

## Explosion på en gasdepå.

940525 MARS 1994\_02

Vid arbete på en behållare med kondenserad gas inträffade en gasexplosion där tre personer skadades allvarligt då deras kläder fattade eld. Orsaken till olyckan förefaller vara mindre ortodoxa metoder vid tömning av tanken i samband med underhållsarbete. Polis och räddningstjänst kunde släcka branden med skumsläckare.

### Inblandade ämnen och mängder

	CAS Nr.	Mängd
propan	74-98-6	50 kg

### Skador:

Människor: 3 personer skadades allvarligt och fördes till sjukhus.

Materiella: Inga.

Miljö/ekologi: Inga effekter rapporterade.

Infrastruktur: Inga.

### Erfarenheter redovisade (Ja/Nej):

Kortfattat anges förebyggande åtgärder.

## Report Profile

### Identification of Report:

country: FA ident key: 1994\_002\_01

reported under Seveso I directive as major accident reports: SHORT

### Date of Major Occurrence: Time of Major Occurrence

start: 1994-05-25 start:

finish: finish:

### Establishment:

name:

address:

industry: - not applicable -

Storage of flammable gases in vessels with a capacity of 3-30 tons

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: 1994\_002\_01

**Accident Types:**

release: No explosion: Yes

water contamination: No other: No

fire: Yes

**description:**

During works on a liquid gas container (Subterranean Stored Pressure Vessel, 5600 kg content) a gas-explosion occurred, in which 3 persons were seriously injured. The full volume of the vessel was usually reduced from 5600 to 3000 kg. As re... see Appendix Short Report / description of accident types

**Substance(s) Directly Involved:**

toxic: No explosive: Yes

ecotoxic: No other: No

flammable: Yes

**description:**

Ca 50 kg of propane.

**Immediate Sources of Accident:**

storage: Yes transfer: No

process: No other: No

**description:**

- not applicable -

**Suspected Causes:**

plant or equipment: No environmental: No

human: Yes other: No

**description:**

It could be that during dismantling works, mechanic workers for safety measures had let the liquid gas plant out service.

**Immediate Effects:**

material loss: Yes

human deaths: No

human injuries: Yes community disruption: No

**other:** No

**ecological harm:** No

**national heritage loss:** No

**description:**

- 3 persons seriously injured

- Material loss amounting at 20,000 DM

### **Emergency Measures taken:**

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

**external services:** Yes **restoration:** No

**sheltering:** Yes **other:** No

**evacuation:** No

**description:**

The police and the firemen were called; they extinguished the fire by foam extinguishers. The emergency physicians took care of the injured, which were transported to the hospital by ambulance.

### **Immediate Lessons Learned:**

**prevention:** No **other:** No

**mitigation:** No

**description:**

- not applicable -

## **Appendices for the FA / 1994\_002\_01 report**

### **Appendix Short Report / description of accident types:**

During works on a liquid gas container (Subterranean Stored Pressure Vessel, 5600 kg content) a gas-explosion occurred, in which 3 persons were seriously injured. The full volume of the vessel was usually reduced from 5600 to 3000 kg. As required by the short distance of the tanks from the service building. For this it was installed a new gas extraction valve with integrated overfilling safety system. The modification works were carried on by two mechanics of a skilled company. An employee of the company helped in the modification works. The container was mostly discharged and should only be emptied of the residue and then cleaned. For this, neither safety devices were used nor the residue gas was flamed. Instead of this the injection and extraction pipes were disflanged, so that the out flowing gas escaped until the gas overpressurer exhausted. In order to withdraw the residue gas still in the tank, this was filled with water, which was pumped in the tank by an electrical dipping-pump from the near available flow.

The motor integrated in the immersion pump was supplied by a current elongation cable which was inserted in a socket of the service structure.

During throwing in of the immersion pump and with this filling of the vessel with water the back pressure was so strong, that the mechanics (workers) could no more support the tube and the employees of the company solicited the plug of the elongation cable to draw out, in order to shut down the immersion pump. During withdrawal of the plug a sudden explosive fireball occurred, an explosive flame struck high and the gas from the tank burnt. The three present persons suffered large burns, their clothing had in part taken fire. The material damage through the burnt tanks amount at 20,000 DM. No environment damage occurred.