ASTEC-VAC-QCD-spc-008

Accelerator Science and Technology Centre

CCLRC Daresbury Laboratory

Vacuum Science Group

Vacuum Systems

Standard Vacuum Notes for use on Engineering Drawings for Vacuum Systems and Components

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CONTENTS

1. Introduction 1
   1.1 Definitions 1
   1.2 Scope 1
2. Complete Notes 1
3. Notes Requiring Completion for Specific Vacuum Items 1

1. Introduction

1.1 Definitions

Reference should be made to ASTEC-VAC-QCD-spc-001 *Definitions relevant to Quality Control Documentation* for the definitions of various terms used in this document.

1.2 Scope

This document describes a set of standard vacuum notes which should be included as appropriate on all manufacturing drawings showing vacuum items for ASTeC.

2. Complete Notes

The following notes shall be used in **exactly** the form shown below:

1. All vacuum surfaces shall be free from visible defects such as pitting, scale, cracks and indentations.
2. All vacuum sealing faces shall be free from radial scratches.
3. Knife-edges shall be free from scratches, indentations and any evidence of rolling, peeling, delamination or inclusions.
4. All vacuum braze regions shall be flush and free from voids, blowholes, etc and there should be no visible evidence of inclusions.
5. All weld regions shall be free from scale, voids, blowholes, etc, and there should be no visible evidence of inclusions. Some degree of discolouration of material in the weld area may be acceptable.
6. No weld repair shall be attempted without the agreement of ASTeC.
7. Vessels assemblies or components shall be cleaned to specification ASTEC-VAC-QCD-spc-003 *Procedures for the Cleaning of Vacuum Items* as appropriate.
8. All gaskets used in tests shall be of a type approved by ASTeC for the purpose.

3. Notes Requiring Completion for Specific Vacuum Items

The following notes require values appropriate to the individual item concerned to be filled in at the points indicated. Otherwise the wording should be exactly as below.

9. Vacuum leak testing shall be carried out in accordance with ASTEC-VAC-QCD-spc-004. Maximum acceptable leak rate *(fill in required value)* mbar l sec^{-1}
10. Acceptance tests to ASTEC-VAC-QCD-spc-005 carried out as appropriate. Maximum acceptable total outgassing rate is *(fill in required value)* mbar l sec^{-1}.
11. Acceptance tests to ASTEC-VAC-QCD-spc-005 carried out as appropriate. Partial pressure components shall be less than -

mass number (amu)	Percent of total pressure
(fill in required values)	*(fill in required values)*