EWELLIX
MAKERS IN MOTION

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Ewellix Standard for suppliers

Edition 6.1

1. General requirements

This Standard is established so that suppliers fully understand and comply with the Ewellix policies and specific requirements set forth.

2. Scope

Ewellix Standard for suppliers, edition 6.0, applies to suppliers of products that have an impact on the quality of Ewellix's finished products or on the image of the Ewellix brand. It also applies to steel makers not delivering directly to Ewellix but used for Ewellix rolling components.

Code of conduct for suppliers and subcontractors

- Suppliers shall adopt the principles of the Ewellix Code of conduct for suppliers and subcontractors. Suppliers shall provide evidence of compliance with these principles when requested by Ewellix. Maybe you should adda direct link to the document on Ewellix supplier portal
- It is strongly recommended by Ewellix that suppliers develop such a code of their own.

Environmental legal compliance

Suppliers shall have procedures in place to comply with Ewellix's compliance with:

• REACH (regulation (EC) No 1907/2006 concerning the registration, evaluation, authorization and restriction of chemicals), including substances of very high concern, SVHC, on the candidate list

• RoHS (directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment)

CMRT compliance. Suppliers shall not use certain minerals mined in the "conflict region" of Africa (comprised of the eastern portion of Democratic Republic of Congo and surrounding countries)

The supplier shall identify to Ewellix the source of conflict minerals in products and ensure that any conflict minerals in their products are certified as "conflict free".

Ewellix expects suppliers to inform Ewellix when changes in their products or in regulatory requirements have impact on the above. Continuous improvement

Supplier performance reports

Ewellix actively monitors supplier performance according to the following key performance indicators (QCDI):

- **Q**uality
- **C**ost
- **D**elivery
- **I**nnovation

Such **QCDI** reports are used as a decision base for future business demands and may also be shared withsuppliers.

Suppliers shall report results and relevant improvement activities on agreed key measurements. If requested by Ewellix, suppliers shall aim to increase Ewellix **QCDI** satisfaction by proposing improvements to delivered products or processes in use

For Quality, supplier performance is measured on PPM value and NCR and Delivery performance is tracked through On Time Deliveries with a general tolerance of minus 7 days / plus 0 (Any agreed delivery outside of this window is considered as "not on time".

3. Specific requirements – direct materials and subcontracting

System and process approval

Direct materials and subcontracting suppliers shall be as a minimum ISO 9001 Quality management system (QMS)

certified by an third party part certification body, for the appropriate scope Additional certifications may be requested due to a specific scope, business or customer requirements.

Approval criteria might require visits to supplier's premises using appropriate approval procedures Thus, suppliers shall allow Ewellix employees access to their manufacturing location (as well as sub-suppliers if necessary) in order to enable Ewellix to conduct effective auditing activities of the supplier's management system and relevant processes.

Suppliers shall co-operate fully with Ewellix representatives in the course of such activity and implement the changes that are agreed with Ewellix.

Typical certification audit questionnaires in use by Ewellix are:

Audit format	Purpose
Technical visit	Initial visit to identify alignment between supplier and Ewellix
Supplier Audit	Supplier approval for direct material suppliers and other suppliers that affect product quality, including traded products suppliers

4. Advanced product quality planning

Agreement on technical documentation technical documentation is provided by Ewellix in the form of:

- a drawing and digital formats like STEP files
- list of critical (CC), significant (SC) and high impact characteristics (HIC)
- material standards and practices
- packaging and delivery conditions
- other product specifications

and will be referred to within purchase orders or agreements. Any documentation provided to suppliers by Ewellix shall be considered as Ewellix property and as such shall be treated as highly confidential and be covered by the Non-Disclosure Agreement signed between Ewellix and suppliers.

Suppliers shall use structured methods (detailed feasibility study) to assess the ability to meet Ewellix specifications CC, SC and HIC characteristics shall be identified (specified by Ewellix on drawing or other Ewellix documents and/ or requirements coming from supplier's own processes) as part of the feasibility study and clearly identified on related working documents such as process-FMEA, Control Plan, Work Instruction and Inspection Instruction. Documented evidence shall be retained and made available to Ewellix upon request (See Documentation, Traceability and Record section).

Suppliers shall formally confirm to Ewellix their agreement on final product specifications and also on all applicable subsequent changes Documented evidence of such agreements shall be retained and made available to Ewellix.

5. Product approval

Depending on product type, Ewellix will notify suppliers of specific activities required to verify the conformity to specifications. The objective of this process is to grant formal product approval status.

Approval of steels for rolling components

Bearing steel (such as billets, rounds for tubes, bars, wires, etc.) for the manufacture of rolling components

shall always be approved by Ewellix prior to use by Ewellix or used by suppliers supplying to Ewellix.

Approval of semi-finished products, components and subcontracted operations

Suppliers will be required to apply one of the following procedures for the approval of Ewellix purchased products:

- Production part approval process (PPAP) submissions for which suppliers shall strictly apply the requirements from the AIAG publications. Unless stated differently in the Ewellix order, suppliers shall use PPAP level 3 as default

NOTE: (refer to production part approval process from the AIAG Publications)

- PPAP submissions require parts to be taken from production, unless otherwise specified by Ewellix. This

lot shall be manufactured under all the conditions intended to be used for series production

- First article inspection (FAI) require traceability between samples and production run Suppliers shall submit for PPAP/FAI:
    - Specified quantity of samples
    - Inspection report showing full compliance with all Ewellix specifications
    - Control plan
    - Material certificates
    - P-FMEA
    - Ewellix specific forms

Ewellix confirmation of product approval

Ewellix will complete the assessment upon receipt of the PPAP or FAI documentation; formal written approval will be granted when confirmed that product specifications have been met and requested documentation has been reviewed and approved.

Suppliers are not permitted to supply series production products before confirmation of product approval from Ewellix. If assessment shows that agreed product specifications have not been met, Ewellix will notify suppliers of the nature and extent of the non-conformance and provide further requirements for corrective actions Ewellix quality may issue conditional approvals.

Approval of parts is granted with the Ewellix FAI process. This is the basis for change control procedure (see section “Change control”) in order to assure that any modification to this process route will require prior approval from Ewellix.

Start of production (SOP)

Approval status granted by Ewellix does not relieve suppliers of their responsibility to verify that all activities planned during the product quality planning phase are completed and suitable for series production such as:

- PPAP/FAI nonconformances still open
- Open issues with subcontractors
- Open issues on documentation (flowchart, control plan, P-FMEA etc.)
- Capacity problems
- Capability deficiencies

Non-conformances must be closed at an agreed time with Ewellix quality.

Open issues on documentation must be completed at an agreed time with Ewellix quality Capability deficiencies (Cp, Cpk) must have an action plan with due closure dates as agreed with Ewellix quality. This is not clear for me, could it be rephrased?

6. Manufacturing

Manufacturing process control

The supplier shall:

- Implement mistake proofing methods

Measurement analysis

The capability of measuring systems shall be determined using analytical methods (NOTE: Ewellix recommends the AIAG “Measurement systems analysis – Reference manual”)

Documentation, traceability and records

Suppliers shall maintain traceability for the supplied product back to material sources based on processes affecting quality or material properties. Suppliers shall retain manufacturing records (such as nonconformance follow-up, first and last piece approval, SPC monitoring data, Cp, Cpk studies or 100% measurements, inspections as well as relevant maintenance records, product approval (PPAP, FAI) documentation for a minimum of 10 years, unless otherwise

These records shall readily be made available to Ewellix upon request.

Change control

Changes affecting products and processes require prior approval from Ewellix.

Unless specifically waived by Ewellix, suppliers shall submit to Ewellix a vendor change request notification for changes such as:

- Engineering change to design records, specifications or materials
- Changes in process or method of manufacture or in the inspection plan having impact on quality of delivered product (refer to supplier control plan and to process flow chart or process route)
- Change of material or its source
- Change of source for sub-contracted parts or services (e.g. heat treatment, surface treatment, turning operations)
- New or modified tools (except perishable tools), including additional tool, replacement, or refurbishment, etc.
- Production from tooling and equipment transferred to a different plant location Upon review of a VCRN, Ewellix may invoke product approval Processes

Non-conformances identified at suppliers' premises

A non-conforming product identified by a supplier shall not be shipped without prior documented Ewellix approval relating to the concerned scope. A product shipped under such approval shall be identified on each shipping container, according to Ewellix instructions.

In case of a problem or potential problem that may affect the scheduled delivery terms, suppliers shall immediately inform Ewellix.

Non-conformances identified at Ewellix or at the final customer's premises

In order to cover costs caused by defective products at Ewellix or at the final customer premises, suppliers shall maintain appropriate product liability insurance and provide proof of insurance to Ewellix upon request.

Any product that does not meet Ewellix acceptance criteria, whether found at Ewellix or at the final customer's premises, will be recorded and the supplier responsible for the failure will receive an official vendor non-conformance complaint (VCC) will be issued to the supplier.

Suppliers shall maintain effective documented procedures, preferable in 8D format, using team approaches and disciplined problem-solving methods, including 5 WHY analysis, to ensure that on receipt of a VCC they will:

- Implement immediate actions, and report to Ewellix within two working days, with logistical and containment actions information
- Perform root cause analysis (for the defect, for the non-detection and for systemic causes)
- Analyze impact on process flowchart, control plan and P-FMEA and, if applicable, update such documents and make available to Ewellix
- Implement permanent process-related corrective action for reducing defects ~~towards Zero Defect~~
- Close VCC when the effectiveness of the action has been confirmed Inform Ewellix of the progress of a corrective action until completion of said corrective action, verification and closure

In case of a nonconformance, Ewellix (as well as the appropriate Ewellix customer or accredited 3rd party auditor)

has the right to perform a quality audit to verify the effectiveness of problem-solving activities.

When the nature of the defect may affect the performance of Ewellix in delivering to the final customer, Ewellix may require suppliers to conduct in a timely manner sorting operations at Ewellix's premises, designated third party inspection source or at Ewellix's customer location at the supplier's expense.

Suppliers not showing improvement in the severity ~~number~~ of VCC's will be subject to escalation approach.

7. Responsibility towards sub-suppliers and subcontractors

Suppliers to Ewellix are responsible for supplied material, components and subcontracted operations.

If the requirements of Ewellix are not met, suppliers are not allowed to use the sub-suppliers or subcontractors unless prior approval has been given by Ewellix.

Suppliers shall purchase the relevant materials from Ewellix approved sources (sub-suppliers or subcontractors) if specified by Ewellix. The use of such sources does not relieve suppliers of their obligation to ensure quality of supplied materials, components and subcontracted operations.

8. Supply chain

Supply chain agreement

Ewellix's target for on-time delivery is zero broken promises. In order to achieve this goal, suppliers shall define and agree to the following with Ewellix:

- Key logistics parameters (Ewellix requested date, throughput time, transportation lead time. Minimum order quantity, batch size)
- Definition of operational direct contacts between suppliers and the Ewellix concerned unit
- System measurement in place on delivery performance

Production planning and physical flow

Suppliers shall have a computerized system allowing for daily and online reception (at least through email) of the Ewellix purchase orders, call-off orders and forecasts as well as transfers of advance shipment notifications (ASN's) at the time of shipment.

Suppliers shall have an order-driven system, preferably computerized, to control material procurement, production planning and deliveries on a daily operational basis. Suppliers shall have daily access to Internet.

Suppliers shall have structured methods to follow up key logistic parameters such as broken promises, lead time and other agreed parameters and shall implement activities for continuous improvements. Broken Promises that do not meet Ewellix acceptance criteria, will be recorded and "assigned to supplier" by the receiving Ewellix unit and an official vendor delivery complaint (VDC) will be issued to the supplier.

Orderliness and cleanliness of operations and processes shall be maintained and systematically improved.

Delivery deviations identified at Ewellix

Any product (purchase order) that is not delivered as agreed to Ewellix, generating broken promises potentially causing disturbance in Ewellix operations, may be recorded and" assigned to supplier" as an official vendor delivery complaint (VDC) by the receiving Ewellix unit. In such case Ewellix will expect a thorough root cause investigation resulting in efficient corrective actions to avoid the same issue from happening ever again. Ewellix may provide a specific investigation format which in such cases shall be applied accordingly.

9. Specific requirements – capital equipment

System and process approval

The system and process of suppliers of capital equipment shall be approved on the basis of the following documented evidence:

- Commitment to Ewellix Standard for suppliers
- All specific requirements from Ewellix are passed

Product acceptance

The product acceptance for capital equipment is executed in two steps unless otherwise specified, and these inspections shall reflect verification of the purchasing agreement (including technical specifications) as well as any other relevant and agreed requirement The two activities are defined as follows:

- Factory acceptance test (FAT) conducted at supplier site
- Site acceptance test (SAT) conducted at final Ewellix user site

If there are any major concerns identified during the FAT test, then suppliers are not authorized to deliver the equipment to Ewellix.

Non-conformances identified at Ewellix

Any products that fail product acceptance (FAT, SAT) or deviate from purchasing agreement (including technical specifications) during the warranty period may be recorded and "assigned to supplier" as an official vendor conformance complaint (VCC) by the relevant Ewellix unit. In such cases Ewellix will provide a specific "corrective action report (Ewellix CAR)" format which shall be applied accordingly.

Additional requirements

Suppliers of capital equipment are at minimum required to perform, document and maintain a safety risk assessment per type of equipment in alignment with the ISO EN 12100 standard (Safety of machinery – General principles for design – Risk assessment and risk reduction).

Ewellix requires the CE marking (European Conformity) when applicable for categories of products being subject to relevant EC directives such as for safety, health, and environmental protection. Suppliers shall upon request from Ewellix be able to submit their “declaration of conformity” in regard to the CE marking and it shall include the following information:

- Manufacturer’s name
- Full postal address
- Product description (incl model and serial number)
- A list of declared EC directives relevant for the scope
- Name, position and signature of the manufacturers authorized representative in Europe

Additional requirement to have UL (Underwriters Laboratories Inc) approval or other similar certification on top of the CE marking can be necessary due to the scope and type of equipment and will in such cases be specifically requested by Ewellix as part of the technical specification.

Suppliers shall have a system in place to monitor the “End of warranty” deadline in order to notify Ewellix in due time and agree upon a date for inspection execution within the deadline of the “End of warranty” Any identified warranty issues found during such an inspection shall be properly addressed and planned for immediate correction by suppliers in a documented action plan to enable for concrete and timely follow up.

Suppliers shall carry adequate product liability insurance covering malfunctioning products at Ewellix resulting in damage to property, people and/or Ewellix products

What about the Selection list of applicable criteria for supplier approval (to be filled in by Ewellix)? Will this be covered by the Quality assurance agreement? We do need a way to convey specific requirements to specific suppliers. For example, ISO 14001 mandatory or IATF 16949 to give a few examples.

Supplier:

Data:	Signature	Name readable

Ewellix:

Data:	Signature	Name readable