T6A024

"**Proven-in-Use Policy**"

1. Contents

2. Revision History

Version	Date	Author	Comments
7	06/2017	T6A	Older template.
8	01/2023	PB	Moved to latest template

3. Introduction

In a SIL rated safety loop there are occasions when it is thought desirable to use an instrument or a component well known to the user that has not been assessed under the IEC 61508 group of standards e.g. by an FMEDA[1]. The Functional Safety standards allow the use of such equipment only on the basis that it has been "proven in use" (IEC 61508) or has a history of "prior use" (IEC 61511).

4. Paper Detail

It is the end user who must ensure that the Safety Instrumented System (SIS) meets the requirements of the standard. They can do that by assessing the SIS themselves or by devolving the assessment to a supplier or system integrator. However, the user retains overall responsibility.

The prior use argument may appear an attractive solution, especially in the following situations:
- To a user having to provide safety related information on components already in use,
- To a user seeking to replace old equipment with new,
- To designers of new plant who cannot find devices that have been assessed for compliance with IEC 61508.

The requirements of IEC 61508 and IEC 61511 for "proven in use" are very demanding. The user is required to have appropriate evidence that the components and subsystems are suitable for use in the SIS. This means that as a minimum the user must have:
- a formal system for gathering reliability data that differentiates between safe and dangerous failures,
- means of assessing the recorded data to determine the safety integrity of the device / equipment, and its suitability for the intended use,
- evidence that the application is clearly comparable,
- recorded historical evidence of device hours in use,
- evidence of the manufacturer's management, quality and configuration manufacturing systems,
- device firmware revision records,
- proof that reliability data records are updated and reviewed regularly,

Users are cautioned to closely scrutinise the relevant clauses of both standards before embarking on this solution.

5. 61508 Association Recommended Practices

This document sets out to describe current best practices in proven-in-use for functional safety systems, but does not seek to prescribe specific measures, since these will depend on the application, and any existing constraints of the installation.

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