Examination Procedure	Beteckning/Document KBE EP-101
	Utgåva/Issue 3 (E)
Rubrik/Title Visual Inspection	Datum/Date 2017-05-22
	Ersätter/Supersedes 2 (E)

1 Scope

This Examination Procedure is applicable as routine inspection to all electrical equipment.

If the equipment contains printed board assemblies KBE EP-190 shall be applied.

2 Objective

Verify that the product has been manufactured in a professional manner and in accordance with relevant specifications

3 Method

A systematic visual inspection is to be performed in accordance with the Manufacturers production and quality procedures, and should include the following points, where applicable:

- Product identification
- Personal safety
  Protective earthing, leakage paths and air gaps, degree of protection, protective measures against unintentional direct contact, accessibility of fuses
- Ratings
  Voltage, frequency, load, inputs and outputs
- Process instruments
  Measuring range, accuracy, measured quantity and unit, scaling, calibration
- Control switches, indicators and meters
  Installation, function, ergonomics, MMI
- Marking signs and labels
  Conformance to the List of Labels, readability
  External signs – product
  Internal signs - item and location designations, apparatuses, fuses
- Component and apparatus location
  Conformance to the List of Apparatus, accessibility, risk of personal damage
- Internal cabling and wiring
  Conformance to the Wiring Table, wire types and colours, conductor dimensions, markings, strain reliefs, risk of mechanical damage, distance to heat emitting items

- Electric connections
  Connecting method, workmanship, cable screens
- Unused cable leads
  Taken care of in a professional manner
- External connections
  Accessibility, terminal blocks, connectors, cable strain relief, fastening devices
- Cleanliness
- Environmental adaptation
  Ventilation, enclosure, cable penetrations, EMC protection, surface treatment and finish, corrosion protection
- Other requirements as set out in the manufacturing documents, the Technical Specification or applicable Technical Requirements (TBE)

4 Acceptance Criteria

The product shall be of the type stated in the Technical Specification and shall meet all requirements of appropriate technical requirements and those of the Manufacturer's/Supplier's internal specifications. Design and assembly of all parts shall be of professional workmanship in order to ensure proper operation.

5 Documentation

Inspection performed is to be documented in an inspection certificate, record or technical report as required in the Inspection Plan. Several examinations within one and the same Inspection Plan may be reported in the same document.

Examinations carried out as routine (100%) inspection are to be reported to the Purchaser as original documents.

The document shall as a minimum include the following:

- Items examined

Product, designation, quantity, serial numbers and reference to the Purchasers order.

- Identity / Traceability

The identity of the objects under examination in comparison with type tested items and in comparison with relevant specifications shall be specified, unless the identity is certified in a separate document (as per KBE EP-180).

- Examination procedure

It shall be clearly stated if the inspection has been performed according to this Examination Procedure or to any other procedure agreed upon.

- Measurement equipment

Type of equipment, accuracy, identification, etc. and current calibration data for the equipment used where performance is significant to the results

Results

It shall be evident that the items have fulfilled stated requirements and acceptance criteria. Measured and recorded values that are to be documented as per the procedure as well as any deviations from requirements in applicable specifications or test procedures shall be reported.

- Approval

Date of inspection and name of responsible inspector are to be included. The document shall be reviewed and approved in accordance with the Manufacturer's/Supplier's or the laboratory's internal QA/QC routines.