

Quality Management in Production

Process Transmitter

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1 Scope

The Quality Management System for the production of process pressure transmitters is based on the general Quality Management System of WIKAL, Alexander Wiegand SE & Co. KG. This document provides an overview of the major quality relevant processes used for production and control of process pressure transmitters. It should be referred to in combination with the Quality manual document as general information.

2 Documentation

Document	Definition
Data sheet (DS)	The DS defines technical features of a process pressure transmitter and can be downloaded from the WIKAL website.
Operating Instruction (OI)	The OI describes requirements for safe handling, installation, operation and maintenance and can be downloaded from the WIKAL website.
Part Number	The part number of any part, component, or process pressure transmitter is unique; it is kept under control through revision management.
Drawing (DRW)	The DRW is used to record technical details of parts, components, or transmitters and always refers to a part number. It is kept under control through revision management.
Standard Operating Procedure (SOP)	The SOP defines how to perform each step of a process. The SOP document is kept under control through revision management and is for internal use at WIKAL only.
Work Instruction (WI)	The WI defines how to handle and test parts/production steps. The WI document is kept under control through revision management and is for internal use at WIKAL only.
Production Work Plan (WP)	The WP is elaborated by the Process Engineering department and defines the different production steps. Every production step is signed by the skilled employee during the production process. The WP is for internal use at WIKAL only.
Bill of Materials (BOM)	The BOM is a structured list of individual parts/ materials needed for the assembly of a part or product. The BOM document is for internal use at WIKAL only.
Welding Procedure Specification (WPS)	The WPS defines in detail how to handle the welding process. The WPS document is kept under control through revision management and is for internal use at WIKAL only.

WIKAL's internal documents may be shown through customer visit / audit upon request; copying for customer documentation or use is not allowed.

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3 Quality Management Procedures in production

3.1 Quality Management prior to series production

- New products and variation of existing products are developed and validated for series production capability according to the WP.
- Potential new suppliers are evaluated prior to series shipments.
- New parts have to pass the First Article Inspection (FAI) process according to the WIKAL Global Guideline "Supplier Quality".
- Preventive quality tools (like FMEA, QFD, Risk Assessments, Quality Workshops...) are used to define quality specification items.

3.2 Quality Management during series production

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- Incoming inspection of purchased parts from certified suppliers according to a control plan is done to verify incoming quality.
- Production tests (functional test, adjustment, configuration...) are documented in the WP to verify the production steps. Product inspections (construction, installation dimensions, identification, documentation, certificates and completion documentation are documented in the WP to ensure the product quality.
- All relevant data (electrical PCB test, pressure test, adjustment, configuration...) are stored for traceability and quality assurance in a database.

Product / step	Process	Specification
Incoming inspection ¹⁾	Acc. testplan	DWG, WI
Function test ¹⁾	scope 100%	WI, WP, SOP
Visual test of dimension ¹⁾	100% optical inspection	WI, WP, SOP
Visual examination of welding ¹⁾	Test of welding according to the welding test instruction	WI, WP, SOP, WPS
Pressure test ¹⁾	Pressure test according to the test instruction	WI, WP, SOP
High voltage test ²⁾	Scope 100% (if required)	WI, WP, SOP
Calibration and Configuration ¹⁾	scope 100%	WI, WP, SOP
Final test/inspection ¹⁾	Final testing according to test instruction Inspection scope 100%	WI, WP, SOP
Packing and shipping ¹⁾	Transmitter packaging, labeling of the packaging and shipping of the transmitter to the customer	WI, WP, SOP
Shipping audit	Random inspection	DS, OI, DRW

¹⁾ Standard test

²⁾ if required

3.3 After sales service

Process Pressure Transmitter which are defective or out of calibration can be returned to WIKA for service; the procedure is described on the website of WIKA under "service" (product return form) and can be handled on an individual basis.

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WIKA Alexander Wiegand SE & Co. KG

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Roland Stapf
Head of Quality Management
Pressure