



## **LASTFIRE Dissociation from Press Release issued by IFIF**

As reported previously, LASTFIRE have agreed to collaborate with IFIF, the International Forum for Industrial Firefighting, based in Rotterdam. Our first cooperative effort was aimed at gaining further knowledge of Boilovers. IFIF claimed to have developed a 'special additive' which delays the onset of boilovers in crude oil tank fires. In the period 22-26 March 2010 a test series was conducted at the Centro Jovellanos training centre, Asturias, Spain. The intention of the test series was to assess the effectiveness of this additive.

The LASTFIRE Group wishes to totally dissociate itself from a Press Statement issued by IFIF regarding the effectiveness of the 'special additive' used. The currently available facts do not support the claims of effectiveness. The LASTFIRE Group sincerely hope that future test work will result in definitive proof that this particular 'special additive' or any other mechanism can reduce the risks associated with boilovers in large diameter tanks but currently this is not the case.

### **Notes / explanation on LASTFIRE position**

The LASTFIRE Group Members were represented at the tests by Kevin Westwood and Brad Byczynski of BP and Mark Plastow of Total. In addition Dr Niall Ramsden and Paul Watkins of Resource Protection International, LASTFIRE Project Coordinators were present throughout the tests.

The Boilover trials were carried out with and without the 'special additive'. Two different test pans were used in the test series and instrumented with thermocouples by Professor Geoff Hankinson of Loughborough University and his colleague Tony Eyre, both of whom concur with the LASTFIRE position on this matter at the tests.

The LASTFIRE representatives are not aware of the detailed composition of the 'special additive' but essentially it is applied using a firefighting foam 'carrier'. The intention of the 'special additive' is to affect the properties of the burning crude oil near the surface so that the hot zone does not form in the same way as normal.

The tests were carried out in a very efficient manner thanks to the cooperation of all parties and the staff of Centro Jovellanos.

The crude used was Ural crude which has some specific characteristics in relation to boilover as shown by earlier small scale tests carried out by LASTFIRE and the current test series.

Two days into the testing series a Press Statement was issued by IFIF about the test series claiming that the problem of boilovers had effectively been solved. The LASTFIRE members who attended and witnessed the test disagree strongly with this comment and wish to dissociate themselves from it completely.

The Press Release (attached below) was issued without full analysis of the instrument data or consultation of the LASTFIRE members. This Press Release claimed that a major breakthrough had been achieved. It is understood that it has been circulated outside of LASTFIRE and IFIF, including to industry organisations such as the European Process Safety Centre.

The LASTFIRE representatives very much regret that this statement was issued so prematurely. Unfortunately the statements in it do not reflect visual observations or the actual test results. The LASTFIRE Group are not at liberty to disclose the full test results. However, the facts are that there was insufficient difference in the results between the tests with the additive and those without the additive to justify the claims made. For example, in one particular test with the additive there was a violent boilover at a time similar to the tests without the additive. In some cases there did seem to be some diminution of heat build up with the additive so there is potential for further work to refine the product and application process. (The full thermocouple data has yet to be analysed to see if this effect was significant.) There are also doubts which must be overcome with regard to practical and proven application of the additive to large diameter tanks.

Certainly, in the opinion of the LASTFIRE representatives there is insufficient evidence at this stage to claim that a major breakthrough has been made or that crude oil fires can be treated as any other tank fire. The LASTFIRE Group see this statement as misleading and potentially dangerous if it is used to justify a major change in response to large diameter crude oil tank fires.

Obviously the LASTFIRE Group are very keen to find a real answer to the boilover issue – currently the LASTFIRE Group consider that the only proven way to prevent a boilover in a large diameter tank is to extinguish it quickly before the hot zone can build up sufficiently to cause a boilover. The LASTFIRE Group is committed to continue cooperation with IFIF or any other group that have the same objective of improving knowledge and developing safer and more effective response tactics. We look forward to further test work.

Anyone wishing to discuss this should contact the LASTFIRE Group coordinator or the LASTFIRE Group representatives who attended the tests. It is possible that LASTFIRE Group members will be asked about this test. They are free to circulate this response to anyone either inside or outside the LASTFIRE Group.

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**Below is the PRESS BULLETIN issued by IFIF on 23<sup>rd</sup> March 2010.  
THIS IS NOT PART OF LASTFIRE DOCUMENTATION**

Press bulletin, Rotterdam, March XX 2010

**Dutch innovation makes crude oil tank fires controllable.**  
*“This breakthrough can avoid the disastrous consequences of such fires”*

**The International Forum for Industrial Fire-fighting (IFIF) – a joint effort of industry and authorities – in the Port of Rotterdam has found a method to avoid the boilovers which can occur when a storage tank with crude oil is on fire.**

Spokesman Ab de Moor: “The burning oil is ejected from the tank causing detrimental effects in the surrounding area.”

Up till now there was always the possibility that emergency responders in the process of fighting the fire were struck by the effects of a boilover. Thanks to this "invention" a crude oil fire can now be tackled as any other tank fire.

As far as we know the first registered boilover from a burning storage tank with crude oil occurred in 1917 in the in Bakersfield – California. The most likely cause of this fire was lightning.

30 more boilovers were officially registered since 1917 the last one in 2005. But it is very likely that more boilovers have occurred in this period.

Various sites that were struck by a boilover were never rebuilt.

Spokesman Ab de Moor “With this newly developed method oil companies can save millions”

The first documented research into the prevention and control of boilovers was carried out in 1925. So far many researchers have not been successful in unravelling the mechanism behind a boilover. About two years ago it became clear why boilovers occur and how they can be controlled. To secure further research the International Forum for Industrial Fire-fighting was established.

IFIF initiated further research on a laboratory scale to optimise the method to control boilovers. In the meantime the tests were up scaled and last week IFIF was able to carry out large scale tests in Spain. The tests proved that this method can be used to real fires in large storage tanks of the tank terminals in the Port of Rotterdam.. This very expensive research was made possible thanks to the support of various parties like, LASTFIRE; Dr. Sthamer, Shell Nederland Raffinaderij, Verwater, Esso Nederland, Ajax Fire Protection, Inburex Consulting, Den Hartogh.

Besides boilovers IFIF researches other issues relevant for industrial safety. IFIF was established through joint efforts of:

- The Unified Fire Services
- DCMR - Regional Environmental Protection Agency
- VRR – Regional safety and emergency response organisation
- Rotterdam Port Authority
- Deltalinqs – Organisation which represents over 300 companies in region of Rotterdam

Please visit our website [www.ifif.nl](http://www.ifif.nl) if you like to know more about our other projects.

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