

QUALITY ASSURANCE GUIDELINE

of the

AMANN
GROUP

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AMANN GROUP – Specializing in sewing and embroidery yarns

Since its foundation in 1854, the AMANN GROUP has developed into one of the largest globally operating sewing thread manufacturers and has a reputation in the business for innovative products of the very highest quality.

The automotive industry imposes the highest demands on materials and processes and requires the reliable delivery of the respective parts and components in order to be able to satisfy the customers' high demands in terms of quality and production efficiency.

In close collaboration with the automotive supply industry, our modern production plants enable us to develop and manufacture technical yarns with precisely defined performance profiles. We comply with the highest quality standards in conformity with ISO/TS 16949.

1. Worldwide AMANN GROUP Quality Management Standard

1.1 Quality Management System

The AMANN GROUP maintains a quality management system in accordance with DIN EN ISO 9001. The AMANN GROUP's automobile manufacturing locations are constantly developed further and certified according to ISO / TS 16949 and certain locations according DIN EN ISO 14001. An external independent certification company regularly checks the QM system to ensure it complies with DIN EN ISO 9001, ISO/TS 16949 and DIN EN ISO 14001.



1.2 Audits

The effectiveness of the management system is checked by means of internal audits of our systems, processes and products, the results obtained are followed up and processed by means of appropriate action plans.

The internal audits are planned and specified centrally and are conducted by qualified auditors.

1.3 Central Process Approval

The AMANN GROUP's centrally valid and administrated QM system guarantees the implementation of identical processes, or those that are equivalent in terms of production, the monitoring of which is guaranteed by the central process approval system.

Central Development and Central Approval

- Identical Processes / Machines: All processes and technologies to be newly introduced and machines to be worked on are evaluated within the AMANN GROUP via the central development department installed in Augsburg. This ensures that qualitatively comparable processes and machines are used no matter where the production location is.
- Release of New Machinery: Existing articles are used at the machine startup stage. The articles produced in this way are checked to ensure that they meet the necessary requirements in terms of color, technology and other relevant features. This provides an analysis of whether the machine affects the qualities of the product or achieves the desired result in the product.
- Release of the Article: The process steps that the article goes through at the respective location are accompanied by the appropriate inspections. This ensures that the product requirements agreed are maintained at the same consistently high standard and meet the requirements of the AMANN GROUP.



- Identical Test Methods: The AMANN GROUP develops test methods in accordance with central specifications based on ISO standards. The same testing equipment is used at all locations.

1.4 Data Collection / Data Management

Quality data are collected centrally and can be analyzed and evaluated via the appropriate data bases.

2. Product Development / Product Realization

The procedure used in developing the product depends on the complexity of the requirements. A distinction is made between the development of colors, the development of an adaptation and a new development. Complex development topics are treated by using the APQP (Advanced Process Quality Planning) method.

2.1 Development Process

To ensure customer satisfaction, a standardized procedure for product and process development has been introduced. A further goal is to ensure central communication among all those involved as a way of guaranteeing that all necessary steps are carried out completely within the specified time. All relevant sequences are specified by means of an internal instruction available to all employees involved. The documents may be inspected as part of an audit.



2.2 Risk Assessment

A system of preventive error management makes it possible to assess the risks with respect to potential weak points in both product and process. Error management is carried out using the FMEA (Failure Mode Effective Analysis) method.

2.3 Production Control Plan

All controls carried out on the product that serve to detect errors early and to monitor the process are summarized in the Production Control Plan. The control plans are created depending on the article group and its production flow.

2.4 Special Features

For new product developments, CC and / or SC features are agreed with the customer, depending on the application.

The calculation of the cpk value is carried out on the basis of the test results of the last production stage.

3. The AMANN Product Specification

The AMANN Product Specification describes the technological performance profile of AMANN articles. It is the definitive basis of the supply relationship and forms the perfect quality base for each individual article. The AMANN product range is the result of many years of constant development work in conjunction with the respective customer's requirements. The products that exist today have established themselves in the market as overarching standards that can be used for all applications and customers. Customer specifications are checked and, if necessary, adapted to AMANN's stipulated limit values. Customer-specific adaptations are possible only to a very limited extent. The specified limits are calculated on the basis of the natural spread in question (technological features) or are based on our specialist know-how (color fastness, hot light fastness).



Most of the technological tests that are of relevance for the sewing threads are destructive tests. This is why we evaluate each individual batch on the basis of sampling inspections.

The dyeing conditions (dye liquor, temperature, duration, chemicals, dyes) have the greatest influence on the two essential product characteristics of maximum tensile strength and load. Sampling procedures are adequate, because all the spools of a batch undergo the dyeing process at the same time.

We are unable to carry out burn tests. If necessary, these need to be performed by the users themselves in cooperation with one another.

4. Initial sampling

4.1 Production Part Approval Process (PPAP)

The AMANN GROUP carries out location-based initial sampling under series production conditions. On account of the nature of the textile production processes and production machinery “initial samples” and “series” may be produced on different but comparable machines.

As a rule, color development is carried out via the Color Competence Center at the Augsburg location. In cases where a color development precedes the creation of the PPAP, the initial sample inspection is likewise carried out at the development location. The initial sample inspection qualifies all AMANN manufacturing locations, provided the specifications are observed. PPAP clearance applies basically to all spool formats.

After the creation of the PPAP documentation the customer must give his approval or provide feedback within eight weeks. If this is not the case, or if articles are ordered in the meantime without express approval, AMANN will treat the materials in question as being approved.



4.2 Supplier Request for Engineering Approval (SREA)

If relevant to the specifications, in cases of relocation of production and change of supplier we provide this information by means of a Request for Engineering Approval. In individual cases the extent of qualification must be agreed separately.

4.3 Parts History

From a technological point of view, our materials are not tied to a specific project, being standard materials that are not subject to any further development resulting from a change of project or model year, so no provision has been made for a parts history.

5. Requalification

In terms of its aim and scope a requalification is not to be regarded as equivalent to an initial sampling. The aim of requalification is to provide proof of stable processes that make it possible to determine the product quality. To achieve this purpose, selected features of representative article groups are checked on the basis of the AMANN specification.

The following elements form the basis of the qualification checks:

- Technological inspections during the production process for every single batch.
- Technological and color-specific features defined once a year in accordance with the AMANN standard specification.

In addition to the above, a product audit of a material is conducted for each production location.



6. Zero-Error Target/ PPM Agreement

As a long-standing partner to the automotive industry AMANN considers it as its aim to observe the zero-error target with regard to the form and implementation of all internal processes and workflows. Realistically speaking, the situation with regard to the raw materials and manufacturing conditions in textile production means that the achievement of 0-PPM is just not feasible. If necessary, PPM agreements must be made separately in each individual case.

7. Traceability

Traceability is ensured at the level of the process stage. If it becomes necessary to re-trace a product's life, a batch number system makes it possible to do this using the smallest possible amount in terms of material, color and batch.

8. Documentation

For all quality-relevant data, a retention period of 25 years after recording the information (specifications, test instructions, specification-relevant test data, acceptance test certificates, communicated PPAP data and product release approval records) applies. All other documents are individually preserved in accordance with the legal or internal requirements.



9. Supplier Management

As part of our cooperation with our suppliers, we implement the requirements that are relevant for us on the basis of the existing AMANN Quality Management System. Within the bounds of our possibilities we support a supplier audit by our customers.

10. First-in-First-Out (FIFO)

Basically, the AMANN GROUP works on the FIFO principle. Deviations may occur in cases of certain constellations of quantities delivered and stock.

11. Realization of Offers

Customers' inquiries are dealt with according to a specifically defined and standardized process.

The aim is the early identification of the organizational requirements that result.

The evaluation of the individual aspects is carried out as part of a feasibility study, taking all relevant departments into account.

This ensures that all aspects that are relevant for the customer are taken into account when a quotation is being prepared.



12. Secrecy

The parties to the contract undertake to treat as business secrets all commercial and technical details that are not in the public domain and that become known to them by way of their businesses relations.

13. Warranty

13.1 As part of the constant process of improvement we reserve the right to make changes in production or design that do not affect the quality or value of the goods and do not constitute a defect, especially if the article conforms to the AMANN standard specification or the customer specification, even if the article has not been released by the customer, despite an express demand that he do so.

13.2 If a defect does exist, we are entitled to deliver an item that is free of any defect (replacement delivery). The special nature of our products means that they cannot be reworked or improved.

13.3 We accept no responsibility for damage arising through unsuitable or improper use or processing, and in particular we assume no liability for damage caused by the sewing process itself.

13.4 No claims can be made for a defect if the error relates only to the circumstances accompanying the delivery. The quality assessment is based solely on the customer-specific or AMANN specification; logistic requirements require a separate written agreement in order to be valid.



13.5 In so far as §377 HGB (German Commercial Code) has not been expressly made a condition of the agreement, an assertion of defect rights is possible only if the obligation to inspect and submit complaints under §377 HGB has been properly observed.

14. Claims for Damages and Reimbursement of Expenses

14.1 If damage is caused through a breach of duty on our part, we shall not be liable for compensation for damages and expenditure, if we prove that we are not responsible for the breach of duty. For this purpose we require precise details about the article, color and batch and suitable documentary evidence. Otherwise, we cannot evaluate the procedure and liability shall be excluded. To process the claim effectively we furthermore require information as to how many spools are affected and whether parts that have already been sewn are affected. If we are responsible for violation of duty, we shall be liable in accordance with the relevant legal provisions to reimburse damage or expenditure unless specified otherwise below.

14.2 In the event of minor negligence, our liability for damages or compensation is excluded. In particular we assume no responsibility for customer's profit lost on account of slight negligence and other financial losses.

14.3 Compensation, costs and expenses must be commensurate with the value of the goods supplied. Any claims that go beyond this cannot be asserted.

14.4 The disclaimer as defined in 13.2 shall not apply to claims resulting from a guarantee in cases of death, bodily injury or health, for claims under the Product Liability Act [ProdukthaftungsG] or claims arising from minor negligent breaches of essential contractual obligations. In the case of minor negligent breaches of essential contractual ob-



ligations, liability, however, shall be limited to compensation for typical damage that was foreseeable at the conclusion of the contract.

14.5 To the extent that our liability is excluded or limited, this shall apply for the personal liability of our employees, representatives and agents.

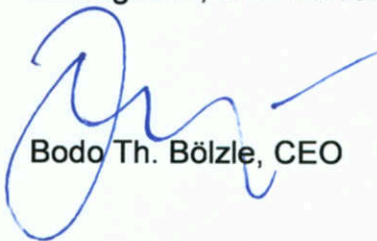
15. General Provisions

15.1 All AMANN GROUP deliveries are based on our General Terms and Conditions and this QAGV. All other agreements that are not confirmed in writing shall have no applicability. The parties undertake to make any alterations and additions to this agreement in writing.

15.2 This agreement shall be governed by German law, the place of jurisdiction is Stuttgart.

15.3 Should one or several of the above provisions be or become invalid, this shall not affect the validity of the rest of this agreement. The parties shall rather be obliged to behave in a manner appropriate to the aim of this agreement and otherwise to agree upon a legally acceptable substitute provision that comes closest to the economic purpose and the invalid provision. This shall also apply to the filling in of contractual omissions.

Bönnigheim, 1st February 2012



Bodo Th. Bölzle, CEO



Wolfgang Findeis, CFO



Jörg Bauersachs, COO



[NAME CUSTOMER] accepts the agreements made here for all deliveries of the AMANN GROUP.

Additions and / or amendments enter into force if both parties agree. All additions and / or amendments must be attached to this Quality Assurance Guideline.

Amann / Söhne GmbH & Co. KG

[Customer X]

[Date, Signature]

[Date, Signature]

