

# IECEX AND ATEX PRODUCT CERTIFICATION

SGS can deliver a full certification package covering all types of explosion protection for both gas and dust hazards.

## PRODUCT CERTIFICATION SCHEME

SGS is the leading internationally recognised certification body for explosion protected equipment, delivering IECEX and ATEX certification to customers around the globe.

## TYPE EXAMINATION

This relates to the comparison of the design specification of a product against the requirements of a standard specification. It will include a physical examination of a sample and the performance of any tests which may be necessary. The results are recorded in a report. (For more detail see our publication BAS-PS-004.)

## PRODUCT VERIFICATION

Each individual manufactured product is compared against the standard or design specification. This is achieved by SGS Baseefa carrying out a physical examination and possibly the performance of tests when the standard calls for routine tests. (For more information see our publication BAS-PS-005.)

## PRODUCT QUALITY ASSURANCE

This is the comparison of a manufacturer's quality management system against the relevant general requirements in the ISO 9000 series

of standards. It also covers the more specific requirements of a quality system standard for particular products (ISO/IEC 80079-34), backed by a system of regular auditing and surveillance of samples.

A Quality Assurance Notification (ATEX QAN), or Quality Assurance Report (IECEX QAR) is a time-limited document, subject to renewal at defined dates, dependent on continuing audit and surveillance. (For more information see our publication BAS-PS-006.)

## ELECTRICAL PROTECTION

- Ex d – Flameproof
- Ex p – Pressurised
- Ex e – Increased Safety
- Ex i – Intrinsic Safety
- Ex q – Powder Filled
- Ex o – Oil Filled
- Ex n – Non Sparking
- Ex m – Encapsulation
- Ex t – Protection by Enclosure Dust
- Ex op – Optical Radiation

## NON-ELECTRICAL PROTECTION

- Ex h - generic identification of non-electrical protection, incorporating:
  - c - Constructional Safety
  - b - Control of Ignition Sources
  - k - Liquid Immersion
- Ex d, Ex p and Ex t may also be used as protection for non-electrical equipment



Images supplied by Cooper MEDC and Hawke International

## FOR MORE INFORMATION CONTACT:

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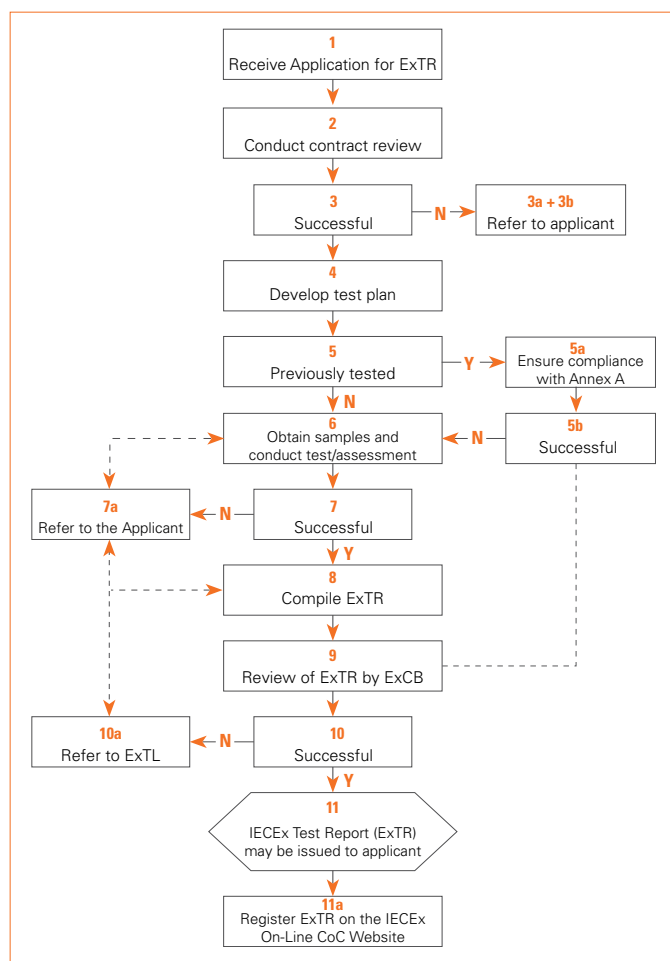
Ex e, Ex q, Ex m, Ex n, Ex t and Non-Electrical Protection: David Brearley

Ex i, Ex op: Maurice Powney

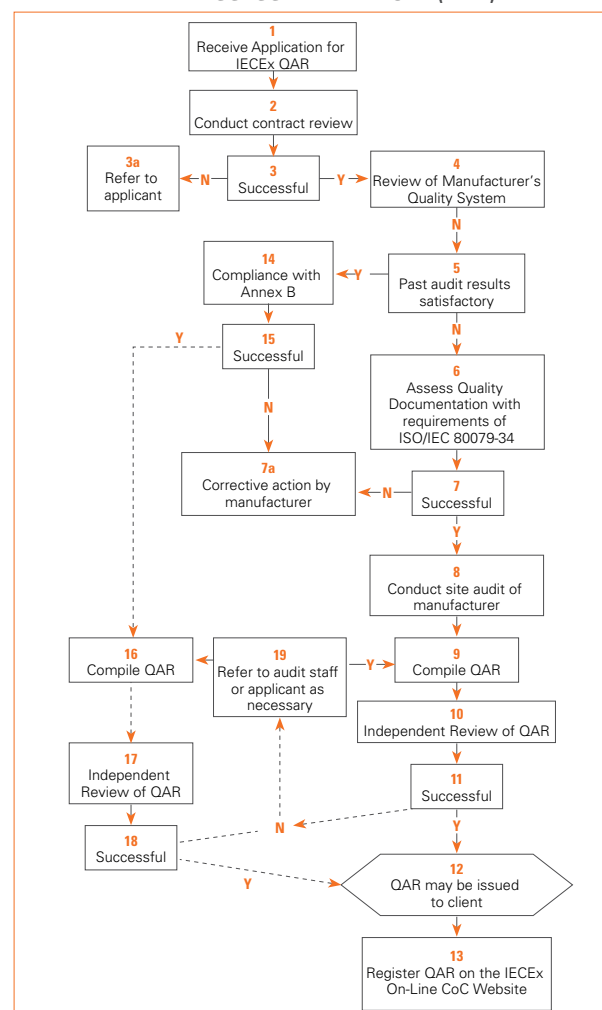


## PRODUCT CERTIFICATION SCHEME

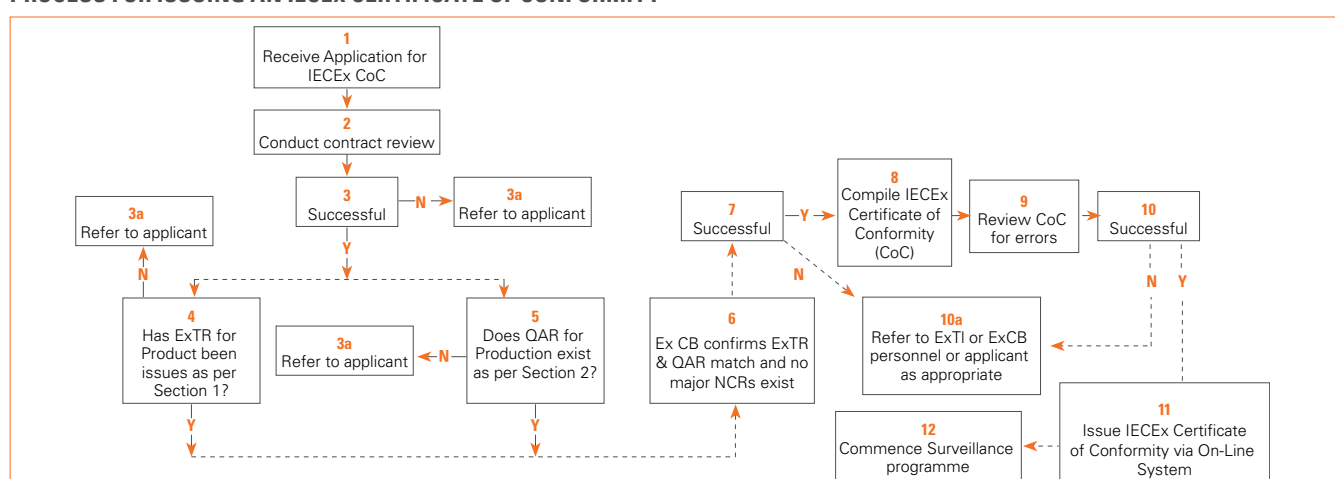
### PROCESS FOR ISSUING IECEX TEST AND ASSESSMENT REPORT (ExTR)



### PROCESS FOR ISSUING IECEX QUALITY ASSESSMENT REPORT (QAR)



### PROCESS FOR ISSUING AN IECEX CERTIFICATE OF CONFORMITY



Note: For added detail of each stage in the flowcharts, please refer to IECEX Operational Document OD 009 available at <http://www.iecex.com/operational.htm>.