

VT ElektroPlast VT Battery

ONE COMPANY – INFINITE POSSIBILITIES

 Quality Management

TECHNOLOGY

DYNAMISM

PROGRESS

STABILITY

CONTENT

- Certified standards
- Quality staff
- Documentation system
- Process Map
- Quality management system development
- Supplier evaluation, development, sourcing
- Trainings
- Measurement equipment calibration
- Specific requirements
- Applied quality technics
- Test lab
- Measurement lab

CERTIFIED STANDARDS – VTEP/VTBT

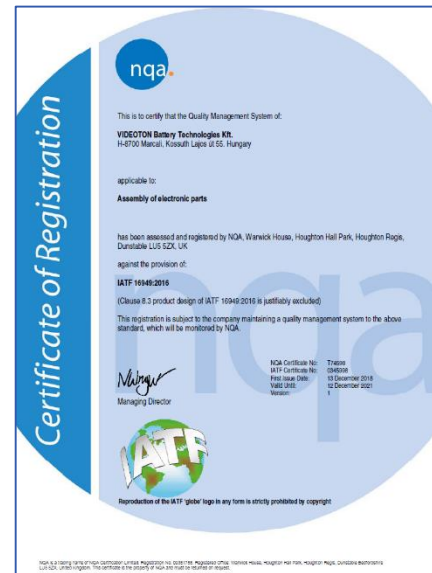
IATF 16949:2016

VTEP scope:

- component assembly and injection moulding parts manufacturing for automotive industry

VTBT scope:

- assembly of electronic parts



CERTIFIED STANDARDS - VTEP

ISO 13485:2016

Scope:

- Manufacture of injection moulded plastic parts and assembly of products for medical device manufacturers



QUALITY STAFF

| | VTEP | VTBT |
|-------------------------------|-----------|-----------|
| Workshop QA manager | 4 | 1 |
| Quality engineer | 6 | 3 |
| SQA engineer | 4 | - |
| Supplier development engineer | 1 | - |
| Supplier quality techn. | 2 | 1 |
| Quality technician | 7 | - |
| Incoming inspector | 3 | 1 |
| Quality inspector | 34 | 7 |
| Total: | 61 | 13 |



DOCUMENTATION SYSTEM

Electronic system on a safe intranet with authorized access

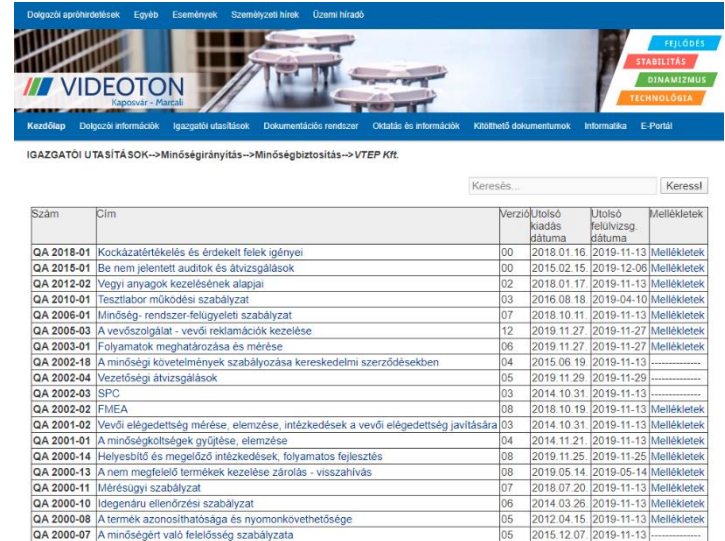
Level 1 Quality Manual

Level 2 Standard Operation Procedures

Level 3 Work Instructions

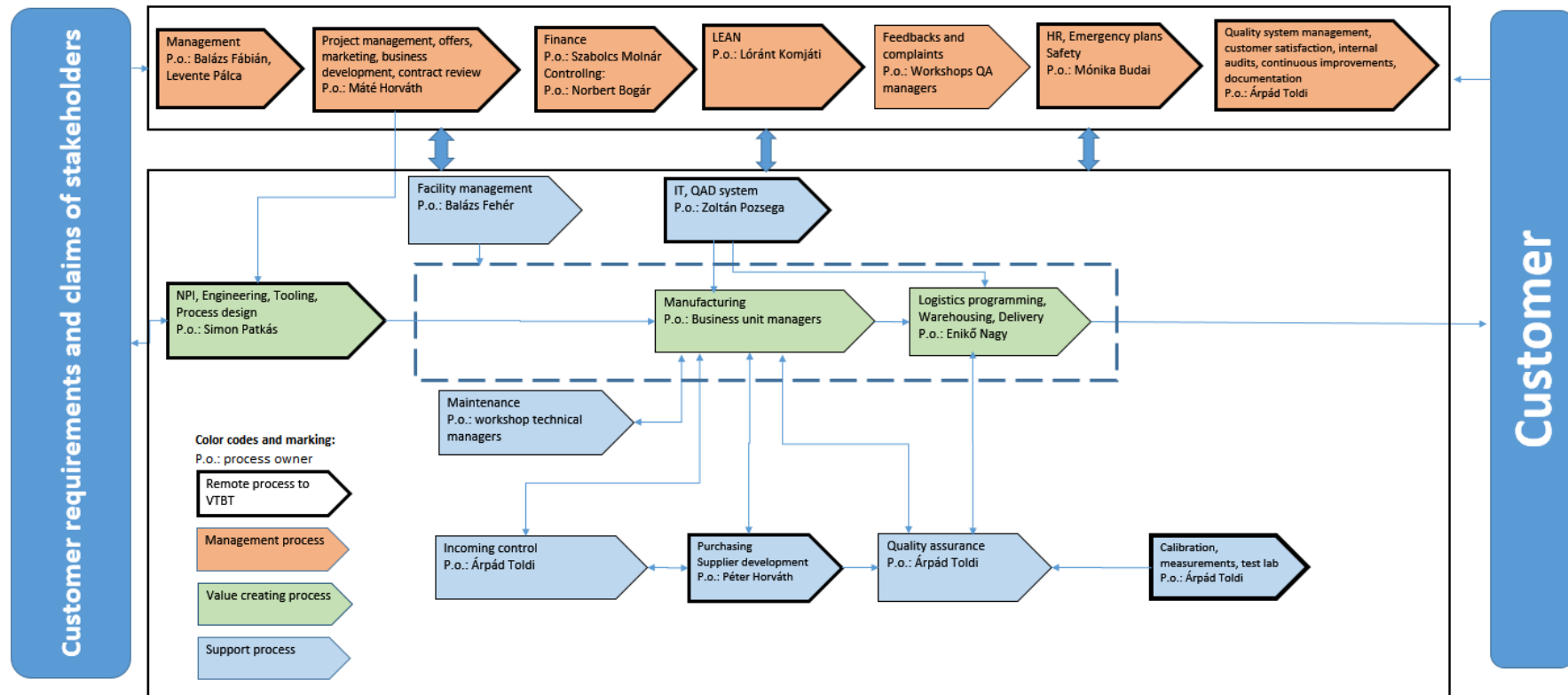
Level 4 Records

- Processed based documentation
- PPAP documents for all products and produced parts
- All the documentations are available for authorized users

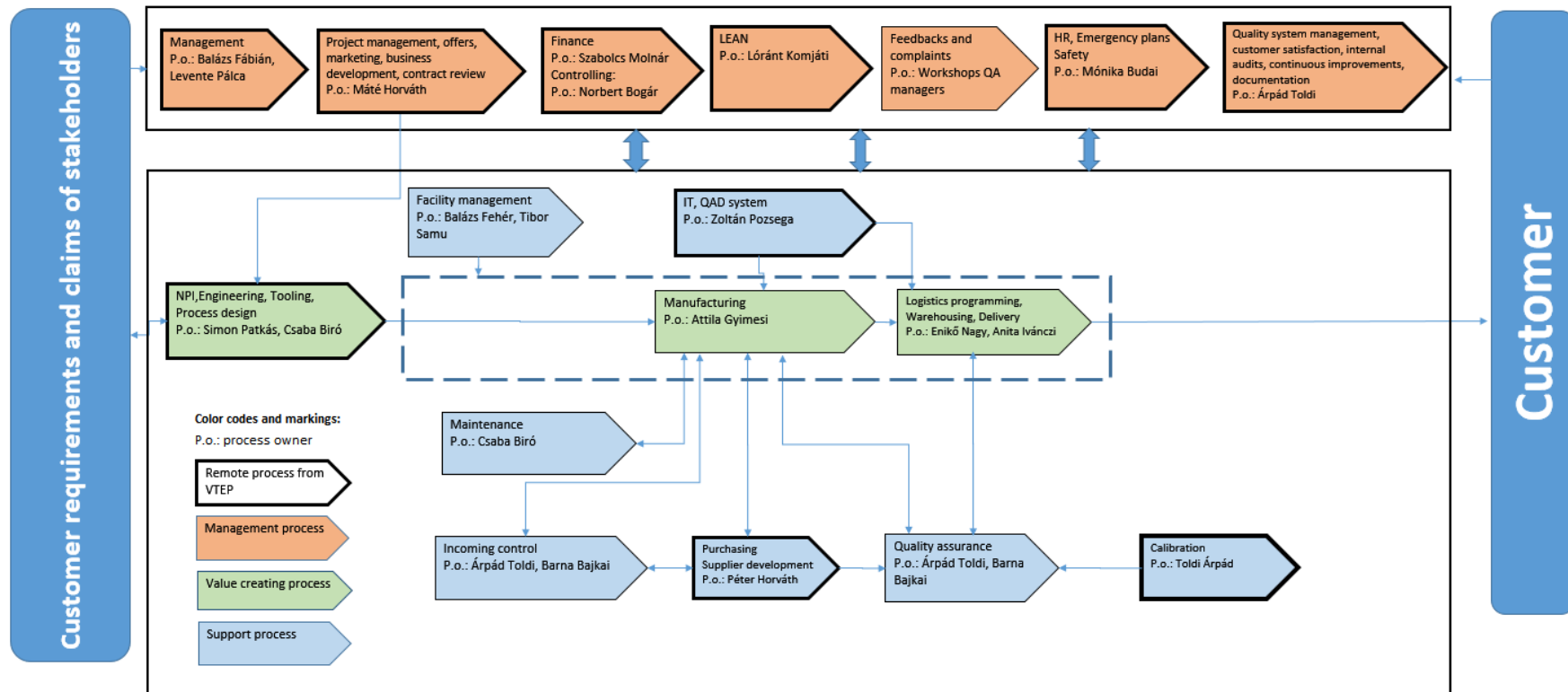


| Szám | Cím | Verzió | Utolsó kiadás dátuma | Utolsó felülvizsg. dátuma | Mellékletek |
|------------|---|--------|----------------------|---------------------------|-------------|
| QA 2018-01 | Kockázatelemzés és érdekelt felek igényei | 00 | 2018.01.16 | 2019-11-13 | Mellékletek |
| QA 2015-01 | Be nem jelentett auditok és átvizsgálások | 00 | 2015.02.15 | 2019-12-06 | Mellékletek |
| QA 2012-02 | Vegyő anyagok kezelésének alapjai | 02 | 2018.01.17 | 2019-11-13 | Mellékletek |
| QA 2010-01 | Tesztlabor működési szabályzat | 03 | 2016.08.18 | 2019-04-10 | Mellékletek |
| QA 2006-01 | Minőség- rendszer-felügyeleti szabályzat | 07 | 2018.10.11 | 2019-11-13 | Mellékletek |
| QA 2005-03 | A vevőszolgálat - vevői reklamációk kezelése | 12 | 2019.11.27 | 2019-11-27 | Mellékletek |
| QA 2003-01 | Folyamatok meghatározása és mérése | 06 | 2019.11.27 | 2019-11-27 | Mellékletek |
| QA 2002-18 | A minőség követelmények szabályozása kereskedelmi szerződésekben | 04 | 2015.06.19 | 2019-11-13 | |
| QA 2002-04 | Vezetőségi átvizsgálások | 05 | 2019.11.29 | 2019-11-29 | |
| QA 2002-03 | SPC | 03 | 2014.10.31 | 2019-11-13 | |
| QA 2002-02 | FMEA | 08 | 2018.10.19 | 2019-11-13 | Mellékletek |
| QA 2001-02 | Vevői elégedettség mérése, elemzése, intézkedések a vevői elégedettség javítására | 03 | 2014.10.31 | 2019-11-13 | Mellékletek |
| QA 2001-01 | A minőségköltségek gyűjtése, elemzése | 04 | 2014.11.21 | 2019-11-13 | Mellékletek |
| QA 2000-14 | Helyesbítő és megelőző intézkedések, folyamatok fejlesztés | 08 | 2019.11.25 | 2019-11-25 | Mellékletek |
| QA 2000-13 | A nem megfelelő termékek kezelése zárolás - visszahívás | 08 | 2019.05.14 | 2019-05-14 | Mellékletek |
| QA 2000-11 | Mérésügyi szabályzat | 07 | 2018.07.20 | 2019-11-13 | Mellékletek |
| QA 2000-10 | Időgenárú ellenőrzési szabályzat | 06 | 2014.03.26 | 2019-11-13 | Mellékletek |
| QA 2000-08 | A termék azonosíthatósága és nyomonkövethetősége | 05 | 2012.04.15 | 2019-11-13 | Mellékletek |
| QA 2000-07 | A minőségért való felelősség szabályzata | 05 | 2015.12.07 | 2019-11-13 | |

PROCESS MAP - VTEP



PROCESS MAP - VTBT



QUALITY MANAGEMENT SYSTEM DEVELOPMENT

Regular internal audits (system and process) based on a yearly plan

It ensures the quality system is consistently in a state of control

Management review

Ensures that the Quality Management System achieves the established objectives with a successful and effective operation

CAPA (Corrective Action/ Preventive Action)

Ensures that quality system issues are identified, analysed and corrected in a proactive manner to keep quality system effective

Quality Improvement Plan

Determines improvement actions for all the departments and workshops on a yearly base

SUPPLIER EVALUATION, DEVELOPMENT, SOURCING

Monthly based evaluation on

- Quality
- Delivery performance
- Price-Cost
- Strategic co-operation
- Operative co-operation



Suppliers are ranked

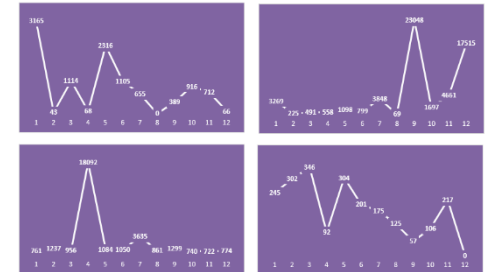
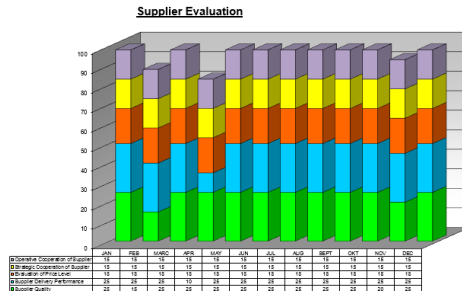
A - B - C - D categories

Half-yearly detailed evaluation

Focus on C and D category suppliers
(improvement requests)

PPM Performance

monitoring



SUPPLIER EVALUATION, DEVELOPMENT, SOURCING

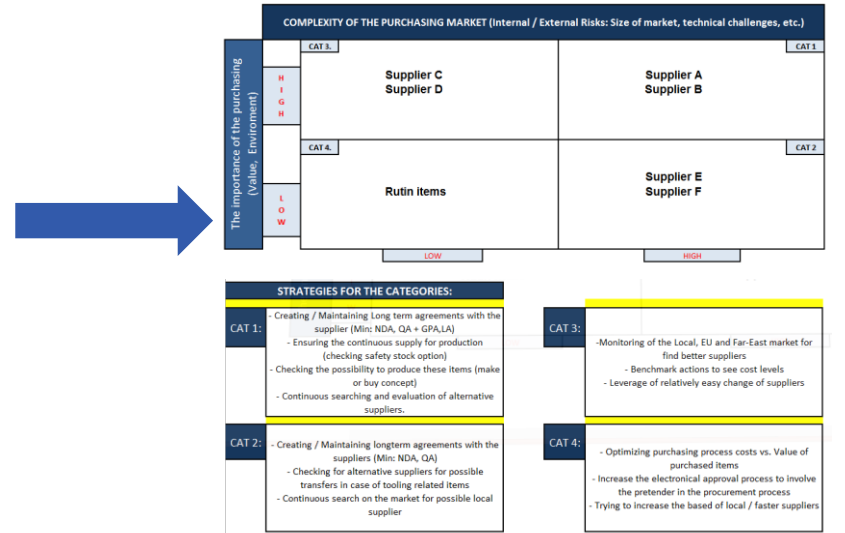
Supplier development

- Dedicated Supplier Development Engineer
- Support in quality issues for SQA engineers in supplier related quality problems
- Visits and audits at suppliers
- Improvement of communication and co-operation
- Monitoring of Reach, RoHS, Conflict Mineral, IMDS, Food Contact, BOMcheck with declarations
- Suggestions and requirements for improvements
- Determine short– and long-term improvement actions
- Pre-qualification in the case of new suppliers

SUPPLIER EVALUATION, DEVELOPMENT, SOURCING

Strategic purchasing

- Commodity driven Sourcing Team
- Supplier classification based on Kraljic matrix
- Continuously updated supplier database
- Seeking and pre-qualifying of new suppliers
- Agreements with suppliers
- Optimization of commercial conditions
- Defining strategic actions toward suppliers, based on classification (Development / Hold / Phase Out / make or buy)
- Defining Road map for development of suppliers



TRAININGS

Wide-spread trainings for all workers at entrance
(plus half-yearly and yearly) with examination

- Quality (based on ISO 9001, IATF 16949 and ISO 13485 standards)
- Labour-safety (based on ISO 45001)
- Environment (based on ISO 14001)
- Energy management (based on EN ISO 50001–VTEP)
- Dress rules
- General (rules, ethics, culture)



TRAININGS

Extended trainings for white-collar workers:

- according to the professional field
- further trainings for improving skills (competence, language)
- specialized trainings for management

Regular (monthly) training for blue-collar workers based on:

- operation instruction, failure cards, customer feedbacks etc.
- yearly training plan to improve worker skills



MEASUREMENT EQUIPMENT CALIBRATION

Internal calibration - Mostly simpler equipment: calipers, micro meters, scales, feeler gauges, dials, simple electronic measurement equipment etc.

External calibration - All the special measurement equipment, which require external laboratory: coordinate measurement machine, torque meters, functional testers, complex electronic measurement equipment etc.

- More than 1700 pcs measurement equipment
- Electronic data base for proper tracing of validation deadlines
- Calibration in temperature controlled measurement lab

SPECIAL REQUIREMENTS

FDA (Food and Drug Administration)

At VTEP, it ensures the manufacturing of safe medical devices complying with the mandatory regulation of 21 CFR Part 820 (Quality System Regulation) for the US market. FDA currently applied at Philips medical products.

I-Quality

Requirements for companies, who manufactures Products for P&G (Braun). Determines major principles for Quality Management System. Currently applied at Braun Shaver Cleaning Center products.



SPECIAL REQUIREMENTS

REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) Its major element is to communicate information on chemicals through the supply chain to restrict the usage of them. It covers those chemicals, that can have potential negative impacts on human, health or environment



RoHS (Restriction of Hazardous Substances Directive)
This directive restricts the use of six hazardous Materials of various types of electronic and electrical equipment:
Lead (Pb), Mercury (Hg), Cadmium (Cd),
Hexavalent chromium (Cr6+), Polybrominated, biphenyls (PBB), Polybrominated diphenyl ether (PBDE)



SPECIAL REQUIREMENTS

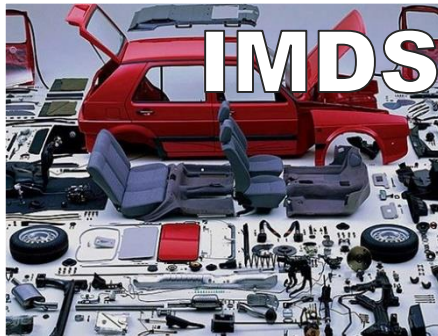
Food contact materials

Materials that are intended to be in contact with food. It determines strict rules for manufacturing, packaging and warehousing of parts and products contacting with food.

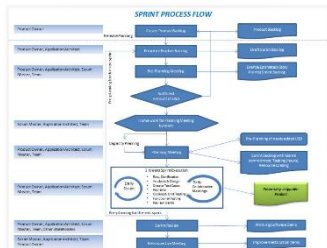


IMDS (International Material Data System)

In the automotive products, it is a requirement to collect information about the used materials (and hazardous content), which must be declared in material data sheet into the IMDS. All supplier must submit data about the parts that sells to customer.



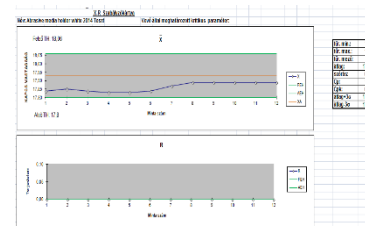
Process flow chart



Control Plan

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SPC



PFMEA - DFMEA

[illegible]

8D report

|  8D REPORT (Form of Complaint against Mr. Advocate) | | No. of completed report: 01314 Date of completion: 16.04.2019 | |
|---|-------------|--|-------------------------|
| State of Customer Complaint Investigation Report | | | |
| C1 C2 C3 C4 C5 C6 C7 C8 C9 | | Date of report | |
| 01 - Complaint description in details | | | |
| Customer's name: SHRADDHA KISHORJI K. SHIRUR Customer's address: 10/666, Kishor Nagar, S. Nagar Customer's representative: Chaitan George Customer's telephone: 9800 60 60 60 E-mail address: shirurk@rediffmail.com Date of visit on site: 16.04.2019 Date of report: 16.04.2019 | | Engineer's name: WPS, G. S. Engineer's address: Engineer's representative: Engineer's telephone: Engineer's e-mail: Product name: Philips PPS 1 Product drawing no: Product in stock: Date of production: Quality duty number: Product warranty: | |
| Quantity of delivered quantity: Date of delivery: Delivered quantity: | | Quantity of delivered quantity: Date of delivery: Delivered quantity: | |
| Description of defects: 0 Failure ASG 1 A B C ASG 1 ASG 1 ASG 1 ASG 1 ASG 1 Date of visit on site: Date of report: | | Created by: | |
| Decision about the shipment: Problem description: None as a defective product was not returned back to us. | | 1. The shipment will be returned back to us. Only the returned back to us. 2. The shipment will be returned back to us. Only the returned back to us. 3. The goods can be used as such without any return. 4. Waiting for decision | |
| Other remarks: Complaint cost 10K | | | |
| Expected actions: - First feedback within 7 days - Effective corrective action (filled) 30 day - These plans are necessary documents about the actions into the file (i.e. audit, measurements, Reports, reports, photos, etc.) - Closing time within 14 days | | | |
| 01 - Open 02 - closed | | 16.04.2019 | |
| 02 - Team activities in team members | | | |
| Name: | Department: | Date: | Name: Department: Date: |
| Planned deadline of closing time: | | | |

**MSA
Gauge
R&R**

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TEST LAB

Test types

- Product design tests
- Product release test
- Battery tests in separated test lab
- Product functionality - related test
- Product performance - related test
- RoHS compliance
- Approbation pre-tests
- Climatic tests in temperature and humidity chambers
- Internal test for investigation of quality problems

Measurement equipment

- Programmable AC Power Source (Chroma 6530, Chroma 63113A)
- Insulation/Current Leakage tester (GW Instek GPI-745A)
- Power analyzer (Yokogawa WT210 + GPIB)
- Digital multimeter (Picotest M3500A, Keysight 34461A)
- Hi-pot tester (Hioki 3561-01)
- Force/torque meter (Mecmesin AFG 500)
- Static torque wrench (Mecmesin TW15)
- Contactless RPM meter



XRF TESTER
(RoHS)



TEMPERATURE
AND HUMIDITY
CHAMBER

MEASUREMENT LAB

Major activity

Measurement in connection with:

- Initial sample approvals
- Quality problem investigation
- Tool approval, optimization or reparation
- Special demand from customer
- R&D

Measurement equipment

- Keyence IM-7020 image measurement system
- Atos 3D scanner
- Dea Global CMM
- Global performance cmm
- Optiv classic optical cmm
- Tesa visio optical cmm
- Tesa cmm
- Nikon profile projector
- Tinius Olsen tensile testing equipment
- Torque meter
- Scale
- Surface roughness meas.
- Hardness meas.



THANK YOU FOR YOUR KIND ATTENTION!



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