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| PSS0 Document of Documents |
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# Purpose

This document provides an overview of the Personnel Safety Systems 0 (PSS0) documents delivered for the Safety Readiness Review (SRR).

# Documents

This chapter describes the list of PSS0 documents with respect to requirements in ESS System Documentation prior to a Safety Readiness Review [1].

## Concept of Operations

The concept of PSS0 is described in the following document:

|  |  |
| --- | --- |
| ESS-0134492: | PSS0 Concept of Operations Document |

## Requirements Specification

The requirements for the PSS0 system are detailed in the following documents:

|  |  |
| --- | --- |
| ESS-0414418: | PSS0 Overall Safety Requirements and Initiating Events |
| ESS-0231390: | PSS0 SIL Assessment Report |
| ESS-0238059: | PSS0 Safety Requirements Specifications |
| ESS-0407101: | Software safety requirements specification for PSS0 |
| ESS-0118213:  | Hazards and risk assessment of the ion source and LEBT[[1]](#footnote-1) |
| ESS-0229491: | PSS0 Hazard Register |

## Design Description

The design of the PSS0 system is describes in the following documents:

|  |  |
| --- | --- |
| ESS-0237557: | PSS0 Software Planning Document |
| ESS-0151602: | PSS0 Electrical circuit diagrams design |
| ESS-0237967: | PSS0 Hardware Design Document |
| ESS-0151602: | PSS0 Mechanical Design Drawings |

## Architecture Description

The architecture is described in the following document:

|  |  |
| --- | --- |
| ESS-0237967: | PSS0 Hardware Design Document |
| ESS-0364105:  | PSS0 Software Design Document |

## Interface descriptions

The interface between PSS0 and the ion source is described in the following document:

|  |  |
| --- | --- |
| ESS-0237562: | PSS0 Ion Source Interface Document |

## Integration plan

The integration plan is described in the following document:

|  |  |
| --- | --- |
| ESS-0268277: | Final report of the PSS0 CDR |
| ESS-0134492: | PSS0 Concept of Operations Document |
| ESS-0316778: | PSS0 FIT (Final Integration Test) |

## Operation and maintenance documents

Operation and maintenance are described in the following documents:

|  |  |
| --- | --- |
| ESS-0134492: | PSS0 Concept of Operations Document |
| ESS-0290888: | PSS0 Maintenance Manual |
| ESS-0367794 | Operations Manual for PSS0 |

## Verification Plan

The verification plan is described in the following document:

|  |  |
| --- | --- |
| ESS-0233615: | PSS0 Verification and Validation Plan |

## Verification Reports

The verification reports are detailed in the following documents:

|  |  |
| --- | --- |
| ESS-0379331: | PSS0 Software Pre-FAT Document |
| ESS-0237899: | PSS0 FAT (factory Acceptance Test) |
| ESS-0237906: | PSS0 SAT (Site Acceptance Test) |
| ESS-0316777: | PSS0 SIT (Site Integration Test) |
| ESS-0316778: | PSS0 FIT (Final Integration Test) |

## Validation report

The validation report for safety and supporting systems is described in the following document:

|  |  |
| --- | --- |
| ESS-0401876: | PSS0 Validation and Handover |

## CE marking and or Declaration of conformity

This can be found in the following document:

|  |  |
| --- | --- |
| ESS-0237967: | PSS0 Hardware Design Document |

# Relation between the documents

Figure 1 shows the flow and the relations of the PSS0 documents. In line with IEC 61511 overall safety lifecycle [2], this is to show the intended reading order of the PSS0 documents.



Figure 1: Flow and relations of the PSS0 documents

Summary

This document gives an overview over the PSS0 documents delivered for the Safety Readiness Review (SRR). It also shows the interactions between the documents to show the intended reading order.

# References

1. ESS System Documentation prior to a Safety Readiness Review (ESS-0177837)
2. IEC 61511:2016 Functional safety – Safety instrumented systems for the process industry

**Document Revision history**

|  |  |  |
| --- | --- | --- |
| Revision | Reason for revision | Date |
| 1 | Creation of Document, first issue | 2018-08-14 |
| 2 | Updated document structure after comments by ZHAW on PSS0 documentation. | 2018-11-01 |

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1. This document was not prepared by PSS [↑](#footnote-ref-1)