

Explosion och brand på en fabrik i petrokemisk industri.

930701 MARS 1993_12

En explosion inträffade vid svetsarbete på en rörledning. Förarbetet med att stänga av flödet genom det aktuella segmentet hade inte slutförts när svetsarbetet påbörjades. Ett misstag då sektionen skulle blåsas fri med kvävgas pressade istället de brandfarliga gaserna in i rörledningen. Gaserna antändes av svetslågan. En person som brändes svårt avled till följd av brännskadorna.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
olika brandfarliga ämnen		

Skador:

Människor: 1 person omkom och 3 fick föras till sjukhus.

Materiella: Utrustningen skadades.

Miljö/ekologi: Inga effekter rapporterade.

Infrastruktur: Inga

Erfarenheter redovisade (Ja/Nej): Nej

Report Profile

Identification of Report:

country: FA ident key: 1993_012_01

reported under Seveso I directive as major accident reports: SHORT

Date of Major Occurrence: Time of Major Occurrence

start: 1993-07-01 start: 12:00:00

finish: finish:

Establishment:

name:

address:

industry: - not applicable -

Plant for storage of liquid mineral products

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: 1993_012_01

Accident Types:

release: No explosion: Yes

water contamination: No other: No

fire: Yes

description:

During weldings works on a pipe an explosion occurred: For binding a pipe to a tank a T-piece and a plug had to be inserted. The concerning power section was detarred and in a mounting point a piece of pipe 1,3 m long was extracted. For not... see Appendix Short Report / description of accident types

Substance(s) Directly Involved:

toxic: No explosive: No

ecotoxic: No other: No

flammable: Yes

description:

- Substances concerning the explosion: flammable gases, high flammable liquids.
- Substances concerning the fire: flammable gases, high flammable liquids, 100 kg

Immediate Sources of Accident:

storage: Yes transfer: No

process: No other: No

description:

Crude-oil storage, crude-oil pipes.

Suspected Causes:

plant or equipment: No environmental: No

human: Yes other: No

description:

Due to insufficient information and control caused by lack of a detailed plan and documentation, during welding works still in course was admitted nitrogen in the pipes contrarily to the usual direction. During the nitrogen admission the pr... see Appendix Short Report / description of suspected causes

Immediate Effects:

material loss: Yes

human deaths: Yes

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

other: No

ecological harm: No

national heritage loss: No

description:

Within the establishment:... see Appendix Short Report / description of immediate effects

Emergency Measures taken:

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

external services: No **restoration:** No

sheltering: No **other:** No

evacuation: No

description:

- not applicable -

Immediate Lessons Learned:

prevention: Yes **other:** No

mitigation: No

description:

For future assembly works it will be prepared a written procedure in order to avoid miscomprehensions.

Appendices for the FA / 1993_012_01 report

Appendix Short Report / description of accident types:

During weldings works on a pipe an explosion occurred: For binding a pipe to a tank a T-piece and a plug had to be inserted. The concerning power section was detarred and in a mounting point a piece of pipe 1,3 m long was extracted. For not be obliged to evacuate the 180 m long piece of tube from hydrocarbons they should introduce, before beginning the welding works, on boths open ends a press plunger as gas-locks. Through the piston they introduced nitrogen to avoid the pressure increase in a direction contrary to the normal one,while the welding works were already started. Due to the nitrogen pressure the piston was expelled from the tubing. The outcoming gas was ignited. During the deflagration residues from crude oil have been expelled and flamed the point of work and the surroundings. A worker of an external (forse un extra communitario) company received heavy burns and died . Three other collaborators received light injures.

Appendix Short Report / description of suspected causes:

Due to insufficient information and control caused by lack of a detailed plan and documentation, during welding works still in course was admitted nitrogen in the pipes contrarily to the usual direction. During the nitrogen admission the pressure in the pipes rised, than the graduated pistons were forced out the pipes.

Appendix Short Report / description of immediate effects:

Within the establishment:

- 1 person killed

- 3 persons hospitalized

- material loss: damaged part of equipments (60 TDM)