

Utsläpp och brand vid ett koksverk i metallindustrin.

960702

Mycket kortfattad

Olyckan inträffade under reparationsarbete. Utsläppet kom från gasbehållare om 20000 m³ på ett koksverk. Gasen bestod av en blandning av vätgas, metan och koloxid. Gasblandningen fattade eld efter att ha kommit i kontakt med en gnistkälla. Ett hundratal brandmän bekämpade elden med vattensprutor; branden var släckt inom 45 minuter. På grund av gasens giftiga natur evakuerades ca 40 personer.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
vätgas (65%)	1333-74-0	okänt
metan (25%)	74-82-8	okänt
kolmonoxid och koldioxid (4,1%)	630-08-0 124-38-9	okänt

Skador:

Människor:	Inga personskador.
Materiella:	Endast produktionsförluster.
Miljö/ekologi:	Inga effekter rapporterade.
Infrastruktur:	Det framgår inte om de 40 evakuerade personerna var anställda eller privatpersoner utanför anläggningsområdet.

Erfarenheter redovisade (Ja/Nej): Nej

Report Profile

Identification of Report:

country: FA ident key: 1800_310_01

reported under Seveso I directive as near-miss reports: SHORT+FULL

Date of Major Occurrence: Time of Major Occurrence

start: 02/07/1996 start: 09:55:00

finish: 02/07/1996 finish:

Establishment:

name:

address:

industry: 2011 metal refining and processing (includes foundries, electrochemical refining, plating, etc.)

Factory of steel pipe

Seveso II status: not applicable: Yes art. 6 (notification): No

art. 7 (MAPP): No

art. 9 (safety report): No

Date of Report:

short: full:

Authority Reporting:

name:

address:

Authority Contact:

rep_cont_name:

rep_cont_phone:

rep_cont_fax:

Additional Comments:

a) - not applicable -

b) - not applicable -

c) - not applicable -

d) - not applicable -

e) - not applicable -

Short Report

country: FA **ident key:** 1800_310_01

Accident Types:

release: Yes **explosion:** No

water contamination: No **other:** No

fire: Yes

description:

Release of gas from a coking plant on a 20 000 cubic meters gas holder

Substance(s) Directly Involved:

toxic: Yes **explosive:** No

ecotoxic: No **other:** No

flammable: Yes

description:

The gas was made of 65 % of hydrogen, 25 % of methan, 4.1 % of carbon monoxide and carbon dioxide.

Immediate Sources of Accident:

storage: Yes **transfer:** No

process: No **other:** No

description:

Gas holder

Suspected Causes:

plant or equipment: No **environmental:** No

human: Yes **other:** No

description:

Accident occurred during repair works.

Immediate Effects:

material loss: No

human deaths: No

human injuries: No **community disruption:** No

other: Yes

ecological harm: No

national heritage loss: No

description:

There was not consequence on the environment and for people. The loss of production was significant.

Emergency Measures taken:

on-site systems: Yes **decontamination:** No

external services: Yes **restoration:** No

sheltering: No **other:** No

evacuation: Yes

description:

About 100 firemens fought the fire with water nozzles ; it was extinguished within 45 min. A safety area was set up. Because of the toxicity of the gas, about 40 people were evacuated.

Immediate Lessons Learned:

prevention: Yes **other:** No

mitigation: No

description:

The holes on the wall must be sealed with special tools and following special methods in order to avoid sparkle if the tank can't be inerted..

A Occurrence Full Report

country: FA **ident key:** 1800_310_01

1 Type of Accident

remarks: - not applicable -

2 Dangerous Substances

remarks: The gas involved came from a coking plant. It is made of 65 % hydrogen, 25 % methane, 4.1 % carbon monoxide and carbon dioxide.

3 Source of Accident

illustration: - not applicable -

remarks: occurrence at gas holder (component)

4 Meteorological Conditions

precipitation none: fog: rain: hail: snow:

No No No No No

wind speed (m/s):

direction (from):

stability (Pasquill):

ambient temperature (°C):

remarks: - not applicable -

5 Causes of Major Occurrence

main causes

technical / physical 5999 other: other

5999 other: other

- not applicable -

- not applicable -

- not applicable -

human / organizational - not applicable -

- not applicable -

- not applicable -

- not applicable -

- not applicable -

remarks: The causes of the disappearance of the bolts are unknown. The source of the fire might be a sparkle of a portable engine (electrical or shock sparkle) or a static one.

6 Discussion about the Occurrence

- not applicable -

Type of Accident country: FA ident key: 1800_310_01

event:

major occurrence 1203 fire: jet flame (burning jet of fluid from orifice)

initiating event 1101 release: gas/vapour/mist/etc release to air

associated event - not applicable -

Dangerous substances

country: FA ident key: 1800_310_01

a) total establishment inventory

CAS number: identity: Flammable substances as defined in Annex IV (c) (i)

name from Seveso I Directive: Flammable substances as defined in Annex IV (c) (i)

name from Seveso II Directive: - not applicable -

category from Seveso II: extremely flammable gases and liquids

other hazards (1): - not applicable -

other hazards (2): - not applicable -

maximum quantity (tonnes): -1

use of substance as: starting material

b) substance belongs to relevant inventory directly involved: No

actual quantity: 0 potential quantity: 0

c) substance belongs to relevant inventory indirectly involved: No

actual quantity: 0 indir_pot_quant: 0

a) total establishment inventory

CAS number: 1333-74-0 **identity:** Hydrogen

name from Seveso I Directive: Hydrogen

name from Seveso II Directive: Hydrogen

category from Seveso II: extremely flammable gases and liquids

other hazards (1): - not applicable -

other hazards (2): - not applicable -

maximum quantity (tonnes): -1

use of substance as: starting material

b) substance belongs to relevant inventory directly involved: Yes

actual quantity: -1 **potential quantity:** -1

c) substance belongs to relevant inventory indirectly involved: No

actual quantity: 0 **indir_pot_quant:** 0

Source of Accident - Situation **country:** FA **ident key:** 1800_310_01

situation

industry

initiating event - not applicable -

associated event - not applicable -

activity/unit

major occurrence 3201 storage: process-associated (stockholding, etc. on-site of manufacture)

initiating event - not applicable -

associated event - not applicable -

component

major occurrence 4004 container; pressurised (bullet, sphere, cylinder, etc.)

initiating event - not applicable -

associated event - not applicable -

B Consequences Full Report

country: FA **ident key:** 1800_310_01

1 Area concerned

affected

extent of effects installation: Yes

establishment: Yes

off-site; local: No

off-site; regional: No

off-site; transboundary: No

illustration of effects please specify the attached materials illustrating the geographical extent

of th... see Appendix Full Report B / area concerned - illustration of

effects

remarks There was no consequence on the environment or on people. There was an embrittle... see Appendix

Full Report B / area concerned - remarks

2 People

establishment popul. emergency personnel off-site population

total at risk -1 -1 -1

immediate fatalities -1 -1 -1

subsequent fatalities 0 0 0

hospitalizing injuries 0 0 0

other serious injuries 0 0 0

health monitoring 0 0 0

remarks See 1c

3 Ecological Harm

pollution/contamination/damage of:

- residential area (covered by toxic cloud) No

- common wild flora/fauna (death or elimination) No

- rare or protected flora/fauna (death or elimination) No

- water catchment areas and supplies for consumption or recreation No

- land (with known potential for long term ecological harm or No

preventing human access or activities)

- marine or fresh water habitat No

- areas of high conservation value or given special protection No

remarks - not applicable -

4 National Heritage Loss

effects on:

- historical sites None - historic monuments None

- historic buildings None - art treasures None

remarks - not applicable -

5 Material Loss

establishment losses off site losses

costs (direct costs to operator) (social costs)

in ECU FRF ECU FRF

material losses 2860000 2E+07 0 0

response, clean up, restoration -1 -1 0 0

remarks - not applicable -

6 Disruption of Community Life

establishment/plant evacuated disabled/unoccupiable destroyed

- nearby residences/hotels No No No

- nearby factories/offices/small shops No No No

- schools, hospitals, institutions No No No

- other places of public assembly No No No

interruption of utilities etc. no / yes duration

- gas No

- electricity No

- water No

- sewage treatment works No

- telecommunications No

- main roads No

- railways No

- waterways No

- air transport No

significant public concern none local level national level

- off site populations No No No

- media interest No No No

- political interest No No No

remarks - not applicable -

7 Discussion of Consequences

- not applicable -

Ecological Components involved

country: FA ident key: 1800_310_01

type: - not applicable -

threatened: not applicable affected: No

C Response Full Report

country: FA ident key: 1800_310_01

1 Emergency Measures

taken - on site - not applicable - - not applicable -

- not applicable - - not applicable -

- not applicable - - not applicable -

- off site - not applicable - - not applicable -

- not applicable - - not applicable -

- not applicable - - not applicable -

still - on site - not applicable - - not applicable -

required

- not applicable - - not applicable -

- not applicable - - not applicable -

- off site - not applicable - - not applicable -

- not applicable - - not applicable -

- not applicable - - not applicable -

continuing contamination or danger

-on site not applicable

-off site not applicable

remarks - not applicable -

2 Seveso II Duties

pre-accident evaluation

Article item not due yet not done done/submitted evaluated

6 notification No No No No

7 policy (MAPP) No No No No

9 safety report No No No No

9, 10, 11 update No No No No

11 internal plan No No No No

11 external plan No No No No

13 informing public No No No No

9, 12 siting policy No No No No

post-accident evaluation

Seveso II duty was actual were actual compared with actual

contingency consequences consequences, the

addressed? addressed? predicted extent was?

Article item

7 policy (MAPP) not applicable not applicable not applicable

9 current safety report not applicable not applicable not applicable

11 internal plan not applicable not applicable not applicable

11 external plan not applicable not applicable not applicable

13 informing public not applicable not applicable not applicable

9, 12 siting policy not applicable not applicable not applicable

evaluation of safety organisation

organisational element element existed did element relate to actual circumstances of

yes / no no / partly / yes adequate?

- **written policy objectives** No

- **specified management** No

structure

- **specified responsibilities** No

- **specified working procedures** No

- **specified procedures for** No

assessment/auditing of

management system

- specified procedures for No

review and update of

management policy

- specified general training No

procedures

- specified emergency No

training procedures

evaluation of ecological impact control

organisational element element existed did element relate to actual circumstances of

yes / no no / partly / yes adequate?

- ecological status review No

before incident

- potential ecological No

consequences assessment

- ecological impact review No

after incident

- ecological restoration No

procedures

- subsequent review of No

restoration success

remarks - not applicable -

3 Official Action Taken

legal action

- not applicable -

other official action

- not applicable -

4 Lessons Learned

measures to prevent recurrence

Unknown at the date of report... see Appendix Full Report C / lesson learned - prevent

measures to mitigate consequences:

Unknown at the date of report... see Appendix Full Report C / lesson learned - mitigate

useful references:

Nothing to report

5 Discussion about Response

- not applicable -

Appendices for the FA / 1800_310_01 report

Appendix Full Report B / area concerned - illustration of effects:

please specify the attached materials illustrating the geographical extent of the effects.

Appendix Full Report B / area concerned - remarks:

There was no consequence on the environment or on people. There was an embrittlement of the shell of the gas-holder.

Appendix Full Report C / lesson learned - prevent:

Unknown at the date of reporting

Appendix Full Report C / lesson learned - mitigate:

Unknown at the date of reporting