suitable package shall be used with clear marking visible on the outside of the package.

If the marking requirements state serial number, then each item shall be packed and tagged individually.

### 7.4 Name plate marking

Name plates should be of a corrosion resistant material and marking method suitable to provide visibility during the equipment's service life. Position shall be as described on drawing and the preferable name plate size is 20 x 50mm.

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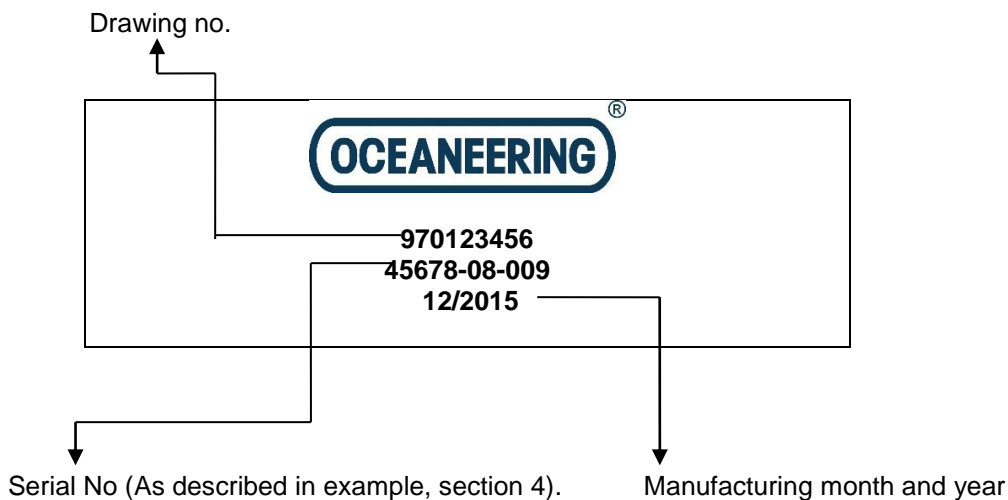
7.4.1 For Individual Parts

For individual parts the information on the tag shall be in accordance to section 4.

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### 7.4.2 For Assembly Items

For assembly items, such as a complete ROV tool, the name plate shall be according to the below description and layout.



### 7.5 Stencilling, Ink & Paint Marking

Ink and paint used for stencilling product identification shall be permanent and resistant to seawater, glycol, and mineral oil, and shall not degrade the base material.

All stencilling shall be a contrasting color to the product, for example black text on yellow background.