

BASF-Industrial Fire Brigade:

TUIS Operation, Level III, 20.11.1997 Elsterwerda Train Station

On the 20.11.97 the Industrial Fire Department was called at 07:51 hrs. by the German Rail AG to assist with responders and equipment - TUIS level III - at Elsterwerda's train station.



A freight train with 22 rail tankers containing around 1800 m³ of petrol derailed. The electrical locomotive was torn away from the rail tankers whilst crossing points and came to rest a few hundred meters away from the actual scene of the accident. One tanker exploded immediately and 12 other tank wagons were so badly damaged from the crash that a considerable amount of petrol was released and caught fire immediately. A second tanker exploded about 15 min. after the first explosion. Spurting petrol and the immense radiation heat from the flames ignited the station premises. The force of the explosion ripped a large part of the train station building away and cars on the station car park ignited. During scene assessment a fireman fatally injured through collapsing debris, a further 9 people suffered server burns. The Elsterwerda's Voluntary Fire Brigade along with other alerted fire brigades and the BASF Industrial Fire Brigade Schwarzeide began fire fighting and cooling the burning rail tankers.

The BASF Industrial Fire Brigade from Ludwigshafen arrived at the train station in Elsterwerda at 13:00 hrs. with a command vehicle. The following situation was given: Under rail tanker Nr. 1 and in particular under the rail tankers Nr. 6 - 12 (shown as a sketch) ground fires still existed and deflagrations were occurring within short intervals. Many drains around the tracks were on fire.

The rail tankers were cooled with water from the municipal fire brigades. The BASF Industrial Fire Brigade decided on applying medium and low-expansion foam to extinguish the fires within the rail and drains area. The ruptured rail tankers were internally covered with low-expansion foam. This was applied through the leakage wholes.

Petrol was leaking out of one end of Rail tanker Nr. 1 and burning within an area of 1 - 2 m². The use of a heat imaging camera enabled the amount of petrol in the crashed rail tankers to be determined. The liquid level was a few cm from the top man hole. This stated that the rail tankers contained about 30 m³ of petrol. On the grounds of operational tactics the decision was made not to extinguish this fire immediately but to cool the rail tankers with water until replacement tankers were available. The fire was extinguished at around 21:30 hrs. and transfer pumping began immediately through the top man hole into the replacement tanks.

The alerted response team from Ludwigshafen consisting of 1 officer and 8 men with a special equipment vehicle arrived at the scene during the night. This team took over the transfer pumping of the rail tankers which were not leaking. Approximately 80 m³ of petrol was transferred into a replacement tankers.

Petrol leftovers and foam-petrol mixtures were transfer pumped into further replacement tankers on Friday the 21.11.97. All in all the fire brigade transfer pumped approximately 156 m³ of petrol and petrol-foam mixture from the rail tankers and drainage system. A low-expansion foam blanket was applied to each tanker after being emptied. The scrapping of the tankers (oxygen cutting) was carried out by specialised companies under the supervision of Elsterwerda's Fire Brigade and the BASF Industrial Fire Brigade.

The scene of the accident was handed over to the German Rail AG on the 28.11.97.

