

2022

Yngve Rothschild



Hydrogen Safety and Risk Management

Hydrogen safety philosophy



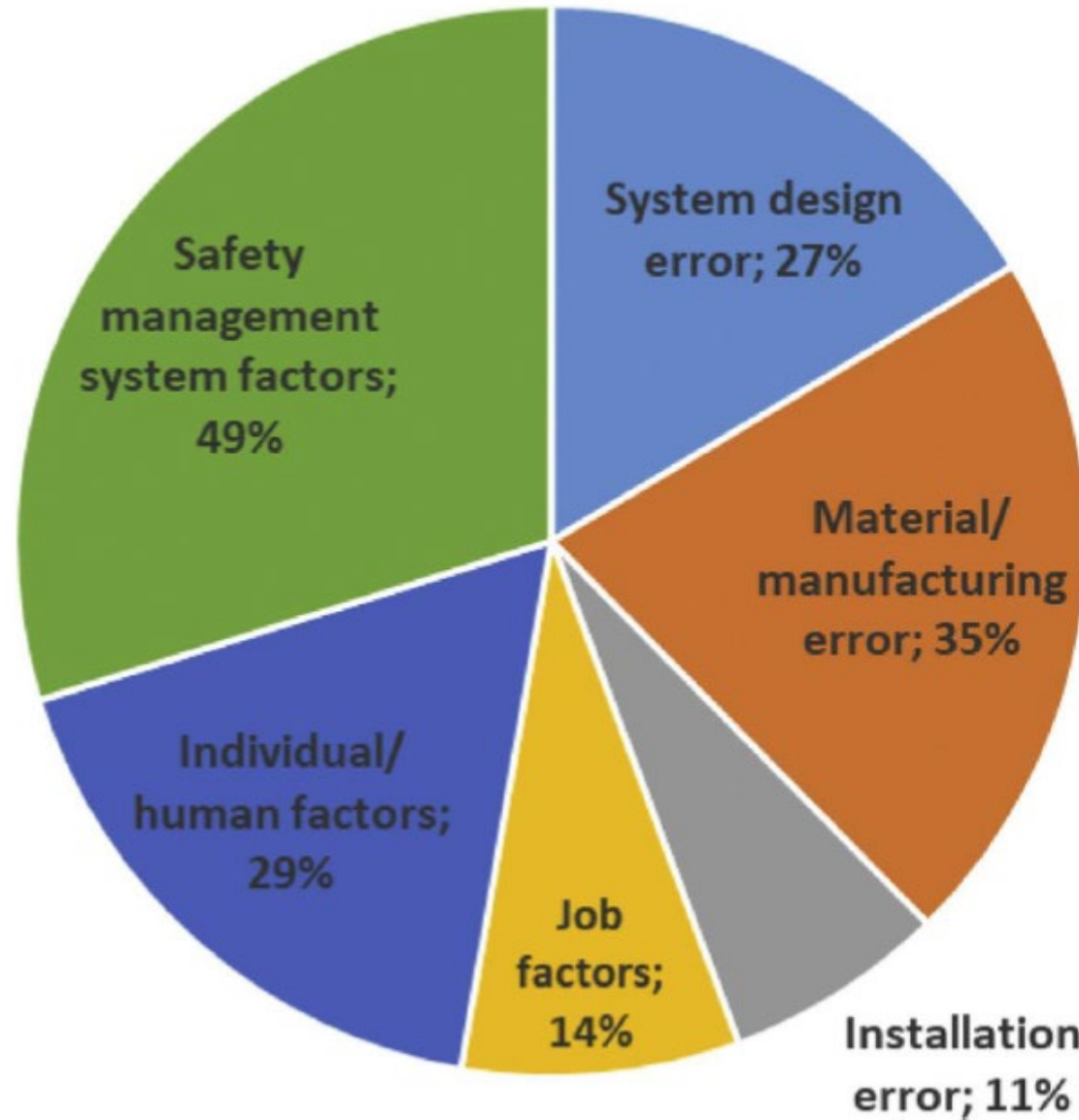
Prevention of releases of hydrogen

Limitation of build-up of dangerous gas clouds

Avoidance of ignition sources

Limitation of consequences of jet fires and explosions

Safety: hydrogen incidents, HIAD 2.0 database



Consequence modelling, probabilistic safety studies and investigation of limitation of consequences

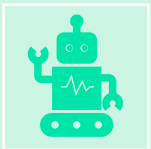


Vysus Group is a recognized market leader of advanced consequence modeling in safety studies



Portfolio of screening tools

PHAST
Inhouse developed tool for hydrogen



Portfolio of CFD and FME tools:

FLACS
Kameleon FireEx (KFX)
FAHTS/USFOS
ANSYS FLUENT
OpenFOAM
OLGA

Other services

Human reliability analyses (HRA)

FMECA, LOPA, SIL and IHA of equipment for use in ammonia and hydrogen plants

HAZID and HAZOP

Hazardous area classification

Emergency preparedness analysis

Maintenance management

Accident investigations

Resource Group Hydrogen Safety

Cooperative input from industry and research organizations in Norway and abroad

Develop a competence center for hydrogen safety

Make a difference in selected market segments of hydrogen safety:

- Maritime vessels and maritime transportation
- Offshore installations, both O&G and wind
- Onshore industry
- Transportation through pipelines

Valuable input to other industries, e.g. aviation

11 January, Hamburg

Hydrogen
Safety Day:
*German–
Norwegian
Exchange*

Goal of the resource group

Safety aspects of gaseous and liquid H₂ facilities

Standards and regulations in relation to H₂ onshore and offshore, global energy transition outlook

Consequence prediction tools

Presentation of safety challenges from 3 German industrial players

Presentation of safety challenges from 1-2 Norwegian players



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Thank you