1. PURPOSE AND FIELD OF APPLICATION

The document defines the criteria for classifying the characteristics and the procedures for obtaining the approval of the supply and the procedures and the acceptance test methods for arrivals, adopted by Italsensor AQ.

2. GENERALITY

The quality and reliability of the product are the result of the coordinated action of all the functions that make up a company.

The main activities that contribute to their achievement are :

- the project;
- definition of processing and testing cycles
- the choice of machinery (processing equipment and control instruments);
- staff training;
- supplier control;
- the collection and dissemination of information;
- any correttive actions

3. REQUIREMENTS AND RESPONSIBILITIES OF THE SUPPLIER

3.1 QUALITY ASSURANCE SYSTEM

The supplier must have an assurance quality system, implemented according to the requirements of the standard or equivalent UNI EN ISO 9001 standards, such as to enable it to ensure the conformity of the product to all the quality specifications required and/or agreed by or with Italsensor.

3.2 TECHNICAL DOCUMENTATION AND INFORMATION FLOW

The supplier must have all the technical documentation sent by Italsensor Purchasing Department, and provide timely to the updates they receive.

If it is not provided with certain documents, it must request a copy from the same office.

Based on the documentation received (drawings, standards/regulations, specifications, etc.) the supplier will have to update, if necessary, its quality management system.

Italsensor technical bodies are available to provide further information about or clarifications regarding drawings, standards, specifications, tests and means of control.

3.3 SUPPLIER PRODUCTION, CONTROL AND TEST MEANS

The supplier must have production, control and test means in quantity and conditions that guarantee the quality and reliability requirements of the product.

Not having suitable means to carry out some of the checks and tests directly and autonomously, prescribed by the documentation received, the supplier must report to Italsensor Purchasing Department, before proceeding with the supply, the characteristics that it is not able to verify.

3.4 CERITFICATE OF QUALITY AND/OR SELF CERTIFICATION

The supplier must attach, to each lot sent, the related Quality and Conformity Certificate (where requested in the purchase order) or duly completed Self-Certification.

The quality and conformity certificate is applicable to all customized components and must include dimensional checks of all the characteristics necessary to ensure the quality of the supply.

For normalized components (not based on drawings) and semi-finished products coming from outsourcing, a quality declaration from the supplier is sufficient.

Raw materials must always be accompanied by chemical analysis of the material.

If the supplier is not able to provide the requested documentation (quality certificate and/or declaration of conformity) he must necessarily report it to the purchasing office before acquiring the order.

N.B. The supplies received without Quality and Conformity Certificate (if provided) or at least a declaration of conformity, are considered in default by the Quality Assurance; particularly serious cases of repeated lack of documentation, are object of Testing Observation with reporting on the Supply Quality chart and can be rendered as Scrap/Waste.

3.5 PRODUCT MARKING

The supplier must comply with any product marking requirements reported on the technical documentation provided and/or on the purchase order.

3.6 CHANGES

The supplier must not accept and/or make changes if not authorized by Italsensor Purchasing Department.

The supplier must not introduce any changes into production (materials, dimensions, processing, treatments ecc.) without having first received an official approval from Italsensor, through Purchasing Office, which authorizes the modification.

3.7 QUALITY AND CONFORMITY OF THE SUPPLY

All products lots must be subjected to quality verification.

Except in the cases where a 100% test is prescribed, the supplier can choose the type of sampling to be adopted, provided that this guarantees what is prescribed and/or agreed.

It is understood that the entire lot can be discarded if at Italsensor the presence of:

- even one “unacceptable” element (waste);
- lack, incompleteness or non-compliance of the documentation provided in attachment to the lot.

The verification of these conditions can generate a test observation, from the quality assurance, with notification to the supplier.

Also against a lot judged to be rejected according to aforementioned methods, if the product was totally or partially recoverable with shooting and/or selection operations and this is necessary for contingent production needs, the supplier is invited to take care of this.

The refusal or unavailability of supplier intervention in useful times, or the need for immediate availability of the material in production, authorize Italsensor to perform product reworking, charging the correspondent cost to the supplier. Italsensor also reserves the right to charge the supplier, any additional costs generated by the non-conformity of the material such as: selection or testing of the non-compliant lot, production stops, penalties requested from Italsensor by its customer for delivery delays.

The material judged to be waste must be picked up within 5 days, on the contrary it will be returned to the supplier with the charge of transport costs.

3.8 DEROGATIONS AND ADJUSTEMENTS OF THE DOCUMENTATION

In case the supplier, for its own production needs, cannot comply with the provisions of the Italsensor documentation, before proceeding he must request the authorization from the Purchasing Department. Depending on the consequences that failure to comply with provisions entail, Italsensor can:

- deny authorization to proceed
- grant permission to proceed with time and/or quantity limit
- grant the authorization to proceed, modifying its own prescriptions as requested by the supplier.

3.9 CORRECTIVE ACTIONS

In the event that the supplier receives, through purchasing department or assurance quality, a product report found not acceptable, must immediately take all the necessary measures to eliminate the caused that caused the defect, giving written notice to Italsensor to specify caused, corrective actions taken and the relative implementation date.

4. ITALSENSOR ACTIVITIES

4.1 PREVENTIVE ASSESSMENT OF THE SUPPLIER FOR APPROVAL

Each supplier selected by Italsensor Purchasing Office (ACQ) must be qualified and approved, by the Responsible of S.G.Q. The return of the questionnaire completed is not a cogent requirement for the evaluation of the suppliers of components in the catalogue, that can still be included in the list of approved suppliers.

Where necessary Italsensor will visit the supplier’s plant, and issue and evaluation report indicating the lever of suitability/eligibility found.

4.2 ASSESSMENT OF THE SUPPLIER IN THE SUPPLY LOCATION

Each supplier approved and authorized to supply will be followed throughout the supply, to assess continuously the performances and reliability

4.3 SIGNALS OF THE QUALITY OF THE SUPPLIES

Italsensor, based on the results of the tests on the product received made at its own plants, will notify the supplier of any anomalies found through the following documents:

- test observation
- supplies situation

The contents or aforementioned documents will be communicated to the supplier, as well as in writing, even by telephone, in order to allow greater timeliness in the implementation of corrective actions.

4.4 MEASURES FOR INSUFFICIENT QUALITATIVE TRENDS

If the qualitative performance of the product received shows an “insufficient qualitative service" and/or a degradation in the reliability level of the supplier, Italsensor reserves the right to adopt the measures deemed most appropriate (letter of call, convocation of the supplier, technical/quality verification with the supplier, reduction or cancellation of pending order, etc.).

4.5 CONVOCATION OF SUPPLIER AND INSPECTION VERIFICATION

Italsensor purchase department, with the quality assurance support, has the prerogative to call the supplier, reporting the topics to be examined; at the end of the meeting will draw up a record on the agreed measures, and will make a copy both to the supplier and to quality assurance that will verify its implementation

In case of particular gravity and/or repetitiveness of anomalous situations, quality assurance can decide to carry out checks or inspections at the supplier to assess the causes of the qualitative deterioration.

These checks, previously agreed between Italsensor purchasing department and the supplier, will be conducted jointly by Italsensor technicians and supplier technicians, who will have to make available his own control and test equipment with the relative personnel.

At the end of the verification the quality assurance will draw up a report of te results, which will send to the purchasing department to take the most appropriate measures.

5. SUPPLY METHODS AND REQUIREMENTS

5.1 START OF SUPPLY

The supply of a new or modified first supply product must always be authorized, through the purchasing department, by Italsensor quality assurance through a "supply approval", issued following sampling of the product presented by the supplier.

With the approval, Italsensor, as a result of checks and / or tests, establishes the suitability for use of a specific product, thereby authorizing the supplier to produce.

The supplier who produces before obtaining approval, does so at his own risk.

5.2 CASES SUBJECT TO SAMPLING

The following supply cases are subject to initial sampling, limited to products not purchased in the catalog:

- new product
- product already in use, built with new equipment
- product already in use, built by a new supplier
- product already in use, on which a modification has been introduced
- product already in use, built with equipment that has undergone extraordinary maintenance
- product already in use, built with a different production cycle and / or different material.

5.3 SAMPLING METHODS

To obtain approval of a product, the supplier, following a regular "order" or "request" issued by the Italsensor Purchasing office, must present a sample of the product itself.

The sampling must reach the quality assurance and accompanied, where applicable, by a regular quality and conformity certificate and where applicable by a certificate of chemical analysis of the material, indicating:

- the reason for sampling
- the supplier test report indicating the checks carried out and the relative results

Products built by molds with multiple figures, each of them must be clearly identifiable by number, letter or other sign suitable for the purpose.

5.4 NUMBER OF SAMPLING

Unless otherwise agreed, the samples must reach the following quantities:

- if the product is built with multi-figure equipment, n° 5 elements per figure;
- in the other cases, 5 items taken consecutively.

In the event that the Quality Assurance considers it worthwhile, it may require further and more consistent sampling for the execution of application tests, assembly, laboratory, finished product etc.

5.5 TEST AND BENEFIT SUPPLY REPORT

The result of the testing of each sampling, positive or negative, will be transmitted to the technical service, to the purchasing department and through the latter to the supplier, by means of a written communication in which all the necessary and binding indications are reported. Any delivery order

issued against a successful product sampling can be considered a substitute for written communication to the supplier.

5.6 DOCUMENTATION

The supply is regulated by the purchase order and the technical documentation (drawings, specifications, standards, tables and various prescriptions) that the Italsensor purchasing office will send to the supplier before the start of the supply itself.

During the latter, any changes to what is prescribed by the documentation will reach the supplier by written communication, through the same office.

5.7 TRANSPORT AND PACKAGING

The product must be supplied in containers or packaging previously agreed with the Italsensor purchasing department.

In the absence and / or derogation of the above, the product must in any case be supplied in containers or packaging that: preserve the product from damage or deterioration and provide sufficient accident prevention guarantees during the period of transport, handling and storage.

6. CLASSIFICATION OF PRODUCT CHARACTERISTICS

6.1 IMPORTANCE CLASSES

Each characteristic considered is assigned a "Class of importance", determined by the consequences that the possible deviation of this characteristic from the prescriptions may entail on the complex on which the product is mounted.

The Italsensor distinguishes the following "importance classes":

- CRITICAL
- IMPORTANT
- SECONDARY

6.2 CLASSIFICATION OF CHARACTERISTICS

Normally, to classify the importance of the characteristics, Italsensor adopts the criteria set out in Prospectus 1.

The importance classes, attributed to specific or critical characteristics of the particular, are normally shown directly on the technical documents relating to the product (drawings, specifications, etc.).

When no symbol appears, the characteristic is classified as "SECONDARY".

The importance classes, attributed to common characteristics, ie present in different products (eg

dimensions, without tolerance, shape errors, roughness, appearance, etc.), are instead indicated on the technical documents, referring to the reference to the applicable standards.

FORM 1 – Criteria for the attribution of the Importance Class

Possible consequences on the finished complex	Class	Symbol
The deviation from the requirements may compromise the efficiency / use	Critical	
The deviation from the prescriptions can cause the partial reduction of the efficiency / use	Important	
The deviation from the prescriptions can only cause minor problems	Secondary	-

7. OPERATING METHODS FOR THE ARRIVAL TESTING

7.1 ARRIVALS ACCEPTANCE TEST

All external supply products are subjected to quality assurance at the acceptance check for arrivals to check their quality characteristics, acting as a barrier to unacceptable lots.

7.2 CONTROL SPECIFICATIONS

7.2.1 DRAWINGS AND STANDARDS

For the testing of dimensions, treatments and any other qualitative characteristic of the external supply products, the Quality refers to the drawings and standards issued or recognized by Italsensor and distributed to suppliers by the purchasing department.

7.2.2 CONTROL CYCLE

For each product, or groupings of homogeneous products, quality assurance prepares a control cycle in which each characteristic to be tested is indicated with the relative frequency, sampling quantity, control means, references to specific standards and specifications and any further information suitable to fully define and make the testing rational.
The quality assurance also takes care of updating the cycles, making all the variations that may be useful in terms of compliance with the customer's specifications, production requirements, etc., indicating the date of change. In the case in which homogeneous groups of components are attributable to common control criteria, quality assurance issues specific work instructions (IL51 and IL54) instead of specific control cycles.

7.3 STATISTICAL TEST OF QUALITY OF SUPPLIES

7.3.1 TESTING METHOD

Unless otherwise notified and / or agreed, Italsensor tests the batches of normal external supply according to the statistical test for variables / attributes, by sampling at a fixed quantity.

7.3.2 SAMPLE NUMBER

The sample quantity is determined by the lot number and the criticality of the product, and is defined in the IL51 and IL54 work instructions.

7.3.3 OBSERVATION OF TESTING

Following any detection of defects, a test remark (non-conformity report) will be issued for the related dispute, which will indicate in detail the defects found and the details needed to identify the lot.

The content of this document in some cases will also be transmitted by email, in order to allow greater rapidity in the realization of any corrective actions.