

# DIN EN 14723:2009-12 (E)

Petroleum and natural gas industries – Pipeline transportation systems –  
Subsea pipeline valves (ISO 14723:2009); English version EN ISO 14723:2009

---

## Contents

Page

Foreword.....	4
Introduction .....	5
1 Scope .....	6
2 Conformance.....	6
2.1 Rounding .....	6
2.2 Compliance to standard.....	6
3 Normative references .....	6
4 Terms and definitions .....	8
5 Symbols and abbreviated terms .....	13
5.1 Symbols .....	13
5.2 Abbreviated terms .....	13
6 Valve types and configurations.....	14
6.1 Valve types .....	14
6.2 Valve configurations .....	14
7 Design .....	30
7.1 Design codes and calculations .....	30
7.2 Pressure and temperature ratings .....	30
7.3 Cavity relief.....	31
7.4 External pressure and loads.....	31
7.5 Sizes.....	31
7.6 Face-to-face and end-to-end dimensions .....	31
7.7 Valve operation .....	41
7.8 Pigging .....	41
7.9 Valve ends .....	42
7.10 Bypasses, drains and vents .....	43
7.11 Manual actuator-manual operator — Handwheels and wrenches.....	43
7.12 Locking devices .....	44
7.13 Position of the obturator.....	44
7.14 Position indicators.....	44
7.15 Travel stops.....	44
7.16 ROV interface .....	44
7.17 Sealant injection .....	44
7.18 Lifting points and supports .....	45
7.19 Valve operator interface .....	45
7.20 Drive trains .....	46
7.21 Stem retention.....	46
7.22 Stem/shaft protector.....	46
7.23 Hydraulic lock .....	47
7.24 Corrosion/erosion.....	47
7.25 Hyperbaric performance .....	47
7.26 Design documents.....	47
7.27 Design document review .....	47
8 Materials .....	47
8.1 Material specification .....	47
8.2 Service compatibility.....	48
8.3 Forged parts .....	48
8.4 Composition limits.....	48
8.5 Impact test requirements of steels .....	49
8.6 Bolting.....	50
8.7 Sour service .....	50

<b>9</b>	<b>Welding.....</b>	<b>50</b>
<b>9.1</b>	<b>Qualifications.....</b>	<b>50</b>
<b>9.2</b>	<b>Impact testing requirements of weldments.....</b>	<b>51</b>
<b>9.3</b>	<b>Hardness testing.....</b>	<b>52</b>
<b>9.4</b>	<b>Repair.....</b>	<b>52</b>
<b>10</b>	<b>Quality control.....</b>	<b>53</b>
<b>10.1</b>	<b>NDE requirements.....</b>	<b>53</b>
<b>10.2</b>	<b>Measuring and test equipment.....</b>	<b>53</b>
<b>10.3</b>	<b>Qualification of inspection and test personnel.....</b>	<b>54</b>
<b>10.4</b>	<b>NDE.....</b>	<b>54</b>
<b>10.5</b>	<b>NDE of repairs.....</b>	<b>54</b>
<b>10.6</b>	<b>Visual inspection of castings.....</b>	<b>55</b>
<b>11</b>	<b>Testing.....</b>	<b>55</b>
<b>11.1</b>	<b>General.....</b>	<b>55</b>
<b>11.2</b>	<b>Hydrostatic shell test.....</b>	<b>55</b>
<b>11.3</b>	<b>Operational/functional test.....</b>	<b>56</b>
<b>11.4</b>	<b>Hydrostatic seat test.....</b>	<b>56</b>
<b>11.5</b>	<b>Cavity-relief test.....</b>	<b>57</b>
<b>11.6</b>	<b>Low-pressure-gas seat test.....</b>	<b>57</b>
<b>11.7</b>	<b>Draining.....</b>	<b>58</b>
<b>11.8</b>	<b>Installation of body connections after testing.....</b>	<b>58</b>
<b>12</b>	<b>Coating.....</b>	<b>58</b>
<b>13</b>	<b>Marking.....</b>	<b>58</b>
<b>14</b>	<b>Preparation for shipment.....</b>	<b>60</b>
<b>15</b>	<b>Documentation.....</b>	<b>60</b>
<b>15.1</b>	<b>Documentation retained by manufacturer.....</b>	<b>60</b>
<b>15.2</b>	<b>Documentation shipped with valve.....</b>	<b>60</b>
	<b>Annex A (normative) Requirements for non-destructive examination.....</b>	<b>62</b>
	<b>Annex B (normative) Supplementary test requirements.....</b>	<b>65</b>
	<b>Annex C (informative) Supplementary documentation requirements.....</b>	<b>70</b>
	<b>Annex D (informative) Purchasing guidelines.....</b>	<b>71</b>
	<b>Annex E (informative) Marking example.....</b>	<b>76</b>
	<b>Bibliography.....</b>	<b>77</b>