



The CML approach to functional safety certification



Overview:

Functional safety is about ensuring that safety instrumented systems have the appropriate dependability for the risks they are controlling.

CML's expertise in functional safety means it can offer a straightforward approach to gaining functional safety certification, making this goal attainable for most equipment manufacturers.

Furthermore, CML's international agreements and recognition of its certification in global markets makes it well placed to assist in leveraging the benefits of these extended markets.

Gaining IEC 61508 certification can add significant value to a product, particularly when safety and reliability are sought after. For overall systems, gaining certification is no better way to demonstrate that all the safety requirements have been engineered correctly and the system integration has been independently verified.

CML's approach to IEC 61508:

IEC 61508 is the default standard that contains requirements for all generic safety systems and their 'elements' (sensors, controllers and final elements). It is referred to in nearly all functional safety sector and application standards like IEC 61511 (process industry) and IEC 62061 (machinery), particularly for the element requirements in those standards.

Manufacturers facing the requirements of IEC 61508 for the first time can find them daunting. Others can find they misunderstand the requirements and either under or over engineer their approach, costing them unnecessary time and money. CML works with its clients at the outset to identify the optimum approach for them.

Even meeting the requirements in the most efficient way can take some time. CML recognises this and we work with our clients at their pace to a staged plan that has been carefully tailored for them. Our experts are then on-hand ready to explain the requirements and to assess each stage when it is ready. We know from experience that the supportive relationship we have with our clients is a key part in achieving a successful outcome to a certification project.



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Assessment methods: The assessment plan which is always defined in advance helps clients to know where their project is heading and what stage to expect next. CML uses the industry recognised CASS methodology ('*Conformity Assessment of Safety-related Systems*'), designed to give transparency and integrity throughout the assessment process.

Product certification: CML offers product certification covering hardware and software, in order to qualify a product for use in applications with a safety integrity level (SIL).

Please ask for further CML's information sheet ***Functional safety product certification programme*** for more details.

System certification: CML can certify the system design and integration lifecycle phase from IEC 61508 or 61511 for a particular system. This is typically of interest to system integrators. Its purpose is to ensure the safety requirements specification has been fully implemented up to factory acceptance test (FAT) or site acceptance test (SAT) as required by the client.

Please ask for further CML's information sheet ***Functional safety system certification programme*** for more details.

Assurance from accreditation: Not all functional safety certification providers are accredited. CML has UKAS accreditation for its functional safety services giving assurance that CML has the right procedures, independence and personnel competencies in this field. As UKAS accreditation is recognised world-wide, so are CML certificates.

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