

工程与品质管理理论分享

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源头管理

产品与服务的品质是企业生存的基础,是不断发展的动力。品质管理的核心是源头管理。何为源头?

源头来自对客户需求的精准了解(Customer Focus),并将其转化为产品规格(Product Specification) – 诸如产品环 保要求、寿命、可靠性、技术指标;

源头来自满足客户需求 / 产品规格的设计 (Design - Plan, Prototype - Do, Validation - Check, Release - Act), 并 且持续改善(DCR/DCO/DCN);

源头来自保证客户需求 / 产品规格的生产制造工艺,并且持续改善(ECR/ECO/ECN)。



工程品质管理的核心在于产品生命周期的不同阶段以PDCA (Plan, Do, Check, Act) 的方法加以保证:

□产品设计阶段:

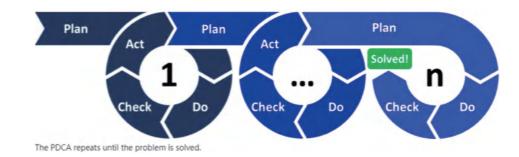
包括方案设计过程可行性分析 (Process Feasibility),设计评审中的可制造性分析与改善建议等。

□产品制程阶段:

采用过程方法,即过程定义-计划、过程试点-做、过程验证-检查、过程资格-行动。

□产品量产阶段:

持续改善,包括建立问题描述、问题识别、故障分析体系,实施纠正措施计划、纠正措施执行等。



实验科学

现实世界是复杂的,针对某些复杂问题,专业理论用于定性分析,找出关键因子——其等效数学 模型的导函数,偏导;要通过对关键因子的 DOE 才能优化产品设计和产品制程定义。

专业技术 +DOE 是产品设计规范,制程定义规范的源泉,并基于此源泉进行产品设计并不断优化。 千里之行始于足下,我们已经在正确的道路上,积跬步以至千里。站在业界之巅,成为行业的领 导者。



相关术语

Capability of a Process: Ability of a process to produce a product that will fulfill the requirements of that product. The concept of process capability can also be defined in statistical terms.

Commercial Manufacturing Process: The manufacturing process resulting in commercial product.

Continued Process Verification: Assuring that during routine production the process remains in a state of control.

Performance Indicators: Measurable values used to quantify quality objectives to reflect the performance of an organization, process or system.

Process Definition: Defining the commercial manufacturing process based on knowledge gained through development and scale-up activities.

Process Qualification: Confirming that the manufacturing process as defined is capable of reproducible commercial manufacturing.

Process Validation: The collection and evaluation of data, from the process design stage through commercial production, which establishes scientific evidence that a process is capable of consistently delivering quality products.

Quality: The degree to which a set of inherent properties of a product, system, or process fulfills requirements.

