



Purchase Order Quality Requirements (POQR) for IEC 61439 - LV Switchgear & Controlgear Assemblies



Acknowledgements

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Revision history

VERSION	DATE	AMENDMENTS
2.0	November 2016	For information only. This is the first release. Version number matches S-560 at the time of publication.



1 Scope

- a. This document defines the standard quality requirements for IEC 61439 low voltage switchgear and controlgear packages.
- b. Annex A defines the User conformance, verification and surveillance requirements.

2 Normative references

The following documents are referenced in one or more requirements in this document. For dated references, only the version cited applies. For undated references, the latest version of the referenced document (including any amendments) applies.

API Specification Q1	Specification for Quality Management System Requirements for Manufacturing Organisations for the Petroleum and Natural Gas Industries.
IEC 61439-1	Low-voltage switchgear and controlgear assemblies - Part 1: General rules (Edition 2.0: 2011).
IEC 61439-2	Low-voltage switchgear and controlgear assemblies - Part 2: Power switchgear and controlgear assemblies (Edition 2.0: 2011).
ISO 9001	Quality management systems - Requirements.
S-560	Supplementary Requirements to IEC 61439-1 & 2 LV Switchgear & Controlgear.

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply:

User

An associate or subsidiary, or other organisation acting as owner, purchaser, or customer as designated in the Purchase Order.

Manufacturer

Entity entering into a contract with Company/Principal to provide materials, goods, supplies, equipment, or plant and includes the successors and (or) permitted assigns of such entity.

4 Symbols and abbreviations

For purposes of this document, the following symbols and abbreviations apply:

- ECMS Electrical control and monitoring system.
- ITP Inspection and test plan.
- PO Purchase order.
- POQR Purchase order quality requirements.
- SDR Supplier deliverable requirements.

SDRL Supplier deliverable requirements list.

5 Quality requirements

5.1 Quality management system

Quality management systems shall conform to ISO 9001, API Specification Q1, or equivalent agreed by Company.

5.2 Conformance verification

- a. ITP or other operational planning and control documents provided by Manufacturer shall define the specific controls to be implemented by Manufacturer to conform with S-560 and this POQR.
- b. Controls shall be applied to products and services provided by Manufacturer and sub-suppliers.
- c. ITP or other operational planning and control documents, shall include the User:
 - 1. Verification and surveillance requirements included in Annex A,
- d. Conformance verification requirements in Annex A are minimum requirements, alternative requirement shall apply if specified in the Purchase Order.

Annex A User surveillance and inspection

Α	REQUIREMENTS PRIOR TO MANUFACTURE / ASSEMBLY / TESTING	Activity Type
1	Post award kick-off and clarification meeting.	
	Approval of all key pre-manufacture deliverables in conformance to the SDRL.	н
2	Manufacture not to proceed until relevant deliverables are approved by User either with or without comments for inclusion, in accordance with the Quality Plan.	
3	Pre-inspection meeting incorporating review of inspection and test plan.	
В	REQUIREMENTS DURING MANUFACTURE / ASSEMBLY / TESTING	Activity Type
1	Switchgear performance tests (IEC 61439-1 / S-560 - clause 9) where applicable.	W
2	Switchgear design verification (IEC 61439-1 / S-560 - clause 10 and all related sub-clauses) where applicable.	w
3	Switchgear routine verification tests (IEC 61439-1 / S-560 clause 11 and all related sub-clauses).	w
4	Switchgear special tests (S-560 - clause 11.101 ECMS) where applicable.	w
с	REQUIREMENTS FOR EQUIPMENT RELEASE AND PURCHASE ORDER COMPLETION	Activity Type
1	Inspection of equipment preservation, sea-fastening, export packing and weighing of all items.	W
2	Inspection of all loose ship items.	W
3	Inspection of insurance spares long term preservation and export packing.	W
4	Verify all inspections and tests are complete, review evidence that all defect items are closed.	н
5	Manufacturing record books.	R
6	Installation, operation and maintenance manual.	R
7	Despatch dossier(s).	S
8	Certificate of conformity.	S
9	Final release (verification and acceptance of above requirements 1-8)	н

Key:

Hold point (H)

A critical operation or process beyond which work shall not proceed without attendance by User representative or written User approval.

Witness point (W)

An operation or process that requires witness by the User representative. The operation or process may proceed without witness only with prior User approval. Repetitive witnessing activities may be by percentage as specified.

Surveillance (S)

Periodic review by the User representative of an activity, operation, process or documentation at Manufacturers or sub-(supplier) premises. No specific notification is required and the activity, operation or process may proceed if the User representative is not present.

Review (R)

User review of Manufacturer documentation providing objective evidence of the Manufacturer's conformance to the Purchase Order requirements. Documentation to be submitted to User office as stated in SDRL.

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