

## Peter Kafka

### Safety & Reliability Engineer

Dr. techn. Peter Kafka is a Senior Consultant for Safety, Risk and Reliability Assessment with extensive experience (~ 30 years) in various industries (e.g. Process, Nuclear, Aviation, Motorcar and Space). Working mainly for German industries, he is also experienced with international organizations like OECD, EC, IAEA, NASA and NRC. He is familiar with the EN and DIN standards specifically for HAZOP, PHA and Risk Assessment (also with the NASA and ASME-PRA Standard). He has given many in-house seminars e.g. for R&D (Ford), HAZOPs (MAN), FTA/ETA (IABG) as well as practical guidance as a moderator for the European Machinery Directive for industrial working teams. He has given seminars for SNERDI, a Chinese organization in Shanghai. He is a founding member of the European Safety and Reliability Association (ESRA) and a leading expert and speaker at international conferences (e.g. ESREL, PSAM, SMiRT, and ISSST in China). Editorial Board Member of the "International Journal of Performability Engineering" (India) and "Journal of Safety and Environment" (China).

#### Education:

- Mechanical Engineering, graduated in 1961 at TU Graz ( Austria)
- PhD, earned in 1967 at TU Graz (Austria)

#### Areas of Expertise:

- FMEA Assessment
- HAZOP Assessment
- Reliability & Risk Assessment
- Safety & Risk Management
- Safety Integrity Level (SIL) Assessment
- Event Tree and Fault Tree Analysis

#### Industrial Practice

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|----------------|--|
| 2001 - Current | Independent Consultant working e.g. for FORD, Siemens Transport, Bombardier, MAN, BMW, EADS, Bosch, Cassidian, etc. for different topics in Reliability, Safety and Risk Assessment. |
| 1971 - 2001    | Head of Department Reliability Engineering at „Gesellschaft für Anlagen - und Reaktorsicherheit (GRS) GmbH“, Garching. Responsible for NPP Safety.                                   |
| 1962 - 1971    | Group Leader at Siemens/KWU, Erlangen. Responsible for Thermal Hydraulics of NPPs.   |

#### Major Projects:

- Ford Werke AG; approximately 25 in-house Seminars for R & M (Reliability & Maintainability) for Motor Car Production.
- Siemens Transport; consulting services for Risk Assessment of Train Systems.
- BMW AG; consulting services for Reliability Assessment of Motor Cars.
- MAN B&W Diesel AG; consulting services for HAZOP Studies for Diesel Electric Power Plants.
- Elektro-Thermit GmbH; consulting services for HAZOP Studies.
- Bombardier; in-house Seminars for Safety Assessment of Train Systems.
- Connex AG; in-house Seminars for Safety Assessment.
- MAN Solar Millennium; consulting services for HAZOP Studies.

- Flagsol GmbH; consulting services for HAZOP Studies for Solar Plants.
- Zettl GmbH; consulting services for SIL Studies for Process Equipments.
- KMPT GmbH; consulting services for SIL Studies of Process Equipments.
- Deutsche Bahn AG; consulting services for Risk Studies of a Electronic Switchyard.
- IABG GmbH; consulting services for FTA Studies.
- ELIN GmbH; consulting services for FTA/SIL Studies for Train Systems.
- European Commission, 6<sup>th</sup> Framework Program, Project Partner in "Virtualis".
- MDT SE, consulting services for HAZOP's for Diesel Electric Plants in die Framework of CE Declaration and the Machinery Directive

Professional Affiliations/Memberships:

- VDI Member (more than 10 years)
- KTG Member (more than 10 years)

Languages:

German: First language                      English: Fluent

Detailed Project History (last ten years):

*Performed HAZOP's:*

2 for Chlorine Storage Facilities.  
16 for Diesel Electric Power Plants.  
2 for Thermit Powder Production Plants.  
6 for Solar Electrical Power Plants.

*Performed FMEAs (very similar to HAZOP)*

1 for Train Systems  
1 for Avionic System (Airplane)  
2 for Motorcar System  
Many for Motorcar Production Lines

*Performed ETA/FTAs:*

Many for Nuclear Systems  
1 for a Space System  
3 for Process Systems  
2 for Motorcar System  
1 for Fire Distinguisher System  
1 for Railway System

*Software Used:* e.g. HAZOP+ 2.0, Workbench/FaultTree+ from Isograph, U.K.; Relex from Relex Company, USA, BowTieXL from Governors NL, and Microsoft Tools.

Study and Experience:

Mechanical Engineering,  
Basic Knowledge in Chemistry,  
Some experience in Chemical Process Engineering,  
Specialised in Reliability, Safety and Risk Assessment.  
Knowledge of many International Standards, like ASME, OSHA, ISO, IEC, EN DIN

*Feffernitz, June 2014, Austria*

Trained as Moderator, Seminar and Conference Speaker.