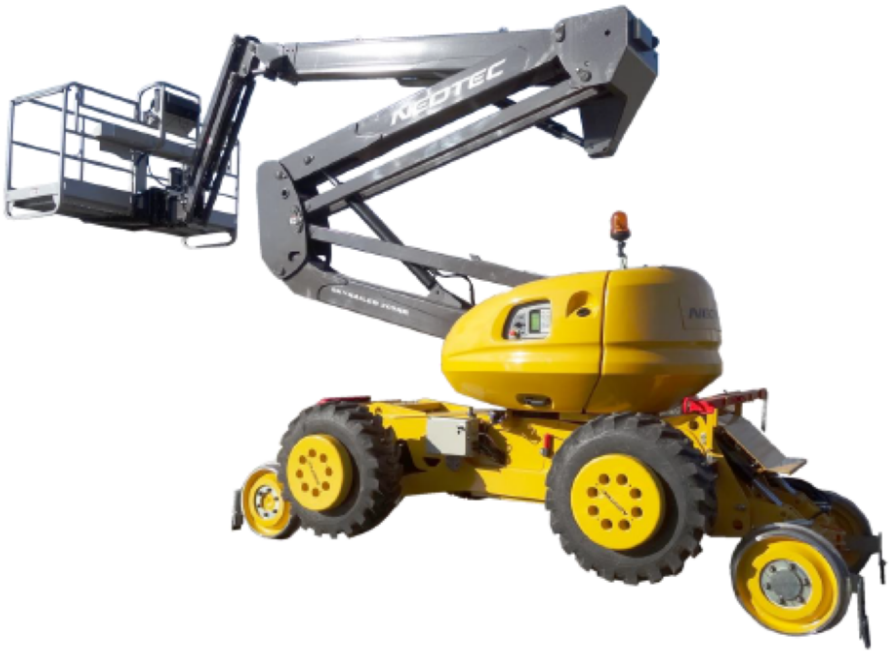
Requirements Specification

Project_Neotec_Skyrailer



HYDAC

Approval/ Freigabe

The content of this Document has been reviewed and approved – as per Date / Signature Der Inhalt dieses Dokuments wurde geprüft und frei gegeben - per Datum/Unterschrift:

Neotec skyrailer		
Responsible	Responsible	Project Manager

HYDAC		
Responsible	Responsible	Project Manager

Documentsnumber / Dokumentennummer
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Definitions and Abbreviations

AgPLd	Agriculture Performance Level d
API	Application Programming Interface
BIOS	Basic Input Output System
BSP	Board Support Package
CEN	C-ENvironment
CM	Configuration Management
TBFRS	Timer base features Requirement Specification
DUC	Design Use Case
EUC	Equipment Under Control
E/E/PE	Electrical / Electronic / Programmable Electronic
E/E/PES	E/E/PE safety-related systems
ECU	Electric Control Unit
EG	Exclude Group
KM	Konfigurationsmanagement
MATCH	Mobile Application Tool Chain
MSC	Mobile Systems and Electronic Controls
PDT	Project Definition Tool
PL	Performance Level
QA	Quality Assurance
SigI	Signal Integration
SIL2	Safety Integrity Level 2
SVN	Subversion
SysML	Systems Modeling Language
TTP	Time Triggered Protocoll
UML	Unified Modeling Language
Vgl	Vergleiche

1 Introduction

The Timer base features Requirement Specification (TBFRS) describes listed requirements by specifying: the ID (requirement to be tested), Version, Required Safety Level, Requirement, Comments, Type of Requirement, Priority, Difficulty, Phase.

ID for Box 10 Requirements and Use Case / Test Case:

```
FF_AAA-bb.RRRee.ee.ee.e_UCff_TTgg
  |    |   |   |   |          |  |   |  |
  |    |   |   |   |          |  |   |  ---- gg = Test Case Index No.
  |    |   |   |   |          |  |    ------ TT = Test Case Type
  |    |   |   |   |          |  |
  |    |   |   |   |          |   ----------- ff    = Use Case Index No.
  |    |   |   |   |          ---------------- UC = Use Case
  |    |   |   |   |
  |    |   |   |    ---------  ee   = Software Req. Index Nr. (sub-indices as needed)
  |    |   |    --------------  RRR = Requirement Type SW / HW
  |    |   |
  |    |    ------------------- bb     = Function Index No. min 2 (or wording)
  |     ------------------------ AAA  = Function Abbreviation
   ------------------------------ FF     = Type of Function SF/NF = (Non) Safety Function
```

Type of Test Case

- Validation of Requirements:
  VT = Validation
- Verification of Use Cases:
  ST = Architecture / System (SW + HW)
  IT = Integration Test
  MT = Module Test

Category of Requirements:

- Non-functional requirements (Manual) Index: (N) Short Name: NFC
- Functional (performance) requirements Index: (F) Short Name: FCT
- Malfunction requirements (Failure, Error) Index: (M) Short Name: MAL
- Configuration requirements Index: (C) Short Name: CFG
- Parameter requirements Index: (P) Short Name: PAR
- Software requirements Index: (S) Short Name: SW

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Requirement Table :

ID #	**Identification number of the software requirement, i.e. SF_XYZ-01.SWR01**
Version	version of the software requirement, i.e. 1.0
Required Safety Level	Safety level of the requirement, normally PLd = d
Description	Description of the Requirement
Type of Requirement	Functional, Display, Performance, (Configuration, Parameter, Architecture, Design …)
Priority	Range: 0~3, Default value = 1 High = 1, Medium = 2, Low = 3 Assigning a requirement priority helps focus efforts on the critical requirements in a requirement trace.

For example:

the ID

SF_SigI-CreateSigI.SWR03_UC03_IT03

means

signal integration should be created.

2 Definitions

2.1.1 Check Table

Entry / Exit Criteria for Writing the Requirement Specification

Entry Criteria	Y/N
Formal requirements defined	Y
Requirements for content and layout including structure of the Requirement Specification have been defined and published by project management.	Y
Project Plan for system design and system test have been concluded. Time schedule and responsibilities, including effort and participants,(also for people from other departments) have been defined, committed and consistent with the project plan and the headcount plan.	Y
Document title and position in the documentation tree (plan) have been defined.	Y

Exit Criteria	Y/N
Requirement Specification conforms to the defined high level requirements.	
Requirement Specification meets project specific requirements concerning content and structure.	Y
Requirement Specification has been reviewed or inspected by development and test (including also sales / marketing , service and field trial support, if necessary.)	Y
Review / Inspection results (e.g. minutes) are available and kept in the project file.	N
Author has performed changes mentioned in minutes.	N
Moderator has verified and signed off that all defects have been corrected.	N
Results were evaluated and distributed by the QA responsible or the release engineer.	N
Requirement Specification (*) is approved, released and under CM control in SVN	

(*) = Please observe separate checklist for this point.

The Entry / Exit Criteria for Writing the Requirement Specification should be checked.

3 Overall Requirements

4 System Requirements