Utsläpp av kolväten på en petrokemisk anläggning.

930924 MARS 1993_06

Olyckan inträffade på en petrokemisk anläggning. En spricka uppstod i en rörledning till följd av rostangrepp. Den spräckta rörledningen uppvisade rostskador på en sträcka av 1 m invändigt vid brottstället. De kringliggande rören och rörsträckorna var rostfria och rostskadan kan bero på att olika material använts. Ungefär 18 000 kg kolväten släpptes ut. Då kolvätena vid utsläppet höll en temperatur på 350-370°C antändes de kort efter att de släppts ut i luften. Nödstoppet aktiverades från kontrollrummet och de aktuella rörledningarna isolerades. Flöden omdirigerades till facklan. Brandmän ingrep och kylde ned anläggningen med vatten.

Inblandade ämnen och mängder

	CAS Nr.	Mängd
brandfarliga flytande kolväten		18 000 kg

Skador:

Människor:	5 personer skadades och fick föras till sjukhus.
Materiella:	Omfattande skador på delar av anläggningen.
Miljö/ekologi:	Inga effekter rapporterade.
Infrastruktur:	Inga.

Erfarenheter redovisade (Ja/Nej): Nej

Report Profile

Identification of Report:

country: FA **ident key:** 1993_006_01

reported under Seveso I **directive as** major accident **reports:** SHORT

Date of Major Occurrence: Time of Major Occurrence

start: 1993-09-24 **start:** 11:00:00

finish: finish:

Establishment:

name:

address:

industry: - not applicable -

Plant for distillation or refining of other mechanical treatment of petroleum or

petroleum 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_006_01

Accident Types:

release: Yes **explosion:** No

water contamination: No **other:** No

fire: Yes

description:

On a connecting pipe, of a vessel to the pump, a rupture occurred. By the rupture of this vertical part of piping 18,000 kg of hydrocarbons have been released. In this piping section the condensate of hydrocarbons generated by a second heat... see Appendix Short Report / description of accident types

Substance(s) Directly Involved:

toxic: No **explosive:** No

ecotoxic: No **other:** No

flammable: Yes

description:

Fire of High flammable liquids and flammable liquids.

Release of high flammable liquids and of flammable liquids (18,000 kg)

Immediate Sources of Accident:

storage: No **transfer:** No

process: Yes **other:** No

description:

- not applicable -

Suspected Causes:

plant or equipment: Yes **environmental:** Yes

human: No **other:** No

description:

The ruptured pipe indicated internally for a lenght of about 1 meter a corrosion. The adjacent tubing parts and all other parts of piping were not affected by corrosion. The corrosion in this sector of piping should be

originated by a diffe... see Appendix Short Report / description of suspected causes

Immediate Effects:

material loss: Yes

human deaths: No

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

other: No

ecological harm: No

national heritage loss: No

description:

- 5 persons were injured and hospitalized;

- Material damage amounting at 15 millions DM for destruction of some plant sectors.

Emergency Measures taken:

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

external services: No **restoration:** No

sheltering: No **other:** No

evacuation: No

description:

In the control panel was disconnected the emergency switch, the fuel-valve closed and the oven-encasement-pump

tripped. The plant activity was shutdown and discharged and disconnected from the flare system. The firemen

intervened to cool b... see Appendix Short Report / description of emergency measures taken

Immediate Lessons Learned:

prevention: Yes **other:** No

mitigation: No

description:

Execution of a program to individuate the weak points.

Appendices for the FA / 1993_006_01 report

Appendix Short Report / description of accident types:

On a connecting pipe, of a vessel to the pump, a rupture occurred. By the rupture of this vertical part of piping 18,000 kg of hydrocarbons have been released. In this piping section the condensate of hydrocarbons generated by a second heating phase is pumped off. Due to the temporary high temperature (350-370 oC) immediately before the second heating phase the hydrocarbons took rapidly fire shortly after the moment of the escape.

Appendix Short Report / description of suspected causes:

The ruptured pipe indicated internally for a lenght of about 1 meter a corrosion. The adjacent tubing parts and all other parts of piping were not affected by corrosion. The corrosion in this sector of piping should be originated by a different steel composition.

Cause of the corrosion is an aquatic medium.

Appendix Short Report / description of emergency measures taken:

In the control panel was disconnected the emergency switch, the fuel-valve closed and the oven-encasement-pump tripped. The plant activity was shutdown and discharged and disconnected from the flare system. The firemen intervened to cool by water adjacent plant systems.