

<p>管理体系文件</p> <p>Management system file</p>	<p>文件编号:</p> <p>File no.</p>
<p>产品的监视和测量程序</p> <p>Product Quality Control Process</p>	<p>共 21 页 Total 21 Page</p>
	<p>版本号: A 修订状态: 0</p> <p>Version: A Revise: 0</p>

1. 目的 Purpose

对产品特性进行监视和测量，以验证产品要求得到满足。

Monitoring and measuring product characteristics, to verify and control product quality.

2. 适用范围 Scope

适用于对生产所用原材料（外购件、外协件）、生产的半成品和成品进行监视和测量。

Suitable for raw material (outsourcing component), semi-finished product and product monitoring and measuring.

3. 定义 Definiton

无 None

4. 工作流程 Working Process

产品的监视和测量控制流程图(图 1)

Product monitoring and measuring control program chart (Chart 1)

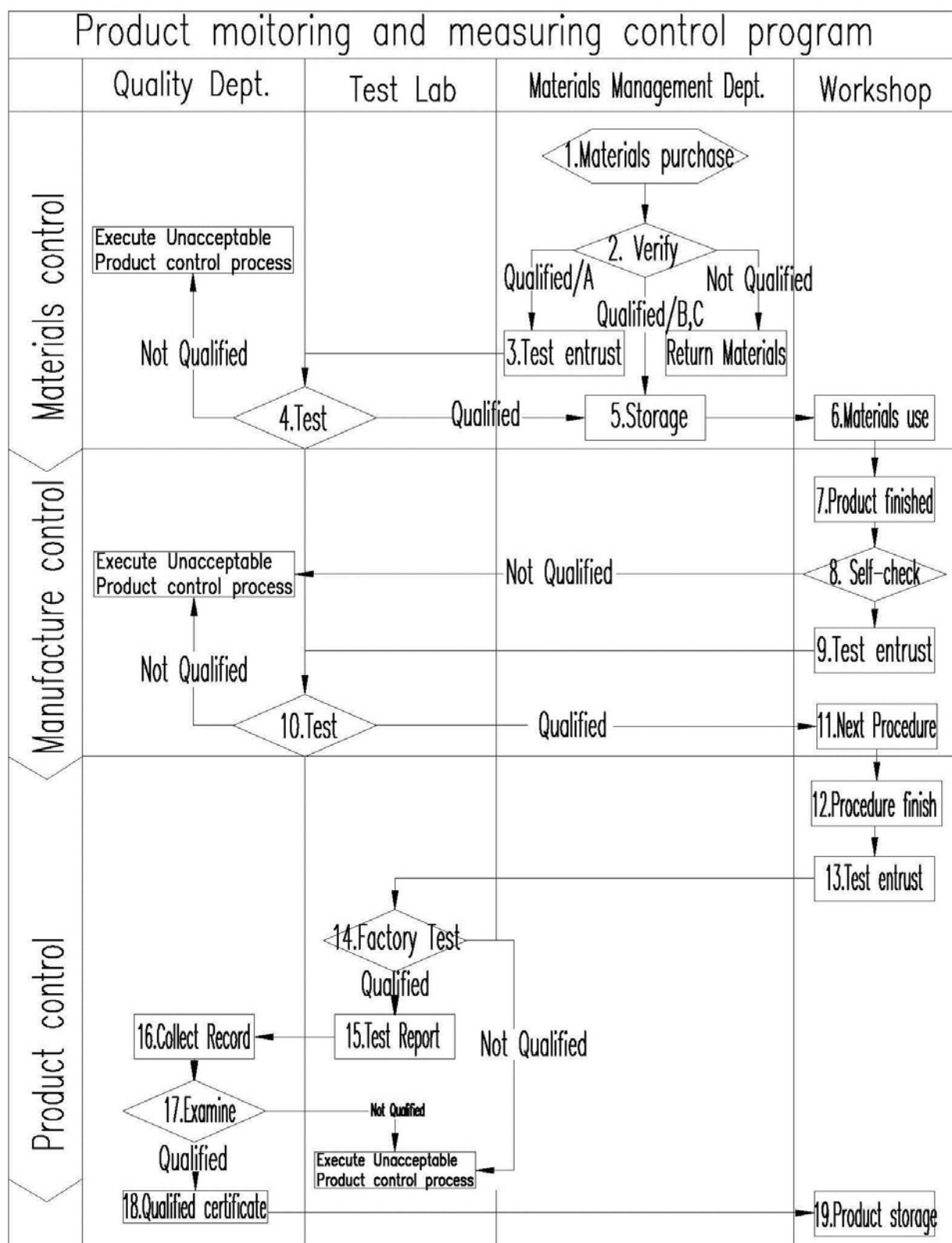
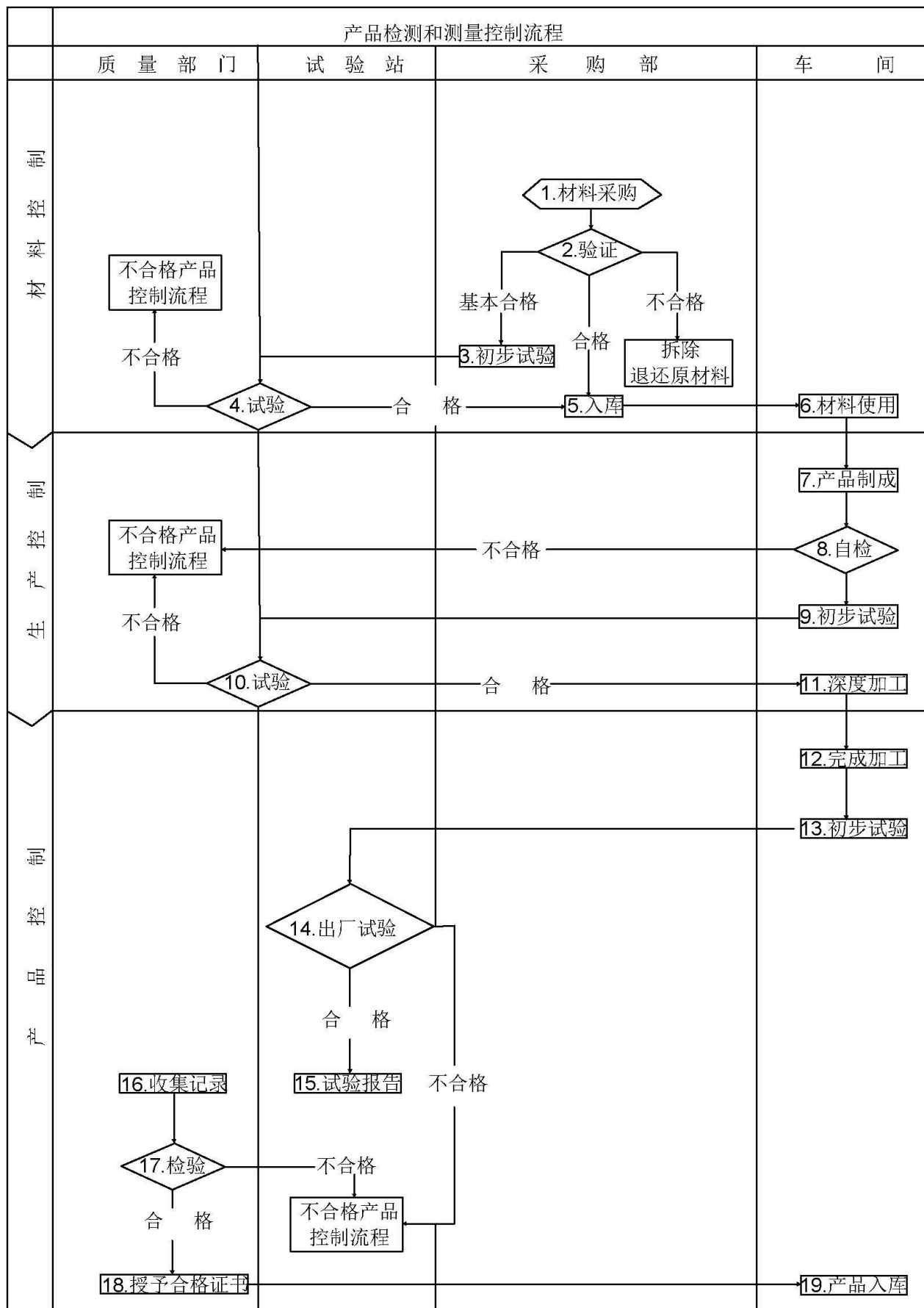


Chart 1



5.控制要求 Control Requirement

序号 No.	工作名称 Work Name	工作描述 Work description	输入 Input	输出 Output	责任部门 Department
1.	原材料/外购件/外协件入厂 Materials/ component purchase	<p>采购部根据“物资需用计划表”、“工艺路线明细表”、《生产计划》、《技术协议》、《采购合同》的要求实施原材料/外购件/外协件的采购。</p> <p>Material management department refer to “Materials plan”, “technology procedure”, “manufacturer plan”, “technical agreement”, “purchase order” requirement, execute materials/compoment purchase.</p>	<p>“物资需用计划表”、“工艺路线明细表”、《生产计划》、《技术协议》、《采购合同》</p> <p>“Materials plan”, “technology procedure”, “manufacturer plan”, “technical agreement”, “purchase order”</p>	<p>原材料、外购件、外协件的购进</p> <p>Materials/compoment purchase</p>	<p>采购部</p> <p>Material management department</p>
2.	验证 Verify	<p>原材料（外购件/外协件）入库前，由物资仓库兼职质检员根据《采购产品验证规定》进行验证，确认物料品名、规格、数量、包装，无误后填写“收料单”。</p> <p>Before materials/compoment enter into storage, storage quality inspector as per purchase product verify term, confirm item name, specification, quantity, package, withouth error, filling “accept sheet”</p> <p>验证中发现的不合格品直接办理退货。</p> <p>Not qualified item execute sales return.</p>	<p>进货实物、《采购产品验证规定》</p> <p>Item, purchase product verify term</p>	<p>“收料单”</p> <p>accept sheet</p>	<p>采购部</p> <p>Material management department</p>
3.	生成ERP送检单或填写“试验委托单” Produce ERP Inspection sheet or filling test order sheet	<p>需要进行专检的A类物资，由物资采购员填写“外协、外购件交验单”在ERP系统中生成送检单，与原制造厂《产品合格证》、《试验报告》、《图纸》、《工艺技术标准》和《技术协议》等资料一并送交质量部。</p> <p>Need special inspected A class material/compoment, buyer filling “material/compoment verify sheet”, with maker product qualification certificate, test report, drawing, technology standards and technical agreement, sent to quality department.</p> <p>需要进行性能试验的原材料与外购件填写“试验委托单”送交质量部或试验中心。</p>	<p>进货实物与随机资料</p> <p>Item itself and delivery attached documentations</p>	<p>ERP送检单、“试验委托单”</p> <p>material/compoment verify sheet, test order</p>	<p>采购部</p> <p>Material management department</p>

序号 No.	工作名称 Work Name	工作描述 Work description	输入 Input	输出 Output	责任部门 Department
		Materials/compoment need doing performance test, filling <i>test order</i> , send to quality department or test center.			
4.	专职检验/试验 special inspection test	<p>质量部专职质检员依据本公司的《原材料、外协件、外购件进厂检验标准》、《图纸》、《工艺技术标准》和《技术协议》等文件对原材料（外购件/外协件）进行检验，在 ERP 系统中输入检验结果，与资料一并反馈送检部门。</p> <p>Quality department inspector as per company <i>materials/compoment test standard, drawing, technology standard and technical agreement</i> etc., to do the test, filling test resoult in ERP system, reverts back to delivery department.</p> <p>质量部负责组织原材料的性能试验，本公司无试验能力的项目，由质量部负责外委。试验结束后，在“试验委托单”上记录试验结论，并反馈给物资仓库。</p> <p>Quality department reponsible for materials performance test, without test capability test, quality department reponsible for test sub-contractor. After test, filling test record in <i>test order</i>, feed back to storage.</p> <p>试验中心负责组织外购件的性能试验。试验结束，在“试验委托单”上记录试验结论，并反馈给物资仓库，对重要零部件应编制“试验报告”。</p> <p>Test center reponsible for compoents performance test. After test, filling test record in <i>test order</i>, feed back to storage, for important compoents, issue <i>test report</i>.</p> <p>检验与试验中发现的不合格品按照《不合格品控制程序》的规定处理。</p>	<p>ERP 送检单、“试验委托单”、“原材料、外协件、外购件进厂检验标准”、图纸、工艺技术标准和技术协议</p> <p><i>ERP test sheet, test order, materials/compoment test standard, drawing, technology standard and technical agreement</i></p>	<p>检验结论、试验报告</p> <p><i>Test result, test report</i></p>	<p>质量部试验中心</p> <p>Quality Department, Test center</p>

序号 No.	工作名称 Work Name	工作描述 Work description	输入 Input	输出 Output	责任部门 Department
		Discovered unaccepted products, manage as per <i>unaccepted products control procedure</i> term.			
5.	入库 Enter into storage	<p>检验和试验合格的A 类物资，由质检人员作好检验状态标识；B、C 类物资由物资仓库兼职质检员作好检验状态标识。Qualified A class materials/compoents, inspector make test condition mark, B/C class materials/compoents, storage inspector make test condition mark.</p> <p>采购部办理登记入库手续，通知领用部门。 Material management department conduct storage register procedure, inform recipients department.</p>	<p>检验合格结论 Test result</p>	<p>办理登记入库 手续 conduct storage register procedure</p>	<p>采购部 Material management department</p>
6.	领用 Consuming	<p>物资仓库根据“物资出库单”发放货品，并对货品予以标识并记录。并在领用时一并将供方的《产品合格证》、《试验报告》、《图纸》、《工艺技术标准》和《技术协议》等文件移交领用部门。货品领出后，领用部门做好记录和标识的移植。 Material Storage as per <i>Material outbound order</i>, dispatch materials, marks mterials and record, with maker <i>product qualification certificate, test report, drawing, technology standards and technical agreement</i>, sent to recipients department.</p>	<p>“物资出库单” Material outbound order</p>	<p>货品领出 Materials consuming</p>	<p>各车间 Workshops</p>
7.	工序完成 Manfuacture finish	<p>生产工序中操作人员按照“三按”要求完成工序中规定的工作内容 Workshop workers as per company demand finish regulation work content.</p>	<p>《图纸》、《工艺文件》、《作业指导书》 <i>Drawing, technology file, operation instruction</i></p>	<p>工序工作内容 完 成 Manufacture finish</p>	<p>各车间 Workshops</p>

序号 No.	工作名称 Work Name	工作描述 Work description	输入 Input	输出 Output	责任部门 Department
8.	首检/自互检 First check/ self check	<p>每道工序操作过程中及完成后，由操作者和班组或车间进行自检和互检，填写“过程检测记录表”，对批量工件与新产品的每道工序的首件工件应由操作者和班组或车间进行自检和互检。</p> <p>Each process operate finished, operator and work team proceed self check, filling <i>process test record sheet</i>.</p> <p>首检、自互检过程中发现的不合格品按照《不合格品控制程序》的规定处置。</p> <p>Discovered unaccepted products, manage as per <i>unaccepted products control procedure</i> term.</p>	《图纸》、《工艺文件》、《作业指导书》、《质量控制点》、《检验指导书》 <i>Drawing, technology documents, operation instruction, quality control point, test instruction</i>	“过程检测记录表” <i>Process test record sheet</i>	各车间 Workshops
9.	填写交验单或试验委托单 Filling test order	<p>对质量控制点中规定的专检点，操作者首检/自互检合格后，在 ERP 系统中生成送检单报专职质检员。需委托试验的项目，由生产车间填写“试验委托单”，经本工序质检员签章认可后，送试验中心。</p> <p>For test control point, After operator self check qualified, filling test order in ERP system, send to test center.</p>	“过程检测记录表” <i>Process test record sheet</i>	“检测记录表”、“产品交验单”、“试验委托单” <i>Test record sheet, product test order</i>	各车间 Workshops
10.	专职检验/试验 Specific test	<p>专职质检员根据《图纸》、《工艺文件》、《作业指导书》、《质量控制点》、《检验指导书》等文件进行专检，填写“检测记录表”。“产品交验单”加盖检验状态标识签章后反馈车间。</p> <p>In 汉变公司 r execute test as per drawing, technology document, operation instruction, quality control point, test instruction, filling test record sheet. Feed back to workshop.</p> <p>试验中心按要求组织试验。试验结束，试验中心将试验结论记录在“试验委托单”后反馈生产车间。试验中心对重要零部件编制“试验报告”。</p> <p>Test center organize test as per demand. After test finished, test center</p>	《图纸》、《工艺文件》、《作业指导书》、《质量控制点》、《检验指导书》 <i>Drawing, technology documents, operation instruction, quality control point, test instruction,</i>	检测记录表、检验结论、试验报告 <i>Test record sheet, test result, test report</i>	质量部试验中心 Quality Department, Test center

序号 No.	工作名称 Work Name	工作描述 Work description	输入 Input	输出 Output	责任部门 Department
		record result and feed back to workshop, for important compoents, issue test report. 检验与试验中发现的不合格品按照《不合格品控制程序》的规定处置。 Discovered unaccepted products, manage as per <i>unaccepted products control procedure</i> term.			
11.	转入下道工序 Next procedure	在本工序所要求的检验和试验完成或收到必须的报告后，才可以转入下道工序。 After finished procedure verify/test, or receive test report, going to next procedure.	检验和试验完成 After test and veify finish	转入下道工序 Going to next procedure	各车间 Workshops
12.	全部工序完成 All procedure finish	半成品的所有工序的检验与试验全部完成后转入成品的监视与测量阶段。 After semi-finished product verify/test finished, going to product monitoring and measuring stage. 对半成品未经检验而例外放行，必须在成品的监视和测量前补检。 For without tested semi-finished product, add test before product monitoring and measuring.	所有工序的检验与试验完成 All procedure verify/test finished	转入成品的监视与测量阶段 Going to product monitoring and measuring stage.	各车间 Workshops
13.	填写试验委托单 Filling test order	总装生产车间负责填写成品“试验委托单”。 Final assembly workshop responsible for filling test order.	总装完成 Final assembly workshop finish	成品试验委托单 Product test order	各车间 Workshops

序号 No.	工作名称 Work Name	工作描述 Work description	输入 Input	输出 Output	责任部门 Department
14.	出厂试验 Factory test	<p>试验中心按图纸、工艺、标准、技术协议要求组织试验。 Test center as per drawing, technology, standard, technical agreement requirement organise test.</p> <p>试验中发现的不合格品按照《不合格品控制程序》的规定处置。 Discovered unaccepted products, manage as per <i>unaccepted products control procedure</i> term.</p>	<p>“试验委托单”、《图纸》、《工艺文件》、《标准》、《技术协议》 Test order, drawing, technology, standard, technical agreement</p>	试验结论 Test result	试验中心 Quality Department, Test center
15.	编制试验报告 Issue test report	<p>试验合格后，试验中心负责编制“产品试验报告”。 After test succeeded, issue product test report.</p>	试验过程、试验结论 Test process, test result	试验报告 Test report	试验中心 Quality Department, Test center
16.	收集监视和测量记录 Collect mointor and measure record	<p>在成品试验完成后，各车间将所有规定的进货验证、半成品监视和测量记录、产品试验报告传递给质量部质量技术员。 After test finish, workshops as per regulation send all material test, mointor and measure record, test report to quality department.</p>	成品试验完成 Product test finish	收集监视和测量记录 Collect mointor and measure record	质量部 Quality Department
17.	审查 Examine	<p>质量部质量技术员对监视和测量记录进行审查，确定监视和测量记录是否已清楚表明产品按标准通过了监视和测量。 Quality department examine and confirm mointor and measure record.</p> <p>审查中发现的不合格品按照《不合格品控制程序》的规定处置。 Discovered unaccepted products, manage as per <i>unaccepted products control procedure</i> term.</p>	收集的监视和测量记录 Collect mointor and measure record	产品是否按标准通过了监视和测量 Whether product test as per monitor and measure standard	质量部 Quality Department

序号 No.	工作名称 Work Name	工作描述 Work description	输入 Input	输出 Output	责任部门 Department
18.	签发合格证 Issue qualified certificate	质量部质量技术员审查监视和测量记录合格后签发“产品合格证”。 Quality department verify monitor and measure record, issue <i>qualified certificate</i> .	监视和测量记录审查结论 Monitor and measure record examine result	合格证 qualified certificate	质量部 Quality Department
19.	办理入库 Product enter into storage	成品监视与测量完成后，相关车间办理产品入库手续 Product monitor and measure finished, relative workshop manage product storage.	成品监视与测量完成 Product monitor and measure finished	办理入库手续 Manage storage	各车间 Workshops

6. 相关文件 Related documents

6.1 不合格品控制程序 Unaccepted products control procedure

6.2 供应商管理与采购控制程序 Supplier management and purchase control procedure

6.3 记录控制程序 Record control procedure

7. 相关记录 Related record

7.1 产品监视和测量记录（检测记录表、试验报告等） Product monitor and measure record (Test record sheet, test report etc.)

7.2 收料单 Receive sheet

7.3 ERP 送检单 EPR test delivery sheet

7.4 试验委托单 Test order

7.5 紧急（例外）放行申请单 Emergency pass application sheet

7.6 物资出库单 Materials removal shee

Quality Control Programme

质量控制计划

汉变公司 hereby provide the necessary information on Quality Assurance Program containing the overall Quality Management and procedures, which we propose to follow during various phases of execution of the Contract.

汉变公司 特此提供有关质量保证计划的必要信息，其中包含我们建议在合同执行的各个阶段遵循的整体质量管理和程序。

1.1 Design Phase设计阶段

Design in accordance with requirement of technology specification strictly, should meet the IEC standards and customer's requirement.

严格按照技术规范要求设计，满足IEC标准和客户要求。

1) In the configuration design, SH will improve the insulation force and distance.

在配置设计中，汉变公司将提高绝缘力和距离。

2) To enhance short-circuit withstand ability, half stiff copper will be used in low voltage winding.

为提高抗短路能力，低压绕组将采用半硬铜。

3) The transformers will be used in the first rank paint to increase antisepsis effect, increase protection grade of accessories.

变压器将用于一级油漆，以增加防腐效果，提高配件的防护等级。

4) Considering shipping transportation, the transformers will be reinforced the body fixation.

考虑海运运输，变压器将加固本体固定。

1.2 Technics Phase技术阶段

Before starting working, there is a technology liaison meeting by technics engineers and design engineers where engineers discuss fully for the technical real intention, definite the request of the quality. In addition to the general technics request, establish detailed control measures for the key control content, enhance the control of working procedure quality and check, guarantee both the inside quality and the appearance quality of the transformers meet the design requirement.

开始工作前，技术工程师和设计工程师召开技术联络会，工程师就技术真实意图进行充分讨论，明确质量要求。除一般工艺要求外，对重点控制内容制定细化控制措施，加强工序质量控制和检查，确保变压器内部质量和外观质量均达到设计要求。

1.3 Material Phase材料阶段

1) Principles原则

A, Perform strictly the document regulations of SH's quality and environment management system procedure. Control the purchase process and the supplier to insure the purchase product meet regulation requirement.

A、严格执行汉变公司质量和环境管理体系程序的文件规定。控制采购过程和供应商，确保采购产品符合法规要求。

B, for a class material supplier, before the first purchase, Material Purchasing Department preside over selecting or naming more than 2 material suppliers. Organizing the relative engineers of Design Department, Quality Control Department to estimate, and fill in "supplier investigation report" with the estimation result, building up archives and carrying through purchase after being examined by vice president for procurement and approved by the president of 汉变公司.

B、对于一类材料供应商，在首次采购前，材料采购部主持选择或命名2家以上材料供应商。组织设计部、品管部相关工程师进行评估，将评估结果填入《供应商调查报告》，经采购副总裁审核，经汉变公司总裁批准后，建立档案，进行采购。

C, According to the request of the material demand plan offered by the Design Department strictly; provide various material and relative outside pieces on time and with good quality. Planner and buyers should communicate with the technique and Manufacture Management Department at the regulation meeting knows the production time requirement, in order to insure the material supply on time.

C、严格按照设计部提供的材料需求计划的要求；准时、优质地提供各种材料及相关外件。计划者和采购商应在法规会议上与技术和制造管理部沟通，了解生产时间要求，以确保按时供应材料。

D, Make great efforts to provide various raw materials with good quality and superior performance, guarantee that the material quantity can meet the special requirement of the transformers.

D、努力提供质量优良、性能优越的各种原材料，保证材料数量能满足变压器的特殊要求。

2) Measure措施

A, Stock link

供货要求

Choose the suppliers assessed and recognized by SH. Contracts must be signed before buying important raw materials and pieces. Contract articles should be self-contained, the quantity request and adopted standards must be detailed, and sign the technique agreements approved by both sides. Organize related departments to reassess the supplier's qualifications if necessary. 选择经汉变公司评估和认可的供应商。在购买重要的原材料和零件之前必须签订合同。合同条款应自成一体，数量要求和采用的标准必须详细，并签署双方认可的技术协议。必要时组织有关部门对供应商资格进行重新评估。

B, Stock material guarantee 供货材料保障

Choose supplier according to the requirement of the technique agreements strictly, each obligation should be linked to the staff who is in charge of the purchase, guarantee the material meet the customer's requirement.

严格按照技术协议要求选择供应商，每项义务都应负责采购的人员挂钩，保证材料符合客户要求。

C, Stock obligation 供货职责

In the process of stock, if things like bad quality of stock material or delay of stock happen and have bad effect on production, according to "the management measures about interface part of quality control" published by Quality Control Department, we will implement check and penalty (decide the penalty sum according as the loss size) to the related staff.

在备货过程中，如果发生库存物料质量差或库存延迟等情况，对生产造成不良影响，我们将按照质检部发布的《质控接口部分管理办法》，进行检查和处理。对相关人员进行罚款（根据损失大小确定罚款金额）。

D, Storage link 储存要求

Staff who take charge storerooms should strictly examine, check and accept the stock material, check the quantity, variety, specification, appearance and quality of the stock; A large amount material or important stock must be checked and accepted by the staff who take charge storerooms, the staff who deal with the stock and the staff of Quality Control Department. The entering storage procedure should be carried out after the successful check and accept, put an end to the entering storage of unconformity.

负责库房的工作人员要严格检查、验收库存材料，检查库存的数量、品种、规格、外观和质量；大宗物资或重要库存必须经库管人员、库存处理人员和品管部人员验收。验收合格后进行入库手续，杜绝不合格入库。

1.4 Manufacture plan phase 生产计划阶段

To meet the customer request for the delivery time and product quality, we do our best to organize and coordinate all the working procedures which involved. In order to ensure that our delivery will be on time, the details listed as follows during manufacture are taken.

为了满足客户对交货时间和产品质量的要求，我们尽最大努力组织和协调所涉及的所有工作程序。为确保我们的交货准时，在制造过程中采取如下所列明细。

All the working procedures are under reasonable arrangement. To the prepare aspect of the technique, we make components partly, and components with long manufacturing period and considerable difficulty are made in advance. As for the key working procedures, working time is gained appropriate extension, thus quantity problem and impact to working procedures due to

time limitation will be avoided surely.

所有的工作程序都得到了合理的安排。在工艺准备方面，我们部分地制作部件，预先制作制造周期长、难度大的部件。对于关键工序，适当延长工作时间，肯定能避免数量问题和因工期限制对工序造成的影响。

1) We master new technics that adopt in manufacturing from personnel, equipments, environment etc. Dispatching technics engineers to the spot to guide manufacturing, arrange time limit reasonably. Especially for the tank part, our technical personnel track the proceedings whole course, keep the close communication with production personnel, thus information will be fed back on time and product quality will be absolutely insured

1) 从人员、设备、环境等方面掌握制造中采用的新技术，派技术工程师到现场指导制造，合理安排工期。尤其是罐体部分，我们的技术人员全程跟踪，与生产人员保持密切沟通，及时反馈信息，绝对保证产品质量。

2) Ensure that pieces brought from different corporation will be received on time. Arrange the technique section to contact with supply department tightly, thus preparation will be done in advance and manufacturing request will be satisfied better.

2) 确保从不同公司带来的材料将按时收到。安排技术部门与供应部门紧密联系，提前做好准备，更好地满足生产要求。

3) enhance the preparation of prophase of the manufacturing from the material, personnel, equipment, and technique and so on.

3) 从材料、人员、设备、技术等方面加强制造前期的准备工作。

4) The key parts receive the point control, and fractionize making-plan tol tank, winding, core and active part. Enhance coordination between all courses during transformer's manufacturing. Based on the measures mentioned above, we can find problem and resolve it in time.

4) 关键部件接受点控制，分出制图工具箱、绕组、铁芯和活动部件。加强变压器制造过程中各环节的协调。根据上述措施，我们可以发现问题并及时解决。

1.5 Quality control phase 质量控制阶段

To enhance the quantity control, quality checking engineers together with technics engineers come to manufacturing spot for technics & quality training for workers. Through those steps, worker's technics & quality will improve notably.

为了加强数量控制，质量检查工程师与工艺工程师一起来到生产现场对工人进行工艺和质量培训。通过这些步骤，工人的技术和质量将显着提高。

Besides normal quantity request, key control are listed in following tables

除正常数量要求外，重点控制如下表

No.	Item项目	Requirement要求	Measures措施
1	Welding, Active parts 焊接, 器身	Ensure oil passages in Active parts and axial oil-dust in windings Straightway 确保器身油道和绕组轴向油尘直通	Check the oil passage carefully Ensure there is not any block. 仔细检查油道确保没有任何堵塞。
2	External appearance quality of L-M steel L-M钢的外观质量	No Crack and double-skin 无裂纹和双层	Check carefully after shot blast. 喷丸后仔细检查。
3	Welding seam 焊缝	Orderly, neat 有条不紊、整齐划一	Check seam strictly, control appearance quality of tank and accessories. 严格检查接缝, 控制罐体及配件的外观质量。
4	Airproof cover 密封盖	Smooth, no leakage 光滑, 不渗漏	Control the pressure and time, check the leaking point under static oil pressure after trial assembly, stamping and general assembly. 控制压力和时间, 试装、冲压、总装后在静油压下检查泄漏点。
5	Purchased parts 外购零件	Ensure the external appearance quality meets the requirements of drawing, agreement and standards. 确保外观质量符合图纸、协议和标准的要求。	Check drawing and standards according to the agreement,, and feed back information quickly if there are any problems. 根据协议检查图纸和标准, 如有问题及时反馈信息。
6	Assembly 组装	Ensure active part neatly, appropriate insulation distance, no part neglected according to drawing. 确保器身部分整齐, 绝缘距离适当, 按图纸要求无遗漏部位。	Control active part and external quality before routine tests and package. 在常规测试和包装之前控制器身部分和外部质量。
7	Test 试验	Check if the test results meet the request of the standards and agreements.	Fill in table with special data in agreement before tests, and check item by item during tests. 试验前按约定的特殊数据填表, 试验

		检查测试结果是否符合标准和协议的要求。	验时逐项核对。
8	Measure instrument 测量仪器	Have CMC mark 有CMC标志	Check if components have CMC mark during purchasing inspection 采购检验时检查元器件是否有CMC标志

1.6 After-sales service phase 售后服务阶段

No.	Item 项目	Requirement 要求	Measure 措施
1	Shipment of Product 产品出货	Don't damage the original checking state of product, and ensure it is complete when transported to indicated place. 不要损坏产品的原始检查状态，并确保在运输到指定地点时完整。	Sign the transportation agreement with the transportation corporation, clear and definite the duties, and supervise hoisting vehicle and sealing vehicle of the transportation corporation. When the transformer and accessories have been transported to the indicated place, product administrator take back the transportation's receipt, inform after-sales service personnel from market manage department to handle the handing over of the products in time, verify if the package and the number of the products are the same as that of the products before transportation, in order to inspect if the transportation company breached the transportation agreement during the period including products transportation and unloading. 与运输公司签订运输协议，明确职责，监督运输公司的起重车辆和封箱车辆。 变压器及配件运至指定地点后，产品管理员取回运单，通知市场管理部售后服务人员及时办理产品交接，核对包装及数量。 产品与运输前的产品相同，以检查运输公司在产品运输和卸货期间是否违反运输协议。
2	Delivery of product 产品交付	Carry out the delivery and acceptance of product with Customer in Time 及时与客户进行产品的交付和验收	After-sales service personnel carry out the handover of the product and data according to the detailed list, which is packed with the product, and together with the customer, installation company confirm quantity and quality of the product. 售后服务人员根据产品随附的详细清单进行产品和资料的交接，并与客户、安装公司一起确认产品的数量和质量。

3	After-sales service 售后服务	Check according to the technique agreement 按技术协议检查	<p>Guide installation personnel to operate on the spot according to the relevant content of installation and use manual. To guide the trial operation according to the operation and maintenance items, handle the information fed back by customers for above process and help quality control department and production department for neglect compensation. To communicate with customer for further more information, and bring related department many beneficial term to resolve quality and installation problems.</p> <p>指导安装人员根据安装使用说明书的相关内容进行现场操作。</p> <p>根据运维项目指导试运行，处理客户反馈的上述过程信息，协助品管部门和生产部门进行疏忽赔偿。</p> <p>与客户沟通以获取更多信息，并为相关部门带来许多有益的术语，以解决质量和安装问题。</p>
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1.7 Quality Promise 质量承诺

In order to ensure prompt, safe and normal operation of your transformer, SH will take the following measures to supply the products with high quality strictly in accordance with the requirements of contract.

为确保您的变压器及时、安全、正常运行，汉变公司将严格按照合同要求，采取以下措施，提供高质量的产品。

1) SH guarantees the transformer without any leakage. If the transformer has any leakage caused by any design problem within three years after putting into operation, 汉变公司 will resolve the problem with free of charge. Therefore, 汉变公司 will take special measures on oil tank and accessories:

1) 汉变公司保证变压器无任何泄漏。变压器在投运后三年内，如因设计问题出现漏电，汉变公司将免费解决。因此，汉变公司将对油箱及配件采取特殊措施：

a. When design, oil tank can meet specific strength of positive pressure and vacuum residue requirements, ensure without any permanent deformation. Oil tank is produced by using high-quality steel and is welded by high-quality welding rods. Main welding lines shall be welded by CO2 gas shielded welding.

a.设计时油箱能满足特定强度的正压和真空残渣要求，保证不产生永久变形。油箱采用优质钢材制作，采用优质焊条焊接而成。主焊缝采用二氧化碳气体保护焊焊接。

b. Oil tank strength calculation shall be verified by senior engineer.

b.油箱强度计算需经高级工程师验证。

c. Pressure relief valve, temperature controller and sealing part shall be used in top rank

companies.

c.泄压阀、温控器、密封件应使用一流企业的。

d. Easy leakage parts such as cooler, oil conservator, butterfly valve and gate valve shall be of best leakage prevention.

d. 冷却器、储油柜、蝶阀、闸阀等易渗漏部位应做好防渗漏措施。

e. SH will sign special leakage prevention quality agreements with suppliers of above-mentioned parts according to requirements of ISO9001 quality system.

e.汉变公司将按照ISO9001质量体系的要求与上述零部件供应商签订特殊的防漏质量协议。

f. All flange sealing surfaces are made mechanic processing and opened sealing limit grooves. Flange bolt holes welded on oil tank use half holes to prevent internal leakage.

f.所有法兰密封面均做机械加工，并开有密封限位槽。油箱上焊接的法兰螺栓孔采用半孔，防止内漏。

g. SH will send the experienced service engineers to guide on-site installation and commissioning.

g.汉变公司将派经验丰富的服务工程师到现场指导安装调试。

2) Under the condition that the layout of transformer is controlled below standard requirements, the buyer can witness manufacture process.

2) 在变压器布置控制在标准要求以下的情况下，买方可以亲眼目睹制造过程。

a. The structure uses formed low layout structure.

a.结构采用成型低布局结构。

b. Key position (for example primary insulation) will use insulation material with reliable quality and ensure roundness of insulation piece.

b.关键部位（如初级绝缘）采用质量可靠的绝缘材料，保证绝缘片的圆度。

c. SH will strictly controls production quality of electromagnetic wires.

c.汉变公司严格控制电磁线的生产质量。

d. SH will monitor coil wire joints one by one and ensure not any burr or rosin joint.

d.汉变公司 将一一监控线圈导线接头，确保没有任何毛刺或松香接头。

e. Oil tank parts and clamping parts in high field strength area will be rounded and polished.

e.高场强区域的油箱零件和夹紧零件将被倒圆和抛光。

f. SH will make clean work at factory building and operation field. Before manufacturing, we will clean all devices such as shelf, fixture, tool, protection tank and crane so as to prevent polluting products.

f.汉变公司将在厂房和运营现场进行清洁工作。生产前对货架、夹具、工具、保护罐、吊车等所有设备进行清洗，防止污染产品。

g. Product body will be covered and protected by plastic cloth on top of white cloth during



assembly insert procedure and machine body lead wire procedure.

g.在组装插入过程和机身引线过程中，产品主体将在白布顶部覆盖并保护塑料布。

3) In order to ensure short-circuit proof capacity of the product, SH will take the following measures:

3) 为保证产品的防短路能力，汉变公司将采取以下措施：

a. Coil wave process calculation and mechanic force calculation shall be verified by senior engineer and compared by multiple plans.

a.线圈绕制过程计算和机械力计算应由高级工程师验证，并多方案比较。

b. Bearing situation and strength of end pressure plate and base plate shall be calculated.

b.应计算端压板和底板的承载情况和强度。

4) If there is any quality problem caused by design or manufacture reason, SH will repair or replace new part with free of charge.

4) 如因设计或制造原因造成任何质量问题，汉变公司将免费维修或更换新零件。

5) SH shall ensure that we will supply best technology, best service, and best equipment.

5) 汉变公司将确保我们将提供最好的技术、最好的服务和最好的设备。

SHAANXI HANZHONG TRANSFORMER CO.,LTD.