PLATO e1ns.p-diagram

PLATO
SOLUTIONS BY SOFTWARE

Understanding Influences.

The P-Diagram is a quality method for investigating the factors that influence a system or function. Due to its structure, it is designed in such a way that correlations can be well represented and captured. This visual representation simplifies the analysis for the team and provides documentation that is easy to understand for all parties involved.

All data of the e1ns.p-diagram can be transferred to the system analysis and FMEA. The user decides to what extent data should be used. If desired, the P-diagram can also be used completely independently only as documentation of the system behavior.
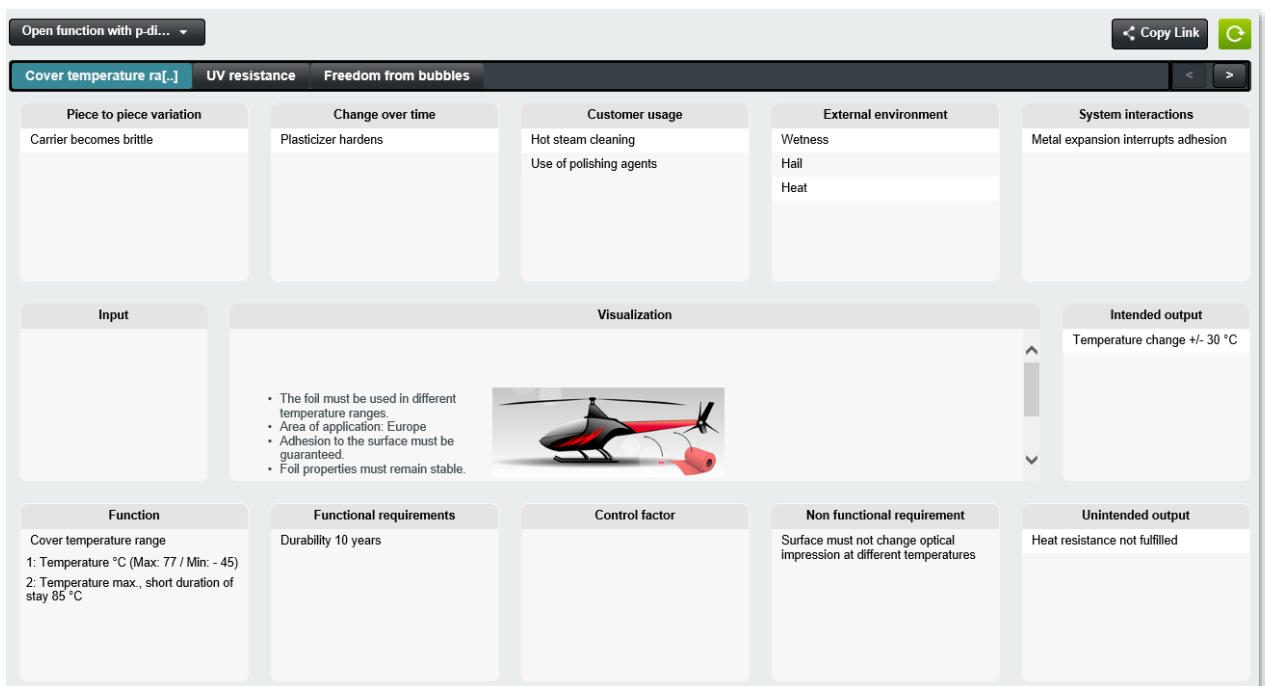
Open function with p-di... ▼				≪ Copy Link ↻
Cover temperature ra[..]	**UV resistance**	**Freedom from bubbles**		‹ ›

Piece to piece variation	Change over time	Customer usage	External environment	System interactions
Carrier becomes brittle	Plasticizer hardens	Hot steam cleaning Use of polishing agents	Wetness Hail Heat	Metal expansion interrupts adhesion

Input	Visualization	Intended output
	• The foil must be used in different temperature ranges. • Area of application: Europe • Adhesion to the surface must be guaranteed. • Foil properties must remain stable.	Temperature change +/- 30 °C

Function	Functional requirements	Control factor	Non functional requirement	Unintended output
Cover temperature range 1: Temperature °C (Max: 77 / Min: - 45) 2: Temperature max., short duration of stay 85 °C	Durability 10 years		Surface must not change optical impression at different temperatures	Heat resistance not fulfilled

Fig.: The P-Diagram groups the different aspects of analysis around the central visualization field.

Use and Application

- Examines system/ component behavior
- Helpful for complex systems with many interactions, conditions and design parameters
- Preparation of a Design FMEA
- Preparation of a test plan
- Delivers failures for the FMEA
- Provides input for the Test Plan
- Serves as documentation
- Operation according to AIAG/VDA (Alignment)

Focus and Functions

Working in a Team

- Only a web browser is required to analyze a P-Diagram together.
- Employees receive links with direct access to the P-Diagram.
- Team members work simultaneously and add their knowledge to the fields of the P-Diagram during the moderation.
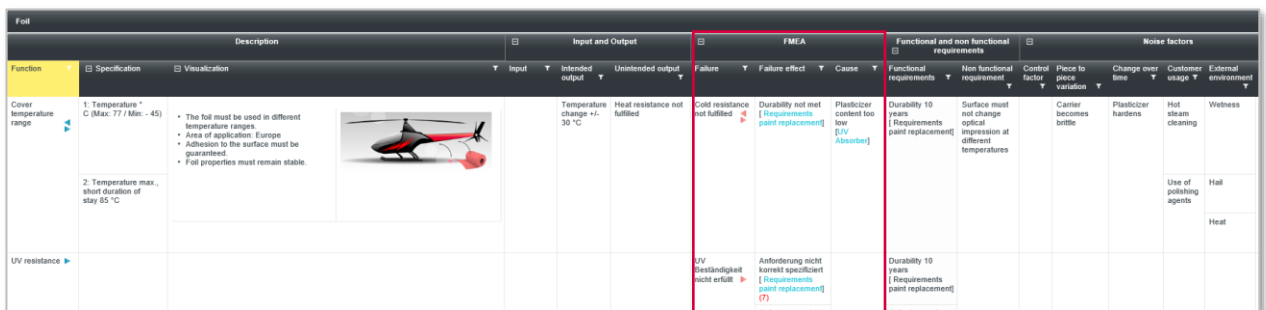
Use of Data for FMEA and System Analysis

Results of the analysis are used for FMEA and system analysis if required. This is done conveniently via suggestion lists in the relevant fields:

- Noise factors are offered in suggestion lists for failure causes in the FMEA.
- Input and output are offered in suggestion lists for specifications.
- Unintended output is offered in suggestion lists for failures in the FMEA.

Individual Configuration

- PLATO's modular concept allows a company-specific configuration so that individual working methods can be implemented.
- In addition to the graphical editor, there is a form for the P-diagram in which data can be conveniently modified, analyzed and filtered.
- The form additionally displays fields from the FMEA Form (Failure, Failure Effect, Cause). Thus it is possible to transfer FMEA-relevant data quickly and clearly from the P-Diagram into the FMEA.

Fig.: Data of the P-diagram in tabular view. Additionally, fields from the FMEA are displayed.

International Teamwork

- The translation of the P-diagram into foreign languages enables continuous international collaboration.
- An interface to the Google translator is available.