



Dump Truck Fire and Emergency Response in a Surface Coal Mine



▶ What happened?

A fully-laden Komatsu HD 785-5 dump truck caught fire as it was driving along a haul road. Another driver alerted the Komatsu driver that his truck was on fire and the truck was immediately parked. Attempts to extinguish the fire with portable fire extinguishers were unsuccessful. However, the driver was not harmed.

When the fire brigade arrived on the scene, they approached the truck and applied water to extinguish the fire. This exposed the firemen to the risk of tyre burst, as well as to a possible chemical explosion within the tyre.

Investigation

The fire was caused by atomized hydraulic fluid from the hoist pump leaking onto hot engine parts. The leak was thought to be the result of either a badly worn hydraulic hoist pump or the driver not returning the hoist lever to the "off" position. Because the hoist was not working properly, the hoist pump may also have been in operation while the truck was being driven. This would have caused the pump to overheat and blow the seals.

The fire brigade was able to extinguish the fire.

Recommendations

1. Always maintain vehicles to manufacturers' recommendations and keep records of the work done.
2. Ensure that drivers are trained in the correct neutral position of the hoist lever.
3. If tyres do catch fire, there is a risk of a chemical explosion within the tyre due to pyrolysis of flammable substances in the tyre. Even a deflated tyre can explode long after a fire has been extinguished due to the auto-ignition temperature being reached within the tyre. A minimum approach exclusion distance of at least 400m and an isolation time of 24 hours after the removal of heat are recommended.

