DRAFT INTERNATIONAL STANDARD ISO/DIS 6708

ISO/TC **5**/SC **10** Secretariat: **ANSI**

Voting begins on: **2008-08-19** Voting terminates on: **2009-01-19**

Pipework components — Definition and selection of DN, NPS and A

Tuyauterie — Définition et sélection des désignations DN, NPS et A

[Revision of second edition (ISO 6708:1995)]

ICS 23.040.01

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote. This International

Standard ISO 6708: 2008 has been prepared by Technical Committee ISO/TC 5, Ferrous Metal Pipes and Metallic Flanges, Subcommittee SC10.

Introduction

This International Standard, ISO 6708 : 2008, makes normative reference to a family of three distinct pipework component size series, each of which has sectorial relevance in noteworthy global marketplaces. Each is widely used within these regional entities. Each of these individual component size series, taken separately, represents a very large installed component population and as such, it is not an economically viable option to compel replacement with a single series.

ISO 6708 : 2008 replaces ISO 6708 : 1995. ISO 6708 remained unchanged for many years while sectorial flange standards have kept pace and by doing so maintained market prominence. This revision, ISO 6708 : 2008, by reference, includes coverage for three of the most prominent sectorial component series, each endowed with significant market presence. This International Standard, ISO 6708 : 2008, is meant to more readily accommodate and expand regional and national standardization needs by providing ready access to a sectorial series whose requirements are contemporaneous with regional imperatives.

Pipework components — Definition and selection of DN, NPS and A

1 Scope

This International Standard specifies the terms DN, NPS and A when applied to components of a pipework system, as specified in those component standards which use a DN, NPS or A designation system either singly or in combination.

This International Standard specifies DN, NPS and A designation numbers that are to be used.

This International Standard is applicable to components within facilities engaged in the processing or handling a wide variety of fluids including steam, pressurized water, chemical, petroleum, natural gas or related products.

EXAMPLES Steam power plant, petroleum refinery, loading terminal, natural gas processing plant (including liquefied natural gas facilities), offshore oil and gas production platforms, chemical plant, bulk plant, compounding plant, tank farm.

This International Standard is also applicable to packaged equipment piping which interconnects individual pieces or stages of equipment within a packaged equipment assembly for use within facilities engaged in the processing or handling a variety of fluids including steam, chemical, petroleum, natural gas or related products.

2 Terms and definitions

2.1
DN

An alphanumeric designation of size that is common for components used in a piping system, used for reference purposes, comprising the letters DN followed by a dimensionless number having an indirect correspondence to the physical size of the bore or outside diameter of the component end connection.

Note 1 The dimensionless number does not represent a measurable value and is not used for calculation purposes.
Note 2 Prefix DN usage is applicable to components bearing PN designations according to ISO 7268.

2.2
NPS

An alphanumeric designation of size that is common for components used in a piping system, used for reference purposes, comprising the letters NPS followed by a dimensionless number having an indirect correspondence to the physical size of the bore or outside diameter of the component end connections.

Note 1 The dimensionless number may be used as a size identifier without the prefix NPS. The dimentionless number does not represent a measurable value and is not used for calculation purposes.

Note 2 Prefix NPS usage is applicable to components bearing Class designations according to ISO 7268.

2.3
A

An alphanumeric designation of size that is common for components used in a piping system, used for reference purposes, comprising the letter A preceded by a dimensionless number having an indirect correspondence to the physical size of the bore or outside diameter of the component end connections.

Note 1 The dimensionless number does not represent a measurable value and is not used for calculation purposes.

Note 2 Suffix A usage is applicable to components bearing Kdesignations according to ISO 7268.

3 Selection

The numeric terms that apply for the DN, NPS and A size designations shall be selected from Table 1. There is no direct dimensional correspondence between the series for DN, NPS and A.

Note There may be specialized applications requiring size designations for DN, NPS, or A that are not included in Table 1 but are cited in component standard. Usage would be in accordance with the relevant component standard.

Table 1 — Size Designations

Numeric terms		
DN	NPS	A
10	*	10
15	½	15
20	¾	20
25	1	25
32	1¼	32
40	1½	40
50	2	50
65	2½	65
80	3	80
*	3½	90
100	4	100
125	5	125
150	6	150
*	*	175
200	8	200
*	*	225
250	10	250
300	12	300
350	14	350
400	16	400
450	18	450
500	20	500
*	*	550
600	24	600
*	26	650
700	28	700
*	30	750
800	32	800

Table 1 — Continued

Numeric terms		
DN	NPS	A
*	34	850
900	36	900
*	38	950
1000	40	1000
*	42	1050
*	44	1100
*	46	1150
1200	48	1200
*	50	1250
*	52	1300
*	54	1350
1400	56	1400
*	58	1450
*	60	1500
1600	*	*
1800	*	*
2000	*	*
2200	*	*
2400	*	*
2600	*	*
2800	*	*
3000	*	*
3200	*	*
3400	*	*
3600	*	*
3800	*	*
4000	*	*