BEHAVIOUR SAFETY MANAGEMENT AT PLANT LEVEL

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Objectives

- Implementation of behavioural safety
- Mission “ZERO”
- Five human success factors to reach the ZERO
- External behavioural safety

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Implementation of behavioural safety

What went wrong?

- Safety behaviour
- Leadership
- Communication/training
- Work atmosphere
- Participation
- Safety and health culture

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Implementation of behavioural safety

Behaviour safety is always a TEAM-challenge

T	Together
E	Enable
A	Act
M	Maximum safety level

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Implementation of behavioural safety

The journey to “ZERO“

Key factor = The human factor

Five
human success factors to reach the
ZERO

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Communication (1/3)

Safe behaviour does not depend on regulations alone

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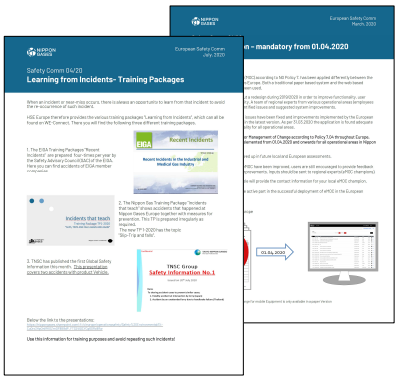
Communication (2/3)

- Daily 5 min safety talk
- Monthly safety theme



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Communication (3/3)

- TOP 5 risk assessment

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Personnel development (1/3)

It needs emloyees who are active and motivated to develop their workplace further

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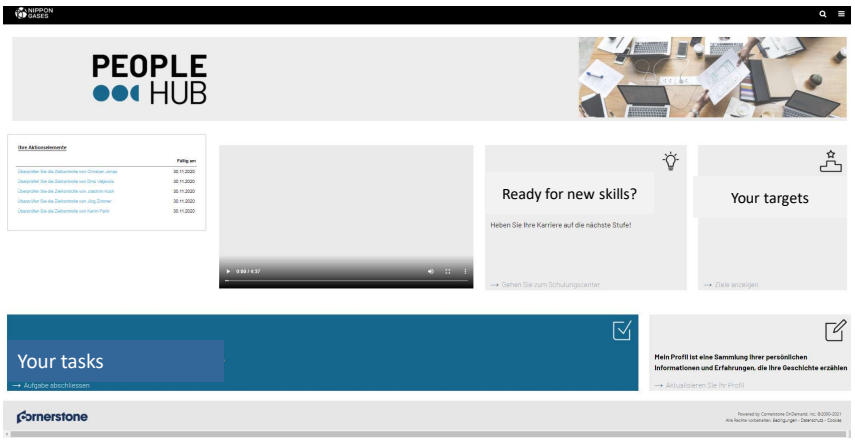
Personnel development (2/3)

Self development/ management



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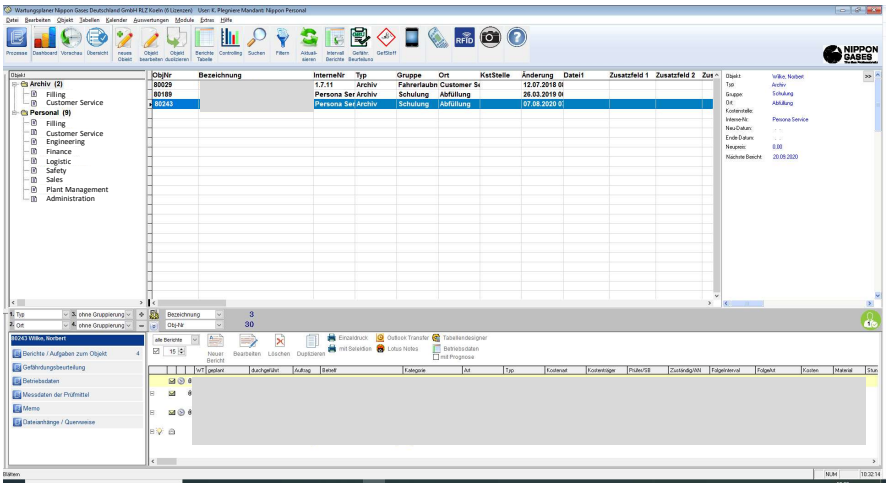
Personnel development (3/3)

Training management tool
at plant level



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Process development (1/4)

Own developed processes

=

Greatest possible acceptance

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Process development (2/4)

Cylinder handling system

System related
safety checks

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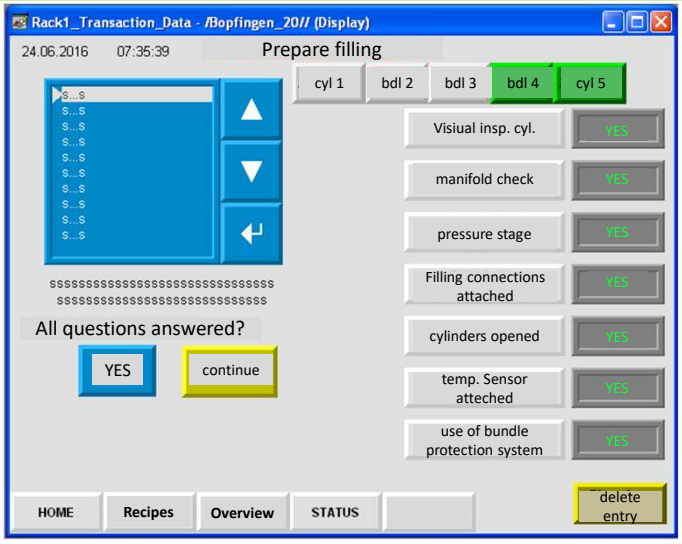
Process development (3/4)

Cylinder filling system

System related
pre-fill
safety checks



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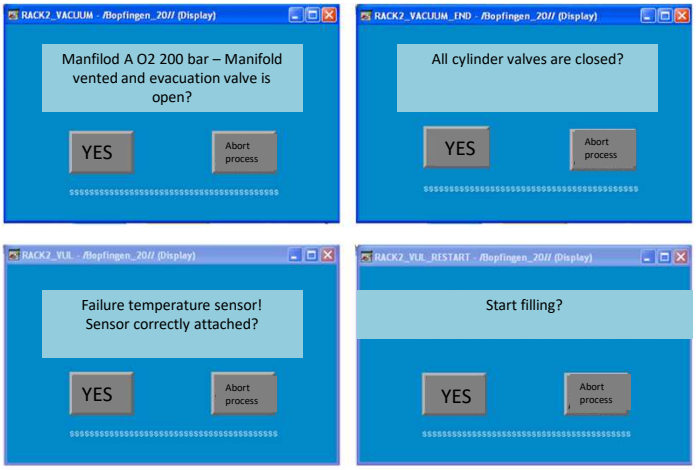
Process development (4/4)

- Cylinder filling system

System related during and after filling
safety checks

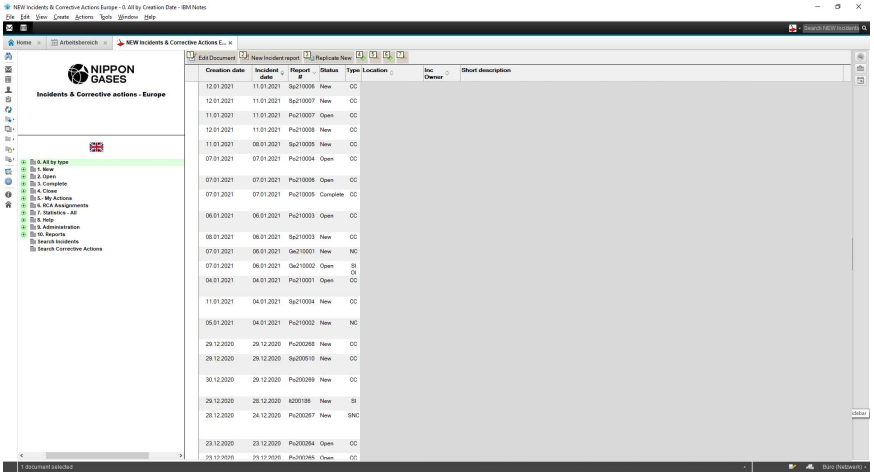


Healthy error culture

Dealing with mistakes constructively and creating a healthy error culture

Healthy error culture

Safety incident database



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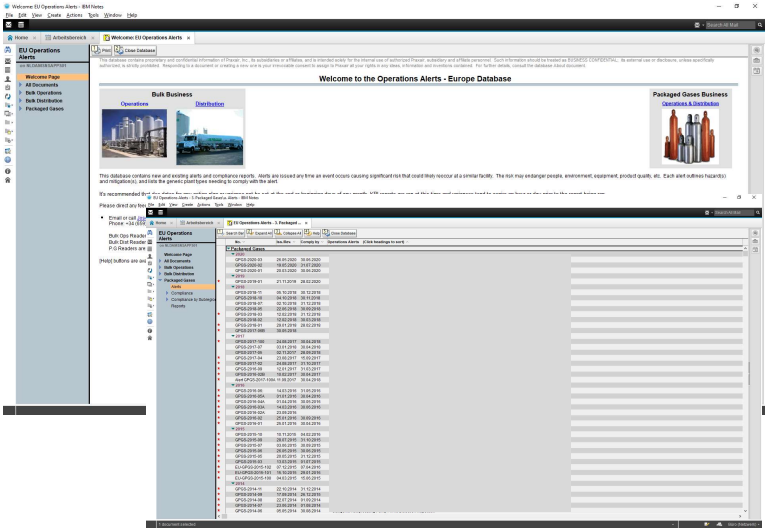
Healthy error culture

Alert database



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Sucess together

One Target

Success **together**

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External behavioural safety

Contractor safety management?!

The same target as ours?

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Bring the safety to a higher level

But how?

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External behavioural safety

- Bring our safety culture to external workers/companies
- Hazardous work permit (HWP)

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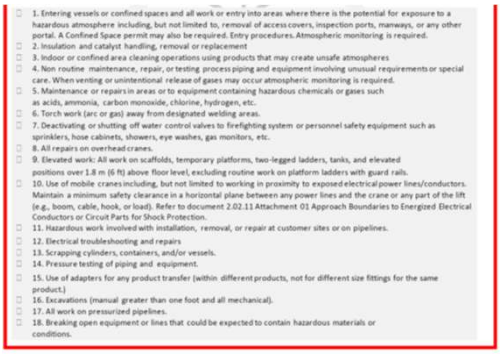
HAZARDOUS WORK PERMIT Control No:

ISSUED TO: Name/Occupation/Company Date

WORK AREA: Location

STARTS AT: AM/PM EXPIRES AT: AM/PM

DESCRIPTION OF WORK TO BE DONE:



1. Entering vessels or confined spaces and all work or entry into areas where there is the potential for exposure to a hazardous atmosphere including, but not limited to, removal of access covers, inspection ports, manways, or any other portal. A Confined Space permit may also be required. Entry procedures. Atmospheric monitoring is required.
2. Insulation and catalyst handling, removal or replacement
3. Indoor or confined area cleaning operations using products that may create unsafe atmospheres
4. Non routine maintenance, repair, or testing process piping and equipment involving unusual requirements or special care. When venting or unintentional release of gases may occur atmospheric monitoring is required.
5. Maintenance or repairs in areas or to equipment containing hazardous chemicals or gases such as acids, ammonia, carbon monoxide, chlorine, hydrogen, etc.
6. Torch work (arc or gas) away from designated welding areas.
7. Deactivating or shutting off water control valves to firefighting system or personnel safety equipment such as sprinklers, hose cabinets, showers, eye washes, gas monitors, etc.
8. All repairs on overhead cranes.
9. Elevated work: All work on scaffolds, temporary platforms, two-legged ladders, tanks, and elevated positions over 1.8 m (6 ft) above floor level, excluding routine work on platform ladders with guard rails.
10. Use of mobile cranes including, but not limited to working in proximity to exposed electrical power lines/conductors. Maintain a minimum safety clearance in a horizontal plane between any power lines and the crane or any part of the lift (e.g., boom, cable, hook, or load). Refer to document 2.02.11 Attachment 01 Approach Boundaries to Energized Electrical Conductors or Circuit Parts for Shock Protection.
11. Hazardous work involved with installation, removal, or repair at customer sites or on pipelines.
12. Electrical troubleshooting and repairs
13. Scrapping cylinders, containers, and/or vessels.
14. Pressure testing of piping and equipment.
15. Use of adapters for any product transfer (within different products, not for different size fittings for the same product.)
16. Excavations (manual greater than one foot and all mechanical).
17. All work on pressurized pipelines.
18. Breaking open equipment or lines that could be expected to contain hazardous materials or conditions.

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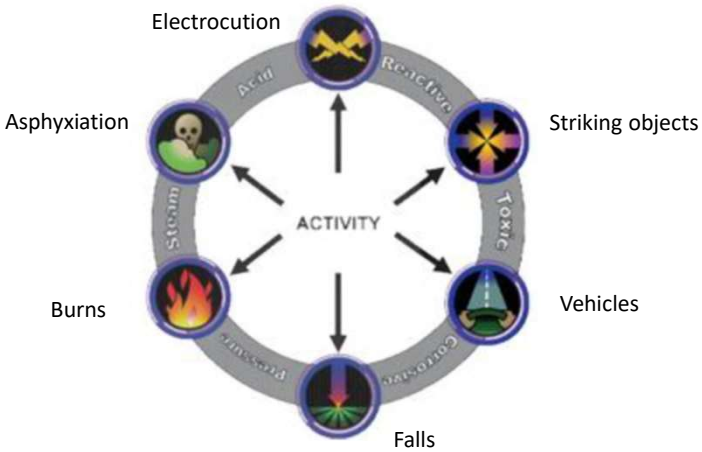
External behavioural safety

- Hazardous work permit (HWP) – Risk assessment



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Conclusion

- Use existing systems
- Avoid “shortcuts” under all circumstances
- Improve process safety
- Have a strong view at the operational discipline
- Behavioural safety is always a TEAM-challenge

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Documents referenced

EIGA Ref.	Document title	Link
DOC 02	Job Motivation and Safe Operations in Cylinder Filling Stations	www.eiga.eu
DOC 23	Safety Training of Employees	www.eiga.eu
DOC 23.23	Safety Training Leaflet 23 Work Permit	www.eiga.eu
DOC 40	Work Permit Systems	www.eiga.eu
DOC 51	Management of Change	www.eiga.eu
DOC 90	Incident/Accident Investigation and Analysis	www.eiga.eu
DOC 118	Safe Management of Contractors	www.eiga.eu

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