Incident Analysis of Bucheon LPG Filling Station
Pool Fire and BLEVE

Kyoshik Park, M. Sam Mannan, Young-Do Jo, Ji-Yoon Kim, Nir Keren, Yanjun Wang

Mary Kay O' Connor Process Safety Center
Artie McFerrin Department of Chemical Engineering
Texas A&M University
College Station, Texas 77843-3122, USA

ABSTRACT

An LPG filling station incident in Korea has been studied. The direct cause of the incident was concluded to be faulty joining of the couplings of the hoses during the butane unloading process from a tank lorry into an underground storage tank. The faulty connection of a hose to the tank lorry resulted in a massive leak of gas followed by catastrophic explosions. The leaking source was verified by calculating the amount of released LPG and by analyzing captured photos recorded by the television news service. Two BLEVEs were also studied.