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<p>1. 前言</p> <p>用完美的产品质量，达到顾客满意，这在很大程度上要受到从供应商处所采购零件的影响。因此，供应商应用质量保证原则的能力以及其产品的质量和可靠性，都是供应商选择的决定性决策准则。</p> <p>合同各方（供应商和 CRH）必须一致认为，只有在改善各方的合作关系，坚持并严格实施质量管理体系（QMS）并且进行持续改进时，技术产品才能达到具有最高竞争力的高质量和可信性。</p> <p>2. 目的</p> <p>《CRH 供 · 商 的 · 量管理指南（QMR）》包含有 · 量管理体系（QMS）的条款和要求，并用于达到“零缺陷”的目 · 。</p> <p>3. · 用 · 域</p> <p>· 些条款适用于 CRH 集团所有公司，并且是所有生产和提供生产用材料合同的一个组成部分（合同标的）。</p> <p>C. Rob. Hammerstein GmbH & Co. KG Merscheider Str. 167 42699 Solingen, Germany</p> <p>CRH Umformtechnik GmbH & Co. KG Mühlenstr. 21 42699 Solingen, Germany</p> <p>Hammerstein Bt Hammerstein u. 2. H-8060 Mór, Hungary</p> <p>CRH Romania SRL Strada Hammerstein nr. 1 RO-305400 Jimbolia, Romania</p> <p>CRH North America Inc. 2541 7th Street South, Clanton, AL 35045, USA</p>	<p>1. Introduction</p> <p>The flawless quality needed to satisfy the Customer is driven to a great extent by the parts purchased from our suppliers. The suppliers' ability to apply QA principles and the quality and dependability of their products is therefore a crucial input to sourcing decisions.</p> <p>The contractual partners (supplier and CRH) must agree that highly competitive products with excellent quality and robustness can only be achieved through improved cooperation, a consistently applied quality management system (QMS) and continuous improvement.</p> <p>2. Purpose</p> <p>This Quality Management Requirements manual (QMR) for CRH suppliers contains the provisions and requirements for the quality management system (QMS) and for achieving the "zero defects".</p> <p>3. Field of application</p> <p>These terms are applicable to all companies of the</p> <p>C. Rob. Hammerstein Group (CRH)</p> <p>C. Rob. Hammerstein GmbH & Co. KG Merscheider Str. 167 42699 Solingen, Germany</p> <p>CRH Umformtechnik GmbH & Co. KG Mühlenstr. 21 42699 Solingen, Germany</p> <p>Hammerstein Bt Hammerstein u. 2. H-8060 Mór, Hungary</p> <p>CRH Romania SRL Strada Hammerstein nr. 1 RO-305400 Jimbolia, Romania</p> <p>CRH North America Inc. 2541 7th Street South, Clanton, AL 35045, USA</p>
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4. 量目标

CRH 公司要求其供应商实施“零缺陷战略”。为了追求这种零缺陷战略，在生产中坚持和严格实施产品质量先期策划（APQP），高效率批量生产监控、重新质量验证和持续改善过程（CIP）都是十分关键的。

在这里，主要关注中心必须放在错误预防上，而不是放在错误探测上。供应商应该遵照质量管理体系（QMS）中规定的条款（请参见第 8 节），并且采用现代化技术，来制造和检验合同标的。

“无缺陷”意味着：没有事故（投诉）并且没有不合格零件。

5. 文件/进入分供应商现场

供应商应该把其实施质量管理活动的记录存档，特别是与首样试验、鉴定/重新评定检验和

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and form an integral component of all contracts for the production and supply of production materials (subjects of the contract).

4. Quality goal

CRH requires a "zero defect strategy" from its suppliers. In order to pursue this zero defect strategy, robust usage of advanced product quality planning (APQP), the subsequent implementation in manufacturing, effective series production monitoring, requalification and a continual improvement process (CIP) are crucial.

The main focus here must be placed on error prevention rather than on error detection. The supplier shall manufacture and test according to the conditions in the contract in accordance with the provisions of the QMS as defined (see section 8) and in accordance with the state of the art.

"Zero defects" means: No incidents (complaints) and no non-conforming parts.

5. Documentation / Access to sub-suppliers' premises

The supplier shall archive quality records resulting from quality management activities, in particular, initial sam-

对应样品有关的记录，在最后一次交付给 CRH 之后，保留至少 20 年。在法规或汽车工业规定要求更长存档时间时，也应该被视为适用。

供应商应该把材料合格证存档，一经 CRH 公司要求，就可以出示。

供应商应该允许 CRH 公司全面了解其文件，如果要求，可以送交想要的试样。此外在文档和试样的评价中，他应该向 CRH 公司提供支持。一经要求，这些文档应该立即提交给 CRH 公司，但是时间决不可迟于 24 小时之内。这些特别适用于一些产品，这些产品的特点是要求和确保工序能力的持续和单独验证。

如果向供应商的订单中包括开发任务，其要求应由合同双方以书面方式注明，例如以设计规范的形式。供应商保证，从产品、工艺及跨部门之间的活动规划阶段开始，就实施一套起作用的项目管理系统。这些应该在质量管理计划（产品开发过程）中留档，并且与 CRH 公司达成一致协议。

供应商应该允许 CRH 公司代表进入其工作现场和设施内，以至于可以检查质量管理体系的存在和作用、所需的供应商生产设备（审核）。CRH 公司应该把其代表的访问及时地通知供应商，并且在出现未预见的缺陷和问题时，CRH 公司保留在短时间通知下，即可拜访的权利。

如果供应商从第三方（分供应商）处，外包给分供方（起始材料、软件、服务、制造及/或检验、测量和试验设备）用于该合同标的产品的制造或质量保证，供应商应该使用其自己的资源，以合同方式确保这些分供物品的质量，或以合同方式把分供应商的纳入到供应商的质量管理体系中。

一旦要求，供应商应该告知 CRH 公司代表，使用了哪些分供应商。CRH 公司保留访问这些分供应商的权利，应该能够检查质量管理体系的存在和运行，以及分供应商所需的生产设备。

在 CRH 公司需要时，还应该允许 CRH 公司的顾客进入分供应商，因此，分供应商应该承担供应商的相应义务。

ple testing, qualification/requalification tests and related samples for a period of at least 20 years after the last delivery of the parts to CRH. Where legislation or automotive industry regulations require longer archiving periods, these are deemed to apply.

Material certificates shall be archived by the suppliers and presented to CRH on demand.

The supplier shall grant CRH a complete insight into his documentation and hand over desired test samples on request. Furthermore, he shall support CRH in the evaluation of the documentation and test samples. The documentation shall be submitted to CRH without delay, on demand, within 24 hours. This applies in particular to product characteristics for which continuous and individual process capability evidence was required and assured.

If the order to the supplier includes development tasks, the requirements shall be specified by the contract partners in writing, e.g. in the form of design specifications. The supplier undertakes to apply a functioning project management system, covering the planning phase for products, the relevant processes and other interdepartmental activities. These shall be documented in quality management plans (product development process) and agreed upon with CRH.

The supplier shall grant CRH representatives access to his production premises and facilities to allow the confirmation of the availability and functioning of the QMS and the supplier's production machinery (audit). A visit of CRH representatives shall be announced good time to the supplier. CRH reserves the right to make visits at very short notice in the event of unexpected defects and problems.

If the supplier uses sub-suppliers (starting materials, software, services, manufacturing and/or inspection, measuring and test equipment) for the manufacture or quality assurance of the products subject of this contract, the supplier shall guarantee the contractually agreed quality of such subcontracted product either using his own resources or by contractually integrating the sub-supplier into the supplier's QMS.

On request, the supplier shall inform the CRH representatives which sub-suppliers are employed. CRH reserves the right to visit these sub-suppliers to the extent that an examination of the existence and function of the QMS and the sub-supplier's production machinery requires.

At the request of CRH, CRH customers shall also be granted access; the sub-supplier shall therefore be obliged to grant access at the request of the supplier.

6. 可追溯性

6.1 所供零件的可追溯性

供应商应该确保所供零件的可追溯性。应该建立合适的可追溯性系统。可追溯性的基础是对每次交付批号的正确标识。在 CRH 物流指南中规定了这个批号。

根据生产中的事件，应该指定一个新的批号（数字上至少应该增加一个数字，例如从 444 到 445）。这类事件可能是：

- 材料批次的更改
- 新生产批次
- 生产中断
- 产品、工装或生产设备的更改
- 生产设备的重新定位
- 等等。

6.2 批量产品可追溯性的序列号

序列号是零件的一个永久性数字标识。它可以压印在单个的冲压零件（无需热处理或重要的表面处理）、或雕刻、铭刻或使用粘胶标签标识。

推荐使用带有六个数字的系列序号作为批号。此序列号包括：

- 编号 1 和 2 作为连续号码。
- 编号 3 和 4 用于日历周。
- 编号 5 和 6 用于年份。

例如：17 25 05

序列号可以扩展加上供应商编号、字母或徽标（例如用 01/02 代表版本，或 L/R 代表左右）。但是，在序列号之前不可以带有数字。

偏离此规则的事宜，必须与 CRH 公司协商。供应商偏离可追溯性批次编号，应该与 CRH 公司零件图纸和解释说明一起存档。零件上每个标志或特性的位置及尺寸，应该由 CRH 公司预先同意。

应该确保序列号与所交付批次（箱体标签、交货单）之间的联系，并且应该存档作为证据。

在投诉时，CRH 公司联系供应商，告知受影响的批号。如果供应商以同一批号交付了若干次，CRH 公司接收该零件之后，无法进行隔离/

6. Traceability

6.1 Traceability of supplied parts

The supplier guarantees the traceability of supplied parts. An appropriate Traceability System has to be established. The basis for traceability is the positive indication with a batch number for each delivery. This batch number is defined in the CRH-logistics guideline.

A new charge number (should increase numerically by at least one digit, e.g. from 444 to 445) is to be assigned according to an event in the production. Such events could be:

- change of material batch
- new production batch
- production disruption
- change of product, tool or production equipment
- production equipment relocation
- etc.

6.2 Serial number for batch traceability

A serial number is a permanent numeric identification on parts. It can be stamped on individual punched parts (without heat treatment or critical surface treatment) or engraved, imprinted or by adhesive label.

A series number with six digits for the batch number is recommended. This serial number consists of:

- number 1 and 2 as consecutive number
- number 3 and 4 for the calendar week
- number 5 and 6 for the year

Example: 17 25 05

This serial number can be extended by supplier numbers, letters or logos (e.g. for the version 01/02 or l/r for left/right). However no numbers may precede the serial number.

Deviations from this rule have to be coordinated with CRH. The deviating supplier batch code for the traceability has to be documented on the CRH parts drawing together with an explanation. The position and size of every mark or characteristic on the part have to be agreed in advance with CRH.

The link from the serial number and supplied delivery batch (box label, delivery note) is to be assured and has to be documented with evidence.

In the case of a complaint CRH communicates to the supplier the affected batch number. If the supplier delivered several times with the same batch number, no isolation / segregation is possible after the acceptance of

分离。但是，在采取合适的措施之前，供应商有责任确保隔离、识别并且隔离因投诉引起的所有嫌疑产品。

7. 更改

影响产品的制造过程、制造位置和设计的更改，以及对工具、起始物料和物流过程的变更，都必须通知 CRH 公司，并且与 CRH 商定。长时间停产（超过一年）及/或在分供应商处的所有更改，也应该通知 CRH 公司。这种通告义务也适用于分供应商。只有在 CRH 公司采购部门以书面方式批准或下令之后，才能进行更改。

在任何更改之后，必须生产试验样品。在实施批量生产之前必须给予首样批准。

在 CRH 公司材料编号中，CRH 在控制索引号 xx 和图纸版本号 yy 之间区分，例如：P1-23450-01-xx-yy。在控制索引号 xx 发生更改时，必须进行更改的全部范围检验，如第 14 点所述。如果在图纸修订 yy 上发生更改，必须与 CRH 公司协商，确认此更改的封面页检验是否充分，或是否需要更广泛的检验。

在更改时，必须与 CRH 公司的采购部和 CRH 公司的物流部协商实施日期和流通库存的使用。为了保持供应，必须确定更改所对应的准备时间。

必须确定检验的进度表，以便在订购日期之前，已经确实的完成检验。

更改必须标识在交货单上，并且带有完整的 CRH 公司材料编号。在部件生命周期过程中，所有更改和附加的临时质量管理活动，必须由供应商在零件历史表存档。

8. 对供应商质量和环境管理体系的要求

作为一种原则，供应商必须维持一套符合 ISO/TS 16949: 2009 的、起作用的质量管理体系，并且必须由公认认证团体，认证为一种持续的体系。

the parts by CRH. However it is the supplier's responsibility to guarantee that all suspect products due to the complaint are isolated, identified and put on-hold until suitable measures can be taken.

7. Changes

Changes affecting the manufacturing process, the manufacturing location and the design of the product and modifications to tooling, starting material and logistics processes must be notified to CRH and agreed upon with CRH. CRH must also be notified of any prolonged stoppages of production (longer than 1 year) and/or any changes in sub-suppliers. This notification obligation shall also apply to the sub-supplier. Changes may only be implemented when they have been approved or ordered in writing by the CRH Purchasing Department. Test samples must be produced after all changes and initial sample approval must have been given before implementation in series production.

In the CRH material number, CRH distinguishes between the control index xx and the drawing revision yy, e.g.: P1-23450-01-xx-yy. In the event of a change in the control index xx, a complete inspection of the scope of the change must be carried out as described under point 15. In the event of a change in the drawing revision yy, agreement must be reached with CRH as to whether an inspection of the cover sheet confirming the change is sufficient, or whether a more extensive inspection is necessary.

In the event of changes, the implementation date and the use of the circulating stock must be agreed upon with the departments CRH Purchasing and CRH Logistics. A corresponding lead time for the change must be created in order to maintain the supply.

Inspections must be scheduled so that they have been positively completed by the order date.

The change must be indicated on the delivery note with the complete CRH material number. All changes and additional temporary quality management actions during the component lifecycle must be documented in the part history sheet by the supplier.

8. Requirements for the supplier's quality and environmental management system

As a matter of principle, suppliers must maintain a fully functioning QM system in accordance with ISO/TS 16949:2009 and this must be proven by certification by an accredited certification body to be a sustained system.

供应商必须开发其分供应商的质量管理体系，以便确保分供应商满足 ISO/TS 16949: 2009 的要求。
 供应商必须以书面方式，把所有更改通知 CRH 公司，包括认证的到期或中止。

在 ISO/TS 16949: 2002 中规定的所有要求，应该视为合同的一个组成部分，而不需要在这里说明单个的技术要求或更多细节。

CRH 公司推荐引入符合 ISO 14001 的环境管理体系 (EMS)，或等效的 EMS。不论采用哪一种 EMS，每个供应商必须满足下列规定的过程：

- 符合法定的条款。
- 在供应商及其分供应商的所有过程中，在资源使用中具有生态保护意识。
- 遵守行业特定的法规（例如欧盟指令 2000/53/EC：关于报废汽车的指令）。
- 提交在成品中所用产品和物质的安全数据表（例如，油品、润滑脂）。

9. 法定要求和一般要求

除了上述的体系要求之外，下列要求也对 CRH 公司的每次订货具有约束力：

- 符合国家的法规要求和汽车工业的一般要求/规定（例如 IMDS、关于报废汽车的欧盟指令）；在出口时，符合所出口国家的法规要求
- 在订购图纸上的要求，包括上面规定的标准
- 我们顾客与项目有关的特定要求（例如在开发、先期规划和首样试验中）

供应商应该自己负责：获得有关的文件，并明确必要的接口，针对与信息的接入系统或识别此接口的相关问题。

10. 供 · 商的批准

供应商批准的先决条件是 ISO/TS 16949: 2009 的认证。

The supplier must develop his sub-suppliers' QM system with a view to ensuring that these sub-suppliers satisfy the requirements of ISO/TS 16949:2009.
 The supplier must inform CRH about all changes including the expiry or suspension of the certificate, in writing.

All the requirements laid down in ISO/TS 16949:2009 shall be regarded being integral parts of this contract without the requirement for individual specification or further detailing here.

CRH recommends the introduction of an environmental management system (EMS) to ISO 14001 or an equivalent EMS. Irrespective of the introduction of an EMS, the following prescribed procedures must be satisfied by every supplier:

- Compliance with the statutory terms
- Ecologically-aware use of resources in all the processes of the suppliers and their sub-suppliers
- Observance of industry-specific regulations (e.g. EU Directive on End-of-Life Vehicles - Directive 2000/53/EC)
- Submission of safety data sheets on products and substances employed in the finished product (e.g. oils, greases)

9. Statutory and general requirements

Apart from the above-mentioned system requirements, the following shall be binding for every CRH order:

- Compliance with the relevant national statutory regulations and the general requirements/regulations of the automotive industry (e.g. IMDS, EU Directive on End-of-Life Vehicles) and in the case of exports, the statutory regulations of the export country
- Requirements on the order drawing incl. the standards specified there
- CRH Customer project-specific requirements (e.g. in development, advance planning and initial sample testing)

The supplier shall take responsibility for; obtaining the relevant documents and to define the interface needed with regards to the information pull system or to identify issues with this interface.

10. Supplier approval

A precondition for supplier approval is certification to ISO/TS 16949:2009.
 CRH furthermore reserves the right to audit suppliers

CRH 公司保留进一步按照自己的准则，审核供应商及其分供应商的权利。

对供应商及其分供应商批量生产的新生产设施，CRH 公司保留审核的权利。

11. 供 商评价

所有交付将记录在 CRH 公司的系统中，用于对其质量和物流特性的供应商评价。在供应商评价中，还包括了主观标准。

如果未能达到 A 状态，供应商应该制订行动计划，并且主动把该计划提交给 CRH 采购部，并且确保该计划的实施。

12. 程审核

CRH 保留在供应商工厂处及/或其分供应商的工厂处，定期进行过程审核的权利，如果合适，还可以允许 CRH 公司的客户参与。

要求供应商对过程审核报告中规定并同意的实施规定的项目实施举措。

13. 先期 质量策划 (APQP)

APQP 构成了防止潜在性误差和持续改进的基础。

APQP 过程包括了从设计到开发直至批量生产的步骤。

APQP 由跨功能小组制订，其中包括了所有的职能部门，例如研发、质量管理、生产计划、制造、采购的质量保证部门。核心工具是一个计划，标示出了 APQP 的每个步骤以及截止状态和职责。

APQP 由 CRH 公司的负责部门和供应商跨功能小组之间合作实施；应该编写定期的进度报告。如果 CRH 公司未参加该产品质量先期策划，供应商必须自己负责完成该计划。

在向供应商下达批量生产订单之前，必须验证其制造能力（请参见附录中的附表）。在 APQP 的最终评价之前，不能进行首样试验。

and their sub-suppliers according to its own guidelines.

CRH reserves the right to audit new production facilities of the series production suppliers and their sub-suppliers.

11. Supplier evaluation

All deliveries will be recorded in a CRH system for supplier evaluation with respect to quality and logistics performance. Subjective criteria are also included in the supplier evaluation.

In the event of failure to reach the A status, the supplier shall draw up an action plan, submit this plan to CRH Purchasing voluntarily and ensure the implementation of this plan.

12. Process audit

CRH reserves the right to carry out process audits at regular intervals at the supplier's works and/or the works of his sub-suppliers, with the participation of the CRH customer, where appropriate.

The supplier is required to implement the action defined and agreed within the context of a process audit.

13. Advanced product quality planning (APQP)

The APQP forms the basis for potential error prevention and for continuous improvement.

The APQP process covers the steps from design and development through to series production.

The APQP is drawn up by an interdisciplinary team in which all the specialty departments such as Research & Development, Quality Management, Production Planning, Manufacturing and Quality Assurance for Purchasing are involved. The central instrument is a plan showing the individual steps of the APQP together with the deadline situation and the responsibilities.

The APQP is implemented in cooperation between the departments at CRH responsible and the supplier's interdisciplinary team; regular progress reports shall be made. Should CRH not participate in this advanced product quality planning, the supplier must perform the planning at his own responsibility.

Before a series production order is placed with a supplier, the manufacturing feasibility must be demonstrated (see QMR form 01 as appendix). Without a final evaluation of the APQP, no initial sample testing can be carried out.

更多细节，请参阅美国汽车工业行动集团 (AIAG) 的《产品质量先期策划和控制计划》参考手册，以及德国汽车工业协会 (VDA) 相应的出版物。

为了更有效的项目沟通,CRH 要求供应商提供周期行的 APQP 进展报告, QMR 附件 4 是推荐供应商使用的格式,供应商必须完成并更新;如果供应商有等同细节的内部格式也可以使用。

图纸中的特殊特性，应该由 CRH 公司作为 IC, SC 或 CC 标出。

如有必要，供应商必须规定他自己的IC,SC和CC特性。

开发供应商必须进行设计的FMEA和过程FMEA。供应商应该接受来自CRH的简化图纸表示方法。

14. 短期和长期工序能力的验证

为了获得工序能力的信息，必须由供应商在项目的所有阶段，进行工序能力的分析。在 VDA 的出版物和 AIAG 的参考手册中，通常能够找到长期工序能力分析作业的信息。

下列工序指标适用于：

	Cmk	Cpk	
CC	>2.0	>1.67	关键特性
SC	>1.67	>1.33	重要特性—装配和功能
IC	待议(*)		检测特性

如果无法达到上述的工序指标，必须进行对原材料进行 100%检验,或者使用有效的 „防错系统“

(*)表示供应商针对这些特性至少要首末件检测。

▪ 于受到漂移特性影响 ▪ 程(例如模具磨 ▪)或特殊工 ▪ 和材料,必 ▪ 有特殊的防 ▪ ▪ ▪ .

For further details, please refer to the AIAG reference manual "Advanced Product Quality Planning and Control Plan" (APQP), and the corresponding VDA publications.

To enable effective communication in the project CRH requires regular reporting of the APQP progress. The QMR Form 4 is a preferred layout to be completed and updated by the Supplier. If the supplier has an equivalent internal form with the same level of detail, this may be used instead.

Special characteristics in the drawings shall be marked by CRH as IC, SC or CC.

Where necessary, the supplier must define his own IC, SC and CC characteristics.

Development suppliers must carry out a Design FMEA and Process FMEA. The supplier shall accept the simplified drawing representation from CRH.

14. Proof of the short and long term process capability

In order to obtain information on the capability of processes, process capability analyses must be performed by the supplier at all phases of a project. Information on the performance of long term process capability analyses in general can be found in the publications of the VDA and in the reference manuals of the AIAG.

The following process capability indices apply:

	Cmk	Cpk	
CC	>2.0	>1.67	Critical characteristic
SC	>1.67	>1.33	Significant characteristic – "Fit and Function"
IC	To be agreed(*)		Inspection Characteristic

In the event of failure to reach the above process indices, a 100% inspection of the corresponding material must be carried out. An alternative solution is a validated Poka yoke system.

(*) At a minimum for IC characteristics CRH requires a first piece / last piece inspection.

For processes with drifting characteristics (e.g. wear-

15. 样品交付,首样试验和和再次评定

15.1 首样批准之前, 来自批量生产工装的样品交付

在首样批准之前, 样品、原型的提供在交付时必须附有测量报告。测量范围和报告应该由供应商和 CRH 公司之间协商。测量报告应该以某种方式标记, 应该可能说明被测零件的明确定位。如果偏离了图纸, 在交付之前, 供应商应该获得不合格品的批准, 并且与 CRH 公司协商零件的可能用途。

CRH 要求做所有送给我们的样品有确切的验证。使用表格 QMR_F03A / QMR_F03B

15.2 首样试验

在 ISO/TS 16949 : 2009 中, 以及最新的 AIAG/PPAP 参考手册或 VDA 第 2 卷中, 都可以发现首样试验的理由, 这取决于议定的取样方法。影响产品特性的所有变更必须提供说明, 并且提供首样。

首样是指采用批量机器和生产设备, 在完全批量生产条件下生产的产品和材料。

如果采用多个多模腔的模具, 应该采用来自每个模具和模腔的 5 个零件, 用于 CRH 公司的试验。

15.2.1 CRH 组件的首样试验

这时, 对应的单个部件也必须和组件一起, 按照 CRH 公司的组件图纸进行试验。

对于公司内功能单元的开发、或组件的交付, 供应商应该试验图纸和组件内的每一个单个部件。

此时, 必须遵守 CRH 公司的设计规范, 试验规程和质量规定 (QR) 。

15.3 首样的运输

during tool life) or special processes and materials, a specific error proofing concept has to be presented to the program team.

15. Sample deliveries, initial sample testing and Requalification

15.1 Sample deliveries from series tooling before initial sample approval

Supplies of samples, prototypes and parts before the initial sample approval must be delivered with a measurement report. The scope of the measurements and the report shall be agreed upon between the suppliers and CRH. The measurement reports shall be marked in such a way that an unequivocal allocation to the measured parts is possible. In the event of deviations from the drawing, the supplier shall obtain non-conformance approval and agree upon the possible applications of the parts with CRH before delivery.

CRH require positive identification of all samples sent to us. Forms QMR_F03A / QMR_F03B are to be used.

15.2 Initial sample testing

Reasons for the initial sample testing can be found in ISO/TS 16949:2009, or the current reference manuals AIAG/PPAP or VDA Volume 2, depending on the agreed sampling method. All modifications that have a bearing on the characteristics of the product must be presented and initial samples provided.

Initial samples are products and materials produced completely under series conditions with series machines and production equipment.

If several moulds each with several cavities are employed, 5 parts from each mould and cavity for CRH shall be tested.

15.2.1 Initial sample testing of CRH assemblies

Here the corresponding individual components must also be tested together with the assembly in accordance with the CRH subassembly drawing.

For in-house developments of functional units or deliveries of assemblies, the supplier shall test every individual component in the drawing and the assembly.

CRH design specifications, testing regulations and quality regulations (QR) must also be observed here.

首样运输必须将标示清楚地标注在包装和交付文件上，并且送至指定的交货地址。QMR-3B 所规定的表格必须被使用。

包装合适的小型零件，可以与首样检验报告 (ISIR) 一起运输；大型零件必须单独交付，并且相应地进行标记。所有样品零件，必须与其它的样品交付、或批量生产交付分开，单独进行包装。

每个首样零件必须由供应商进行标识，其方式应该是明确的并且是可识别的。对应的交货单必须注明零件编号，附有控制索引号和图纸版本号、首样的个数或包装的个数，以及首样的订单编号。

15.4 规程

对于批量产认可，必须向 CRH 公司提供符合 AIAG/PPAP(level3)最新技术要求的或 VDA 第 2 卷 (level2)的首样。

确切的项目特定要求(例如 PPAP 范围,提交等级)必须有 CRH 项目组定义。

更改的批准在第七章已经被描述“更改”

在首样订单上给出的交货日期具有约束力。完整的首样检验报告，包括根据 CRH 图纸中的事项，以及要求的文件（例如工序能力证明，IMDS），必须随着首样运输一起提交。

必须从工序能力的观点看，确保符合所有特性；这还适用于具有一般公差的特性。首样试验之前，必须达成所有需要的协议，包括首样中不合格品的澄清说明，并且必须在由供应商在其进度表内进行考虑。

在 PPAP 提交中的所有的偏差都必须提供 DOU 表格.请用 QMR-F05 的表格填写.

只有在 CRH 公司批准首样之后，才能开始向 CRH 公司的批量生产交付。

CRH 保留向供应商收取相应额外费用的权利，包括取样试验例行程序（延误的、重复的、额外的或跟踪试验）、复核来自供应商的错误试验结果、或超过了最后期限引起的额外费用。

15.3 Shipment of initial samples

The initial sample shipment must be clearly marked on the packaging and on the delivery documents as initial samples and must be sent to the specified delivery address. For identification form QMR-3B must be used.

Small parts, appropriately packed, may be shipped together with the ISIR, larger parts must be delivered separately and marked accordingly. All sample parts must be packaged separately from other deliveries of samples or series production deliveries.

Each initial sample part must be marked by the supplier in such a way that it is unequivocally identifiable. The corresponding delivery note must show the Part No. with control index and drawing revision, the number of initial samples or the number of packages and the initial sample order number.

15.4 Part Approval Process

For serial release, initial samples complying with the latest specifications of the AIAG/PPAP (level 3) or VDA Volume 2 (level 2) must be submitted to CRH.

The exact project specific requirements (i.e. PPAP scope, Submission level) shall be defined with the CRH Programme team.

The approval of changes is described in chapter 7 "Changes".

The delivery date given on the initial sample order is binding. The completed initial sample inspection report including the items according to the marked-up CRH drawing and the required documents (e.g. process capability certificates, IMDS) must be submitted with the shipment of initial samples.

Compliance with all characteristics must be assured from the point of view of process capability; this applies also to characteristics with general tolerances. All necessary agreements, including clarification of non-conformance in the initial samples, must be reached before the initial sample testing and must be taken into consideration by the supplier in his scheduling.

All deviations in the PPAP submission must be accompanied by a completed Deviation (DOU) form. Please use form QMR-F05 Decision on Use for this purpose.

Only when initial samples have been approved by CRH can series production deliveries to CRH begin.

CRH reserves the right to charge the supplier accordingly for additional costs resulting from sampling testing routines (delayed, repeated, additional or follow-up test-

应该使用相应的报告表格，提交单独的尺寸和材料试验结果，以及所有的官能和特殊试验结果。供应商应该签字确认这些结果。应该以 PDF 格式采用电子邮件提交全套的 PPAP 表格给项目采购认可的邮件地址。处理之后，把带有试验结果和决定的文件返还给供应商。仅接受以电子方式提交的全套文件。不完整的 ISIR，应该被视为没有提交，并且发还给供应商，由供应商付费。

15.5 首样的评估

由 CRH 公司进行首样试验的核查试验。

可能产生 3 种决定：

a. 放行

如果 CRH 公司收到完整的首样运输，并且已经确认了对应于这种交付的所有文件，给予系列放行。

b. 有条件的放行

如果放行附带有条件，供应商必须立即与 CRH 公司采购部议定重复试验的日期。重新试验日期的计划，必须为所有工具调整留出时间。在重新试验日期之前，供应商必须确保相应的准备时间，并且同意交付的顾客弃权声明书（数量或时间）。

c. 拒收

发现了不合格性能，妨碍使用该产品。要求供应商与 CRH 公司采购部立即议定一项行动计划，包括责任和重新试验的日期。供应商必须修缮不合格性能，并且重新检验。

如果在首样试验期间未发现不合格的性能，CRH 公司应该有权在日后进行投诉。

CRH 公司的验收或检验，决不可以视为放弃权利或对接受不符合合同的质量。CRH 公司依照第 14 条款的权利，决不可构成责任。本样品试验过程也适用于对 ISO TS 16949 标准的年度重新评定。

ing), counter-checks in the event of incorrect test results from the supplier or exceeding of deadlines for which the supplier is responsible.

The individual dimensional and material test results as well as any function and special test results shall be submitted using the corresponding report forms. The supplier shall confirm the results with his signature. The complete PPAP form package shall be submitted by email in pdf format to an email address agreed upon with Project Purchasing. The documents with the test result and decision are returned to the supplier after processing. Only complete documents submitted electronically can be accepted. Incomplete ISIR shall be regarded as not submitted and will be returned at the expense of the supplier.

15.5 Assessment of initial samples

The counter-testing of the initial sample testing is performed by CRH.

3 decisions are possible:

a. Release

The serial release is granted if CRH has received the complete initial sample shipment and correspondence with all the documents for this delivery has been confirmed.

b. Conditional release

If conditions are attached to the release, the supplier must agree upon a retesting date with CRH Purchasing without delay. A retesting date must be planned with allowance for all tooling corrections. Corresponding lead times must be assured by the supplier and a customer waiver agreed for deliveries (quantity or period) before the retesting date.

c. Rejected

Non-conformances discovered preclude the use of the product. The supplier is required to agree on an action plan including responsibilities and a retesting date with CRH Purchasing without delay. The supplier must remedy the non-conformance and repeat the inspection.

In the event the non-conformance is not discovered during initial sample testing, CRH shall be entitled to make the complaint at a later date.

Acceptances or inspections by CRH in no way constitute a waiver of rights or an acceptance of a non-

15.6 重新评定

每年进行一次重新评定, 过程基本和首件评估程序类似 15-15.5 章节.过程包括了 ISO/TS 16949:2009 规定的要求. CRH 和 CRH 的客户可以规定特殊的要求.

供应商有责任来获得相关的要求(主动获取)

重新评定的结果必须按照 5.1 章要求要求来存档. 如果 CRH 要求, 供应商必须能够提供.

16. CRH提供的零件,CRH指定的零件,CRH提供的产品工装

CRH 提供的零件是指 CRH 直接提供给供应商的零件, 供应商有责任通知 CRH 一旦发现有缺失, 变化, 缺陷产品或加工缺陷.

CRH 指定的零件是指 CRH 指定的第三方提供的零件, 该零件由供应商来进行进一步的加工和装配. 物流和质量控制有直接供应商完成. 例如适当的行动来确保满足这些零件的质量要求.

提供给供应商, 用于进一步加工和使用的模具、生产机器、检验、测量和试验设备和包装, 都是 CRH 公司的财产, 并且应该进行相应的标识、验证和保护。如果进行非故意的改造或具有处理问题, 应该立即通知 CRH 公司。

17. 包装和标识

产品必须存放在供应商的现场, 其方式应该足以防止丢失和防盗, 并且排除环境影响对材料特性造成的损坏或改变。

除非 CRH 公司另有规定, 供应商必须按照《CRH 公司供应商物流指南》中规定的规定, 确保必要的包装和标识 (请参见 www.crh-group.com)。

contractual quality. The rights of CRH pursuant to clause 14 in no way constitute an obligation. This sample testing process applies also to the annual requalification test to ISO TS 16949.

15.6 Requalification

Requalification has to be completed once a year. The process is basically similar to the initial sampling process as described in chapter 15-15.5. This process covers the requirements of the QM-System ISO/TS 16949:2009. Specific requirements from CRH or CRH customers have to be considered.

The supplier shall be responsible for obtaining the relevant requirement (pull approach).

The results of Requalification have to be archived according to chapter 5.1. These results shall be made available to CRH on request.

16. CRH-supplied parts, CRH designated parts and CRH supplied production equipment

CRH-supplier parts are parts supplied directly by CRH to the supplier who is obliged to inform CRH immediately of any loss, changes, defective parts or manufacturing defects.

CRH designated parts are parts from a third party specified by CRH that the supplier has to incorporate into its manufacturing and assembly operations. In this case the responsibility for the logistics and quality lies with the direct supplier, i.e. appropriate actions need to be taken to ensure compliance with the quality requirements for these parts.

Any tooling, production machinery, inspection, measuring and test equipment and packaging provided to the supplier for further processing and use is the property of CRH and shall be marked, verified and protected accordingly. In the event of unintentional modifications or processing problems, CRH must be informed immediately.

17. Packaging and identification

The products must be stored on the supplier's premises in such a way that they are sufficiently protected against loss and theft, and that damage or changes to the material characteristics due to environmental influences are ruled out. Unless otherwise specified by CRH, the supplier has to ensure the necessary packaging and identification in accordance with the rules laid down in the

18. 保障生产概念

如果工具或模具损坏及/或机器损坏，供应商必须采取适当措施，确保向买方供应产品（例如，迅速地以合同方式，接洽各自的制造商的模具制造或机器维护部门，清点库存的材料）。为了防止工序中断，供应商应该进行预防性维修/保养。所需的能力必须在合同评审的框架内确定，必须确保应该随时可以得到。

如果使用专用机器/设备，必须制订应急计划；在首样试验阶段，必须提交给 CRH 公司，无需加以要求。

19. 进厂检验

供应商必须按照先进/先出原则（FIFO），交付完好的产品。

在收到交付时，CRH 公司将进行入厂货物控制，包括标识检查和数量检量，以及检查明显的运输损坏。CRH 公司应该把发现的所有缺陷立即通知供应商。在进厂检验期间未发现的所有缺陷，CRH 公司在发现之后应该在一段合适的时间之内，通知供应商。

20. 投诉

供应商应该立即回复 CRH 公司的投诉。他应该以书面方式立即确认收到投诉，并且在 24 小时内，发送带有针对 CRH 公司直接措施的第一份 8D 报告，并且尽快提供完好的代用材料。其后，首次交付三批完好的产品，在每个包装单元上，必须清楚地用文本标签标明“已检验的完好货物”。

必须立即向 CRH 公司提交问题的原因和改正措施，时间决不可迟于 5 个日历日。为了避免生产线停工或中断，CRH 保留进行返工/自己分拣的权利，或由第三方进行这项工作，由供应商承担费用（另请参见第 20 章）。

20.1 CRH 生产中缺陷的发生

如果，因不合格的交付造成，在 CRH 公司产生了生产问题（例如停车），供应商必须立即确

CRH Logistics Guideline for Suppliers (see www.crh-group.com).

18. Production assurance concept

In the event of tooling or mould damage and/or machine breakdowns, the supplier has to take appropriate action to ensure the supply of products to the purchaser (e.g. quick, contractually assured contact to mould making or machine maintenance of the respective manufacturers, inventory reserves of materials). In order to prevent process interruptions, the supplier shall practice preventive maintenance/service. The necessary capacities must be identified within the framework of the contract review and their availability must be assured at all times. In the event of the use of special machines/equipment, an emergency plan must be drawn up; this must be submitted to CRH without being requested during the initial sample testing phase.

19. Incoming inspection

The supplier shall be obliged to ensure deliveries of flawless products according to the First In/First Out principle (FIFO).

On receipt of the delivery, CRH will carry out an incoming goods control that includes an identity check and quantity check, as well as an inspection for obvious transport damage. CRH shall inform the supplier without delay of any faults discovered. The supplier shall be notified by CRH of any faults not discovered during the incoming inspection within a reasonable period after their discovery.

20. Complaints

The supplier shall react immediately to complaints by CRH. He shall confirm receipt of the complaint immediately in writing and send a first 8D Report with immediate measures to CRH within 24 hours and shall provide flawless replacement materials as quickly as possible. The first three flawless deliveries thereafter must be clearly marked with a label bearing the text "Inspected and flawless goods" on each packaging unit.

Causes of the problems and corrective actions must be submitted to CRH without delay, but not later than within 5 calendar days. In order to avoid production line stoppages or interruption, CRH reserves the right to carry out reworking/sorting itself or to have this work carried out by third parties at the expense of the

20.1 Occurrence of a defect in the CRH

保补救（更换、运输、分拣、返工、维修）。CRH 公司保留对已经进一步加工的采购零件，进行分拣、返工或修理的权利。这可以由 CRH 公司员工进行，或由外部服务供应商完成。因投诉引起的所有直接和间接费用应该由供应商承担。

20.2 重复投诉

如果多次重复投诉，CRH 公司应该有权：

- 把供应商分类到遏制级（（请参见第 20 章））。
- 审核有关的工艺，并且检查文档。
- 对供应商现场，进行供应商的进一步开发程序。

把供应商归类到《新业务终止》状态。

21. 遏制政策

遏制是正常检验之外的、一种临时安排的检验措施,例如针对特定参数额外的 100%检验。CRH 保留把供应商置于遏制状态的权利。置于遏制状态的供应商，应该承担所有的相关费用。遏制状态只能在 CRH 公司检验和批准之后撤除。

无论遏制的级别，供应商应该修改所有的相关文件，防止不合格品的重复发生（例如过程 FMEA、控制计划、流程图、操作说明书、试验说明、培训的证据）。这些修改后的文件应该提交给 CRH 公司进行检查。

遏制的理由可能是：

- 重复的不合格品
- 因为采购到不合格品，造成 CRH 公司生产停工。
- 顾客投诉。
- 现场停工。
- 制造工序的能力不足。
- 对问题或带有 8D 问题解决方案，遏制不充分。
- 即将发生的生产停滞。
- 过程审核导致的活动。

CRH 公司的 3 级遏制是：
安全放行级：项目阶段直至 SOP
1-2 级：批量生产阶段

production

If, as a result of non-conforming deliveries, production problems arise (e.g. standstills) at CRH, the supplier must ensure a remedy without delay (replacement shipments, sorting, reworking, repair).

CRH reserves the right to have purchased parts already further processed sorted, reworked or repaired. This can be carried out by CRH personnel or by an external service provider.

20.2 Repeated complaints

In the event of repeated complaints, CRH shall have the right:

- To classify the supplier into a containment level (see chapter 20)
- To audit the relevant processes and to inspect the documentation
- To carry out a supplier further development programme on the supplier's premises
To assign the suppliers the status **New Business Hold**

21. Containment

Containment is a temporary inspection that is installed in addition to the normal inspections e.g. extra 100% inspection of certain specified characteristics. CRH reserves the right to place a supplier in containment Suppliers placed in containment are responsible for all the associated costs. The containment status can only be lifted after review and approval by CRH. Irrespective of the containment level, the supplier shall modify all relevant documents in order to prevent a repeated occurrence of the non-conformity (e.g. Process FMEA, control plan, process flowchart, working instructions, testing instructions, training evidence). The modified documents shall be submitted to CRH for examination.

Reasons for containment can be:

- Repeated non-conformity
- Production stoppages at CRH due to non-conforming bought-ins
- Customer complaints
- Downtimes in the field
- Inadequate manufacturing processes
- Insufficient containment of a problem or problem solution with 8D
- Impending production standstills
- Actions from process audits

The 3 levels of CRH containment are:

安全放行级:

在供应商的工厂内批量生产开始 (SOP) 时, 如果在 SOP 时, 还没有建立工序能力的验证, CRH 保留权利, 要求附加的 100% 检验和试验。

供应商被放入安全放行级, 时间至少为 4 周。100% 检验和试验由供应商的人员完成。货物必须相应地进行标识。100% 检验和试验, 必须在正常的生产区之外, 由供应商的人员完成。

应该向 CRH 公司提供检验报告。检验报告的内容, 受检验产品的标识, 必须与 CRH 公司议定。

遏制级别: 1

由供应商人员完成接下来 3 次交付的 100% 检验和试验。货物必须相应地进行标识。100% 检验和试验必须在正常的生产区内, 由供应商的人员完成。应该向 CRH 公司提供检验报告。检验报告的内容, 受检验产品的标识, 必须与 CRH 公司议定。

遏制级别: 2

由供应商雇佣的、被 CRH 公司认可的、具有资质认证的外部服务供应商, 进行 100% 检验和试验。这种活动的时间将与 CRH 公司议定 (目标是无缺陷)。位于正常生产区之外的试验地点, 应该与 CRH 公司议定。每日向 CRH 公司提交检验报告, 通常是提交给生产现场的质量经理。检验报告的内容, 受检验产品的标识, 必须与 CRH 公司议定。

22. CRH 升级程序

为了确保生产和项目过程的平稳, 并且及时地发现问题, CRH 公司采用供应商升级程序。在由供应商引起问题时, 这个过程允许规定适当的统一补救措施和有保证的实施过程。

升级程序的理由可能是:

- 重 ▪ 的不合格品
- 因 ▪ 采 ▪ 到不合格品, 造成 CRH 公司生 ▪ 停工。
- ▪ 客投 ▪ 。
- ▪ ▪ 停工。

Safe Launch Level: Project phase up to SOP

Levels 1 - 2: Series production phase

Safe Launch Level:

CRH reserves the right at the start of series production (SOP) in the supplier's works to demand additional 100% inspection and testing if, at the time of SOP, the process capability has not yet been established. The supplier is placed into safe launch level for a period of at least 4 weeks. 100% inspection and testing is performed by the supplier's personnel. The goods must be marked accordingly. The 100% inspection and testing must be performed outside the normal production area. An inspection report shall be submitted to CRH. The contents of the inspection report and the identification of the inspected products must be agreed upon with CRH.

Containment level 1:

100% inspection and testing of the next 3 deliveries by the supplier's personnel. The goods must be marked accordingly. The 100% inspection and testing can be performed in the normal production area. An inspection report shall be submitted to CRH. The contents of the inspection report and the identification of the inspected products must be agreed upon with CRH.

Containment level 2:

100% inspection and testing by an external, certified service provider engaged by the supplier and acceptable to CRH. The duration of this activity is to be agreed with CRH (goal is zero defects). The testing location, outside the normal production area, shall be agreed upon with CRH. A daily inspection report shall be submitted to CRH, usually the production site Quality Manager. The contents of the inspection report and the identification of the inspected products must be agreed upon with CRH.

22. CRH Escalation procedure

In order to ensure a smooth course of production and the project and to recognise problems in good time, CRH employs an escalation procedure. This process allows appropriate uniform remedies to be defined and their implementation to be assured in the event of problems caused by the supplier.

Reasons for an escalation procedure could be:

- 制造工序的能力不足。
- 或 有 8D 解决方案，遏制不充分。
- 即将 生的生 停滞。
- 程 核 致的活 。
- 不恰当的 目 理。

23. 品 任

供 商必 确保，在其公司内， 工都已 知道与非 型 任有 的所有 任和法定条文。他必 采取适当的故障安全机制，按照汽 供 品行 内的正常要求，防止 品的危 。

供 商必 自 投保和 持适合于 危 的 品 任保险，并且在全世界有效，包括覆盖召回和更 活 的范 。

24. 其它事

关于本 QMR 的 助 、更改和 充， 要求 面形式确 其有效性。 同 适用于以 面方式，撤 要求的修改。

参考其它文件/文献 ， 适用所引用文件的最新版本。

如果本 QMR 的 个条款无效、或失效、或不适用，将不影响 QMR 作 一个整体的有效性或适用性。

25. 国 准

供 商 自己了解与合同 品有 的、所有国家和国 准。

例如，我 您留意下列网址：

- | | |
|-------------------|-------------------|
| www.vda.de | VDA 的信息 |
| www.ts16949.com | ISO/TS 16949 准的信息 |
| www.vda-qmc.de | VDA 和 IATF 的信息 |
| www.aiag.org | ISO/TS 16949 的信息 |
| www.mdssystem.com | 国 材料数据系 |

26. 略

AIAG 美国汽车工业协会

- Repeated non-conformity
- Production stoppages at CRH due to non-conforming bought-ins
- Customer complaints
- Field rejections
- Inadequate manufacturing processes
- Insufficient containment of a problem or problem solution with 8D
- threatening production stoppages
- Actions from process audits
- Poor project management

23. Product liability

The supplier must ensure that all obligations and statutory provisions relating to the no-fault liability are known in his company. He is obliged to take appropriate fail-safe mechanisms to prevent product risks in accordance with the normal requirements in the automotive supplies industry.

The supplier must take out and maintain product liability insurance appropriate to the risk and with worldwide validity, including cover for recall and replacement campaigns, at his own expense.

24. Miscellaneous

Any complementary agreements, changes and supplements to this QMR are only valid with written approval. This applies equally to the removal of the requirement for modifications to be in writing.

Where references are made to other documents/literature, the latest editions of the cited documents shall apply.

Should individual provisions of this QMR be or become invalid or inapplicable, this shall not affect the validity or applicability of the QMR as a whole.

25. International standards

The supplier shall proactively keep abreast of all national and international standards relating to his contract products.

For example, we would refer you to the following web-sites:

- | | |
|--|------------------------------------|
| www.vda.de | VDA information |
| www.ts16949.com | ISO/TS 16949 information |
| www.vda-qmc.de | Information on the VDA and IATF |
| www.aiag.org | ISO/TS 16949 |
| www.mdssystem.com | International Material Data System |

APQP	产品质量先期策划
EDL	外部服务供应商
ISIR	首样检验报告
FiFo	先进/先出
IMDS	国际材料数据系统
CIP	持续改进过程
PPAP	生产件批准程序
PSW	零件提交保证书
QMD	质量管理指令
QMS	质量管理体系
QR	质量法规
APQP	产品质量先期策划
SOP	开始生产
EMS	环境管理体系
VDA	德国汽车工业协会
SC	重要特性
CC	关键特性
IC	检测特性
27. 附件/ 表格	
外部链接, 查看 CRH 的网站:	
http://www.crh-group.com/cn/series/supplies :	
可行性报告(QMR_F01)	
零件历史表(QMR_F02)	
量产前零件标签/OTS (QMR_F03A)	
量产零件标签/PPAP (QMR_F03B)	
APQP 进度报告 (QMR_F04)	
偏差认可报告(QMR_F05)	
28. 变更历史	
Rev. 6: - 章节. 21 遏制编辑修改	
Rev. 7: - 章节 15.6 增加重新评定	
Rev. 8:	
- 章节 13/页 12: 增加供应商定期APQP进度报告	
- 章节 13/ 页 12: IC (=检测特性) 作为补充信息供	
应商必须定义自己的检测特性	
.	

26. Abbreviations

AIAG	Automotive Industry Action Group
APQP	Advanced Product Quality Planning
EDL	External service provider
ISIR	Initial Sample Inspection Report
FiFo	First In/First Out
IMDS	International Material Data System
CIP	Continual Improvement Process
PPAP	Production Part Approval Process
PSW	Part Submission Warrant
QMD	Quality Management Directive
QMS	Quality Management System
QR	Quality Regulations
APQP	Advanced Product Quality Planning
SOP	Start of Production
EMS	Environmental Management System
VDA	German Association of the Automotive Industry
SC	Significant Characteristic
CC	Critical Characteristic
IC	Inspection characteristic

27. Attachments / Forms

Internal linked, external available on CRH-website

<http://www.crh-group.com/cn/series/supplies>:

[Form Feasibility Study \(QMR_F01\)](#)

[Form Parts History \(QMR_F02\)](#)

[Form Sample Identification Label before PPAP \(QMR_F03A\)](#)

[Form Sample Identification Label for PPAP \(QMR_F03B\)](#)

[Form APQP Progress Report \(QMR_F04\)](#)

[Form Deviation \(DOU\) \(QMR_F05\)](#)

28. Change History

Rev. 6: - Chap.21 Containment editorially revised

Rev. 7: - Chap. 15.6 Requalification added

Rev. 8:

- Chapt. 13/page 12: regular APQP progress reporting from the supplier required

<p>- 章节 14/ 页 12: 短期和长期的过程能力 (cmk, Cpk 值)</p> <p>- 章节 15 / page 13: CRH样品的鉴别表格 QMR-F03A/B</p> <p>- 章节 15.4/ 页 14: 所有的 PPAP 要求的偏差, 必须使用 DOU</p> <p>- 章节 27 / 页 24: 添加新附件:</p> <ul style="list-style-type: none"> - 可行性报告(QMR_F01) - 零件历史表(QMR_F02) - 量产前零件标签/OTS(QMR_F03A) - 量产零件标签/PPAP(QMR_F03B) - APQP 进度报告(QMR_F04) - 偏差认可报告(QMR_F05) 	<p>- Chapt. 13/page 12: IC (=Inspection characteristic) as special characteristic added and information that supplier have to define his own special characteristics</p> <p>- Chapt. 14/page 12: short and long term process capability (cmk, cpk values)</p> <p>- Chapt. 15.1/page 13: identification for samples by CRH form QMR-F03A/B</p> <p>- Chapt. 15.4/page 14: all deviations of PPAP must be requested by a Decision on Use</p> <p>- Chapt. 27/page 24: New added attachments</p> <ul style="list-style-type: none"> - Form Feasibility Study (QMR_F01) - Form Parts History (QMR_F02) -Form Sample Identification Label before PPAP (QMR_F03A) -Form Sample Identification Label for PPAP (QMR_F03B) - Form APQP Progress Report (QMR_F04) - Form Deviation (DOU) (QMR_F05)
<p>Rev. 9:</p> <p>- 章节 14/ 页 12: IC 的短期和长期的过程能力的修改 (cmk, Cpk 值)</p>	<p>Rev. 9:</p> <p>- Chapt. 14/page 12: short and long term process capability for IC modified (cmk, cpk values)</p>
<p>Rev. 10</p> <p>绿色的: 新修改的内容</p> <p>红色的: 英文翻译版本变化, 德文的版本没有变化</p> <p>章节 5: 添加文本</p> <p>章节 8 修改文本</p> <p>章节 9 修改文本t</p> <p>章节 14: IC的要求和文本</p> <p>章节 15.4 修改文本t</p> <p>章节 16: 对指定部件的要求更精确地描述</p> <p>章节 18: 最后一段删除</p> <p>章节 20.2 发生在CRH客户处的缺陷和20.4章 责任删除 (与Rev 9比较)</p> <p>章节 20.3在Rev.9内的内容现在是 20.2在Rev. 10</p>	<p>Rev. 10</p> <p>In green: new or modified text</p> <p>In red: English translation modified without change in German text</p> <p>Chap.. 5: text amended</p> <p>Chap.. 8: wording changed</p> <p>Chap. 9: wording changed</p> <p>Chap. 14: requirements for IC and word</p> <p>Chap. 15.4: wording changed</p> <p>Chap. 16: requirement for designated parts stated more precisely</p> <p>Chap. 18: last paragraph deleted</p> <p>Chap. 20.2 Occurrence of a defect at the CRH customer and chap. 20.4 Liability deleted (compare with Rev. 9)</p> <p>Chap. 20.3 of Rev 9 is now chap. 20.2 in Rev. 10</p>

<p>内的章节</p> <p>章节 20.2 修改文本</p> <p>章节 21: 修改文本</p> <p>章节 22: 修改不同的责任</p> <p>章节 24 修改文本</p> <p>章节 27 附件部分历史修改 (编辑)</p> <p>29. 附件 1: 更改了一些责任 (之前表格在章节22</p> <p>29. 附录 1: 升级程序相关责任人</p>	<p>Chap. 20.2: wording changed</p> <p>Chap. 21: wording changed</p> <p>Chap. 22: different responsibilities modified</p> <p>Chap.. 24 wording changed</p> <p>Chap. 27: Attachment Part History modified (editable)</p> <p>29. Annex 1: some responsibilities changed (table was in chap. 22 before)</p> <p>29. Annex 1: Eskalationmatrix with responsibilities</p>

1. 项目阶段

级别	内容	活动	CRH 公司的负责人	供应商工厂的负责人
0	正常合作	无	项目小组	负责的员工
1	开发结果与要求的状态不对应，不能维持质量和最后期限，或活动无效。	与供应商一起确定补救措施。在 CRH 公司方面，活动是“宣布在业务关系上的影响”。	项目采购主管	项目领导
2	没有注意到/实施来自 1 级的结果。	对供应商的进一步影响：业务暂停。 - 终止订单，撤回工具。 重新考虑业务关系。	管理采购经理	管理 销售主管

2. 批量生产阶段

级别	内容	活动	CRH 公司的负责人	供应商工厂的负责人
0	正常合作 按照 CRH 公司的 QMG 采购物品（8D 报告），进行单个投诉的处理。	无	质量管理的负责人	负责人
1	质量与要求的状态不对应，或不能维持质量和最后期限，或活动无效。	质量会议，得到活动的协议和进度表，例如： - 在供应商工厂的筛选检验。 - 交付的标识。 - 议定遏制的级别。	中心质量采购 项目采购主管	质量经理
2	没有注意到/实施来自 1 级的结果，或活动没有达到想要的结果。	- 质量会议，得到活动的协议和进度表	管理 采购经理	管理 销售主管

1. Project phase

Level	Content	Actions	Person responsible at CRH	Person responsible at the supplier's works
0	Normal cooperation	None	Program team	Responsible employee
1	Development result does not correspond to the required status, or quality and deadlines are not maintained or actions are not effective:	Define remedies with the supplier. Actions on the part of CRH are "Announcement of effects on the business relationship"	Program lead buyer	Project leader
2	Results from Level 1 are not observed/implemented	Further effects on the supplier are: <ul style="list-style-type: none"> - Business Hold - Termination of the order with withdrawal of the tooling - Reconsideration of the business relationship 	Senior Management Purchasing Manager	Management Head of Sales

2. Series production phase

Level	Content	Actions	Person responsible at CRH	Person responsible at the supplier's works
0	Normal cooperation Independent complaint processing in accordance with CRH QMG Bought-ins (8D Report)	None	Plant Quality	Responsible employee
1	Quality does not correspond to the required status, or quality and deadlines are not maintained or actions are not effective:	Quality meeting with agreement and scheduling of actions, such as e.g.: <ul style="list-style-type: none"> - Screening inspection at the supplier's works - Identification of the deliveries - Agreement on a containment level 	Plant Quality Commodity Manager	Quality Manager
2	Results from Level 1 are not observed/implemented or actions do not achieve the desired result	<ul style="list-style-type: none"> - Quality meeting with agreement and scheduling of actions 	Senior Management Commodity Manager	Management Head of Sales