

D-FMEA according 7 steps of AIAG/VDA FMEA Handbook 2019

By Dimitri Daudrich

www.fmeaschule.de

About Me

Dimitri Daudrich

37 years old, married, 1 child (9 months old)



B.Eng. Mechanical Engineering
M.Sc. Industrial Engineering



3.5 years **APIS**
FMEA Moderator



Steering System (1)



All-wheel Drive System (2)



1.5 years **CASQ-it FMEA**
FMEA Expert



4 years **APIS**
FMEA Specialist



- > 2,300 FMEA Meetings
- > 3,600 FMEA Meeting hours
- > 58 FMEA projects
- > 59 FMEA Audits (internal & external)
- > 7.5 years 100% APIS® (every day)



(3)

(1) <https://www.audi-technology-portal.de/en/thassis/wheel-suspension-steering/power-steering>
 (2) <https://www.audi-mediocenter.com/en/quattro-with-ultra-technology-the-permanently-available-all-wheel-drive-system-5503>
 (3) <https://www.maps.google.de>

Roadmap for 20.01.2022

- 1st Step: Planning and Preparation
 - Create a new APIS® FMEA file
- 2nd Step: Structure Analysis
 - Create Structure in the Structure Editor
 - Block Diagram Editor
 - Form Sheet creation
- 3rd Step: Function Analysis
 - Define Functions
 - Create Function Net
- 4th Step: Failure Analysis
 - Define Failures
 - Create Failure Net
- 5th Step: Risk Analysis
 - Severity
 - Initial & Revision States
 - Occurrence & Detection
 - Rating catalogues
 - Statistics Management
- 6th Step: Optimization
 - New Revision States: Recommended actions
 - Add Persons
 - Deadline Editor
- 7th Step: Results documentation
 - Management Report Editor
- Link to P-FMEA
 - Failure caused FMEA Form Sheet

1st Step: Planning and Preparation

- Create a new APIS[®] FMEA file

2nd Step: Structure Analysis

- Create Structure in the Structure Editor
- Block Diagram Editor
- Form Sheet creation

3rd Step: Function Analysis

- Define Functions
- Create Function Net
 - Create Function Net automatically: “Workstation Settings” -> “Settings” -> “Net Editors”

4th Step: Failure Analysis

- Define Failures
- Create Failure Net

5th Step: Risk Analysis

- Severity
- Initial & Revision States
 - Initial States O/D=10 instead of O/D=? -> Workstation settings -> „Actions“
- Occurrence & Detection
 - Set in Display Options (Structure Tree)
- Rating catalogues
 - „Administration“ -> „Valuation catalogues“
 - Change from [System] to [Design]
- Statistics Management

6th Step: Optimization

- New Revision State: Recommended Actions
 - Options: Date in CW or specific date („Document Settings“ -> „Actions“)
- Add persons
- Deadline Editor

7th Step: Results documentation

- Management Report Editor

Link to P-FMEA

- Failure caused FMEA Form Sheet

Thank you!

Please give me your **feedback**:

<https://fmeaschule.de/20-01-2022/>

(anonymous)

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