

# ISO/TS 29001:2007-12 (E)

## Petroleum, petrochemical and natural gas industries - Sector-specific quality management systems - Requirements for product and service supply organizations

---

<b>Contents</b>		<b>Page</b>
Foreword .....		vi
Introduction .....		viii
0.1	General .....	viii
0.2	Process approach .....	ix
0.3	Relationship with ISO 9004 .....	x
0.4	Compatibility with other management systems .....	xi
0.5	Goal of this Technical Specification .....	xi
1	Scope .....	1
1.1	General .....	1
1.1.1	Field of Application -- Supplemental .....	1
1.2	Application .....	1
1.2.1	Application -- Supplemental .....	2
2	Normative references .....	2
3	Terms and definitions .....	2
3.1	Terms and definitions for the petroleum, petrochemical and natural gas industries .....	2
4	Quality management system .....	4
4.1	General requirements .....	4
4.1.1	Outsourced processes and/or services -- Supplemental .....	4
4.2	Documentation requirements .....	5
4.2.1	General .....	5
4.2.2	Quality manual .....	5
4.2.2.1	Quality manual -- Supplemental .....	5
4.2.3	Control of documents .....	6
4.2.3.1	Control of documents -- Supplemental .....	6
4.2.3.2	Control of document changes -- Supplemental .....	6
4.2.4	Control of records .....	6
4.2.4.1	Control of records -- Supplemental .....	6
5	Management responsibility .....	7
5.1	Management commitment .....	7
5.2	Customer focus .....	7
5.3	Quality policy .....	7
5.3.1	Quality policy -- Supplemental .....	7
5.4	Planning .....	8
5.4.1	Quality objectives .....	8
5.4.2	Quality management system planning .....	8
5.5	Responsibility, authority and communication .....	8
5.5.1	Responsibility and authority .....	8
5.5.2	Management representative .....	8
5.5.3	Internal communication .....	9
5.6	Management review .....	9
5.6.1	General .....	9
5.6.1.1	General -- Supplemental .....	9
5.6.2	Review input .....	9
5.6.3	Review output .....	10

6	Resource management .....	10
6.1	Provision of resources .....	10
6.2	Human resources .....	10
6.2.1	General .....	10
6.2.2	Competence, awareness and training .....	10
6.2.2.1	Training -- Supplemental .....	11
6.3	Infrastructure .....	11
6.4	Work environment .....	11
7	Product realization .....	12
7.1	Planning of product realization .....	12
7.1.1	Planning of product realization -- Supplemental .....	12
7.2	Customer-related processes .....	12
7.2.1	Determination of requirements related to the product .....	12
7.2.2	Review of requirements related to the product .....	13
7.2.2.1	Review of requirements related to the product -- Supplemental .....	13
7.2.3	Customer communication .....	13
7.3	Design and development .....	14
7.3.1	Design and development planning .....	14
7.3.1.1	Design and development planning -- Supplemental .....	14
7.3.1.2	Design documentation -- Supplemental .....	14
7.3.2	Design and development inputs .....	14
7.3.2.1	Design and development inputs -- Supplemental .....	14
7.3.3	Design and development outputs .....	15
7.3.3.1	Design and development outputs - Supplemental .....	15
7.3.4	Design and development review .....	15
7.3.4.1	Design and development review -- Supplemental .....	15
7.3.5	Design and development verification .....	15
7.3.6	Design and development validation .....	16
7.3.7	Control of design and development changes .....	16
7.3.7.1	Control of design and development changes -- Supplemental .....	16
7.4	Purchasing .....	16
7.4.1	Purchasing process .....	16
7.4.1.1	Purchasing process -- Supplemental .....	16
7.4.1.2	Criteria for supplier selection, evaluation, and re-evaluation -- Supplemental .....	17
7.4.1.3	Supplier provided processes that require validation -- Supplemental .....	17
7.4.2	Purchasing Information .....	17
7.4.2.1	Purchasing information -- Supplemental .....	17
7.4.3	Verification of purchased product .....	18
7.4.3.1	Verification of purchased product -- Supplemental .....	18
7.5	Production and service provision .....	18
7.5.1	Control of production and service provision .....	18
7.5.1.1	Control of production and service provision -- Supplemental .....	18
7.5.1.2	Process controls -- Supplemental .....	18
7.5.2	Validation of processes for production and service provision .....	19
7.5.2.1	Validation of processes for production and service provision -- Supplemental .....	19
7.5.3	Identification and traceability .....	19
7.5.3.1	Identification and traceability -- Supplemental .....	19
7.5.3.2	Identification and traceability maintenance and replacement -- Supplemental .....	19
7.5.3.3	Product status -- Supplemental .....	19
7.5.4	Customer property .....	20
7.5.4.1	Customer property -- Supplemental .....	20
7.5.5	Preservation of product .....	20
7.5.5.1	Preservation of product -- Supplemental .....	20
7.5.5.2	Periodic assessment of stock -- Supplemental .....	20
7.6	Control of monitoring and measuring devices .....	21
7.6.1	Control of monitoring and measuring devices -- Supplemental .....	21
7.6.2	Environmental conditions -- Supplemental .....	21
8	Measurement, analysis and improvement .....	22
8.1	General .....	22

<b>8.2</b>	<b>Monitoring and measurement .....</b>	<b>22</b>
<b>8.2.1</b>	<b>Customer satisfaction .....</b>	<b>22</b>
<b>8.2.2</b>	<b>Internal audit .....</b>	<b>22</b>
<b>8.2.2.1</b>	<b>Internal audit -- Supplemental .....</b>	<b>23</b>
<b>8.2.2.2</b>	<b>Response times -- Supplemental .....</b>	<b>23</b>
<b>8.2.3</b>	<b>Monitoring and measurement of processes .....</b>	<b>23</b>
<b>8.2.4</b>	<b>Monitoring and measurement of product .....</b>	<b>23</b>
<b>8.2.4.1</b>	<b>Monitoring and measurement of product -- Supplemental .....</b>	<b>23</b>
<b>8.2.4.2</b>	<b>Acceptance inspection -- Supplemental .....</b>	<b>23</b>
<b>8.3</b>	<b>Control of nonconforming product .....</b>	<b>24</b>
<b>8.3.1</b>	<b>Release or acceptance of nonconforming product -- Supplemental .....</b>	<b>24</b>
<b>8.3.2</b>	<b>Field nonconformity analysis -- Supplemental .....</b>	<b>24</b>
<b>8.3.3</b>	<b>Customer notification -- Supplemental .....</b>	<b>25</b>
<b>8.4</b>	<b>Analysis of data .....</b>	<b>25</b>
<b>8.4.1</b>	<b>Analysis of data -- Supplemental .....</b>	<b>25</b>
<b>8.5</b>	<b>Improvement .....</b>	<b>25</b>
<b>8.5.1</b>	<b>Continual improvement .....</b>	<b>25</b>
<b>8.5.2</b>	<b>Corrective action .....</b>	<b>26</b>
<b>8.5.2.1</b>	<b>Corrective action -- Supplemental .....</b>	<b>26</b>
<b>8.5.2.2</b>	<b>Response times -- Supplemental .....</b>	<b>26</b>
<b>8.5.3</b>	<b>Preventive action .....</b>	<b>26</b>
<b>8.5.3.1</b>	<b>Preventive action -- Supplemental .....</b>	<b>26</b>
<b>Bibliography .....</b>	<b>.....</b>	<b>27</b>