bdp Mechanical Components Deutschland GmbH

German quality standard and global sourcing

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How to do a supplier process audit for the Automotive Industry?

We are ISO 9001:2015 certified, many of our producers are also IAFT 16949 certified.

Various audits are available to you as a customer to audit the processes of your own suppliers. The most common method that customers choose to have the processes of our suppliers audited is the VDA 6.3 process audit (hereinafter referred to as VDA 6.3) developed by the *Verband der Automobilindustrie* (VDA), which assesses the quality capability and enables processes to be controlled and competent for the purpose of correction, prevention, and continuous improvement.

Process audits can be divided into planned and unplanned ones. Planned audits include supplier system and project audits; the following situations trigger unplanned audits: frequent quality problems, process changes, etc.

How to evaluate VDA 6.3 process audit results?

We generally use the VDA 6.3 audit form to record the audit and the final evaluation score of the supplier, record the problems found during the audit, and find the corresponding clauses for judging.

If this supplier is not yet in the company's system, we will conduct a supplier P1 potential supplier audit with 35 questions, respectively extracted from the VDA 6.3 questionnaire catalog (P2-P7), followed by the potential analysis. In the case of an ongoing supplier project, the process audit only needs to review the P5-P7 clauses.

The P1 audit follows the principle of red, green and yellow traffic lights, where depending on the number of red, green and yellow classifications, the level of the suppliers is assessed against the specific criteria (see Figure 1). For the P2-P7 terms, the scoring principles (see Figure 2) are followed with the scoring, sometimes considering the subjective factors in addition to the objective principles. However, in the end, the customers should make their own judgments about the results.

Classification		Evaluation based on questionnaire	
		Yellow	Red
Barred supplier	R	more than 12	one or more
Conditionally approved supplier	Y	Max. 12	none
Approved supplier	G	Max. 6	none

Figure 1

Points	Assessment of compliance with the requirements
10	Full compliance with requirement
8	Requirement mainly fulfilled; minor deviations
6	Requirement partly fulfilled; significant deviations
4	Requirement inadequately fulfilled; major deviations
0	Requirement not fulfilled

Figure 2

How to conduct a VDA 6.3 audit of a supplier?

I. Audit preparation

Before the audit, we need to do detailed planning according to the needs of this audit.
Communicate with the suppliers about the plan and purpose of this audit before the on-site audit. We need to plan the routes of the audit in advance according to the production process flow chart and site layout diagram. This is necessary to avoid overlapping audit routes or taking the same route twice.

You should familiarize yourself with the product, understand the drawing requirements and the basic process as well as identify the key features. Since the audit time is often tight, you can then focus on these key features during the audit.
Find out in advance about quality problems identified during previous audits and those that have occurred with other suppliers, and focus on these problems during the audit as well.

II. Audit implementation

During the implementation of an audit, the time of the first meeting is limited to 15 minutes. During this time, a simple PowerPoint presentation can be presented, introducing the company, the plan, and the purpose of the audit. In addition, the supplier should be informed about the production process and the documents that need to be reviewed. The most important point is that the supplier's general manager should be invited to the first and last meeting so that the supplier can cooperate with the audit and facilitate the coordination of responsible people in different departments.
The timeline of the audit may include a document review first and an on-site audit second. A document review contains the requirements included in the VDA 6.3 checklist or audit plan, such as checking the validity of the quality certificate, signing the quality agreement, achieving the annual targets, preparing the internal quality indicators, personnel structure, supplier qualification list and others.

Under P5.1, for example, suppliers are asked to create a "Supplier Qualification List". The "Supplier Qualification List" can be used to clarify many supplier management issues. First, the procedure document is used to check how the requirements are designed, then one or two subcontractors are selected to check the actual assessment. Generally, the evaluation is based on the subcontractor's performance at levels A

through D and whether there is an improvement plan or subsequent requirements for the supplier for each level. If a level D supplier has been eliminated, the supplier should have a development plan for new suppliers. In addition, it can be seen if the supplier has contingency measures for suppliers of critical parts, such as multiple supplier coverage. If all of the above points are met, this clause can be awarded full points.

The order of the on-site audit has been arranged at the audit planning, generally according to the process flow chart from the supplier incoming materials to the production site, and finally to the finished product warehouse, interspersed with inspection rooms, non-conforming product areas, tooling warehouses, mold warehouses and other areas.
During the on-site audit, we will prepare a supplier's control plan in hand and we need to check whether the requirements of the control plan are reflected in the on-site process documents, work instructions, inspection instructions, etc. Furthermore, we have to review whether process parameters, inspection methods, their frequency and the site protocol match. Particular attention should be paid to the special characteristics marked on the control plan (they need to be consistent with the special characteristics given by the customer) and the problems that have occurred before.
Often suppliers tend to ignore the three types of products: defective products, reworking and repairing parts, as well as debugging products. Therefore, we then need to pay extra attention to this aspect of the on-site audit. 1) For defective products, whatever occurred in the production process or the final inspection, the supplier is required to display a conspicuous logo on the side of the defective product storage area, which can’t be removed. 2) For reworking and repairing products, the supplier has to specify what kind of defects can be reworked or repaired. In addition, the rules and regulations must be updated from time to time according to site and customer feedback. The supplier must also ensure that employee training has been completed. Reworking and repairing activities must be accompanied by appropriate work instructions and approved by the customer. After the rework and repairs are completed, check that the supplier has marked the items to be inspected to prevent defective products from being put into circulation. 3) For debugging products, it is especially important to pay attention to how the supplier's program documents were specified and how they were ultimately implemented. These products must be strictly controlled.

The audit can be flexible depending on the client's plan or requirements, experience with SQE (Safety, Quality and Environment) and the company's focus.

III. Audit summary

In the last meeting, we should first summarize the audit, affirm the strengths of the audited process, and at the same time, we should point out the shortcomings and confirm the problem items found in the audit with the supplier. Upon completion of the audit, the audit report should be sent to the supplier and the supplier should be asked to submit a complete corrective action plan as soon as possible.

IV. Audit follow-up

After the audit report is sent to the supplier, we need to collect the supplier's analysis of the causes of the audit issues and corrective measures. We also need to review the corrective measures for the issues on a

regular basis.
According to past experiences, the audited party often has an incomplete analysis of the causes of the audit issues and the measures formulated are superficial. For this reason, we must carefully check the causes of the problems and the corrective measures of the supplier's feedback. When these phenomena are found, we must ask the supplier to give feedback again.

bdp can provide you with purchasing, supplier audit, process audit, product inspection, logistics, and related services:

1. We can provide customers with the service of finding and matching suitable component suppliers.

2. Supplier audit and inspection work of the first-time cooperative enterprises, such as the potential risk audit of suppliers.

3. Services for projects in operation, following up the production control of samples and a small batch production control, such as PPAP certification.

4. After entering mass production, the follow-up of the stability of mass production and the inspection before each shipment.

5. After entering mass production, regular factory process audits, system audits, product audits, and sub-supplier audits for special processes.

6. Logistics services for different destinations, including sea, air, express, and China-Europe trains etc.

If you have any further questions about supplier audits, please email us (purchase@bdp-mc.com). We are sharing with you further information on supplier audits on our website. Our bdp Mechanical Components team is happy to provide you with advice and assistance. Contact us!

Lynn Zhu
Supplier Quality Manager (SQM) at bdp Mechanical Components China

Mr. Zhu has been working in large factories and foreign companies for ten years. He is very familiar with the IATF16949 quality management system and has the ability and experience in supplier quality development and management. In addition, he is familiar with the manufacturing processes of injecting, vulcanization and sealing. As Supplier Quality Manager (SQM) at bdp MC, he is responsible for new product development, technical analysis, supplier audit, and supplier quality control.

About bdp Mechanical Components
Founded in 1982, today's bdp Mechanical Components is headquartered in Berlin and has 14 other offices in Germany, China, Poland, Spain, Bulgaria, and Switzerland. bdp Mechanical Components is a specialized provider in the field of international sourcing of castings and forgings for customers who do not have a detailed overview of the most suitable suppliers for their products, especially in Asia (China), Turkey and Eastern Europe. And of course, also for customers who cannot accompany corresponding project start-ups closely on site with the suppliers and monitor the ongoing production.

For more professional advice, please follow us on WeChat: public number bdp-Group-1992, or scan the QR code below to follow us.

Headquarter

Berlin
bdp Mechanical Components Deutschland GmbH
Danziger Straße 64
10435 Berlin
Postal code: 10435
Tel.: +49 (0) 30 4433 610
Fax: +49 (0) 30 4433 6154
info@bdp-mc.com
www.bdp-mc.com

Sourcing center

Shanghai
bdp Mechanical Components (Shanghai) Co., Ltd.
Room 759, Building 3, German Center, No. 88 Keyuan Rd. Pudong, Shanghai, China
Postal code: 201203
Tel.: +86 (0) 21 6878 0138
Fax: +86 (0) 21 6878 2638
purchase@bdp-mc.com
www.bdp-mc.com

Qingdao
bdp Mechanical Components (Shanghai) Co., Ltd., Qingdao
Room 27A, 27th Floor, Building C. JINDU Garden. No.37 Donghai West Road, Qingdao, China
Postal code: 266071
Tel.: 86 (0) 532 - 6675 9663
quality@bdp-mc.com
www.bdp-mc.com

Tianjin
bdp Mechanical Components (Shanghai) Co., Ltd., Tianjin
Room K, 20th Floor, Teda Building No. 256 Jiefang South Road, Hexi District, Tianjin, China
Postal code: 300042
Tel.: +86 (0) 22 – 5995 9243
Fax: +86 (0) 22 – 5995 9243 805
info@bdp-mc.com
www.bdp-mc.com

Warsaw
bdp Mechanical Components Warsaw
Ul. Klarysewska 50
02-926 Warszawa
Tel: +48 (0) 513 0305 06
purchase@bdp-mc.com
www.bdp-mc.com

Sofia
bdp Mechanical Components Bulgaria
Bratja Miladinovi Str. 16, floor 2, office 3
1301 Sofia, Bulgaria
Tel: +35988 7318 134
purchase@bdp-mc.com
www.bdp-mc.com

Sales team

Hamburg
bdp Mechanical Components Hamburg
Haus am Hafen, Steinhöft 5-7
20459 Hamburg
Tel: +49 (0) 40 3099 360
Fax: +49 (0) 40 3099 3660
sales@bdp-mc.com
www.bdp-mc.com

Frankfurt
bdp Mechanical Components Frankfurt
Frankfurter Landstraße 2-4
61440 Oberursel
Tel: +49 (0) 6171 5868 805
sales@bdp-mc.com
www.bdp-mc.com

Marbella
Mechanical Components España bdp, S.L.
Urb. Marbella Hill Village, Casa 6 Sur
29602 Marbella/Málaga, España
Tel: +34 (0) 952 7663 00/01
Fax: +34 (0) 952 7663 02
sales@bdp-mc.com
www.bdp-mc.com

Zürich
bdp Mechanical Components Switzerland
Stockerstraße 41
CH-8002 Zürich
Tel: +41 (0) 58 4007 070
sales@bdp-mc.com
www.bdp-mc.com