

The Problems of Monitoring Mist in Gas Turbine Chambers

by

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A number of years ago, we met up with Roger Santon who was advocating the use of mist detectors in Gas Turbine Chambers.

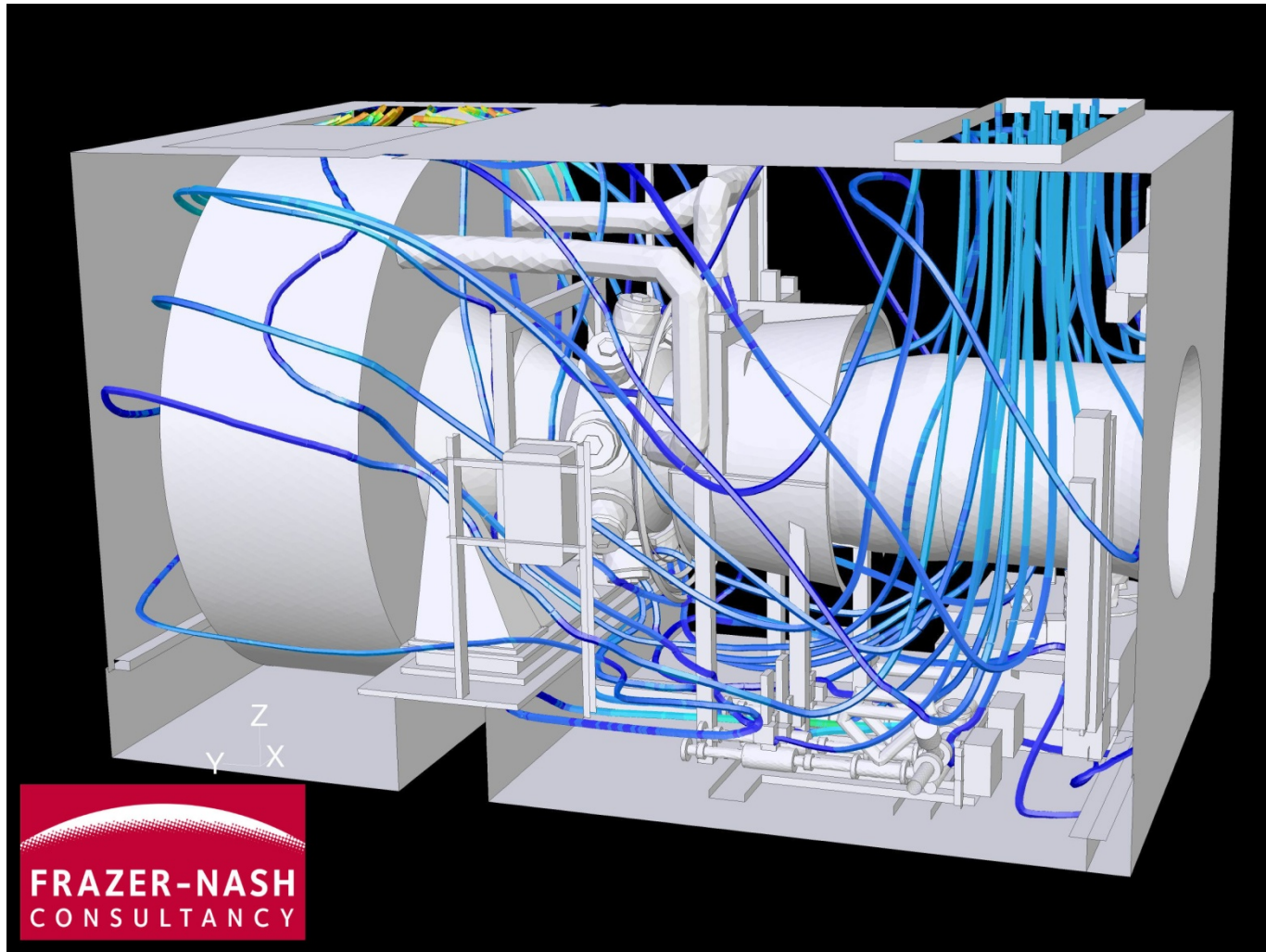
The main points of concern are:

- a) Location of Detector
- b) Easy to install and maintain whilst the plant is working
- c) A reasonable price

HSE then organised a number of workshops about dealing with the problem of fires in the chambers.

As you can see from this slide produced by Frazer Nash Consultants, the reason for the problems of detection is the airflow patterns and the only place that you are most likely place to be reasonably sure of detecting mist is in the air extractor ducts.

Gas Turbine Ventilation showing airflow patterns



We were then approached by Trevor Sidaway of NPower, East Cowes, who had been to one or two of the HSE Meetings about installing some form of detection in his Gas Turbine Chambers.

NPower East Cowes



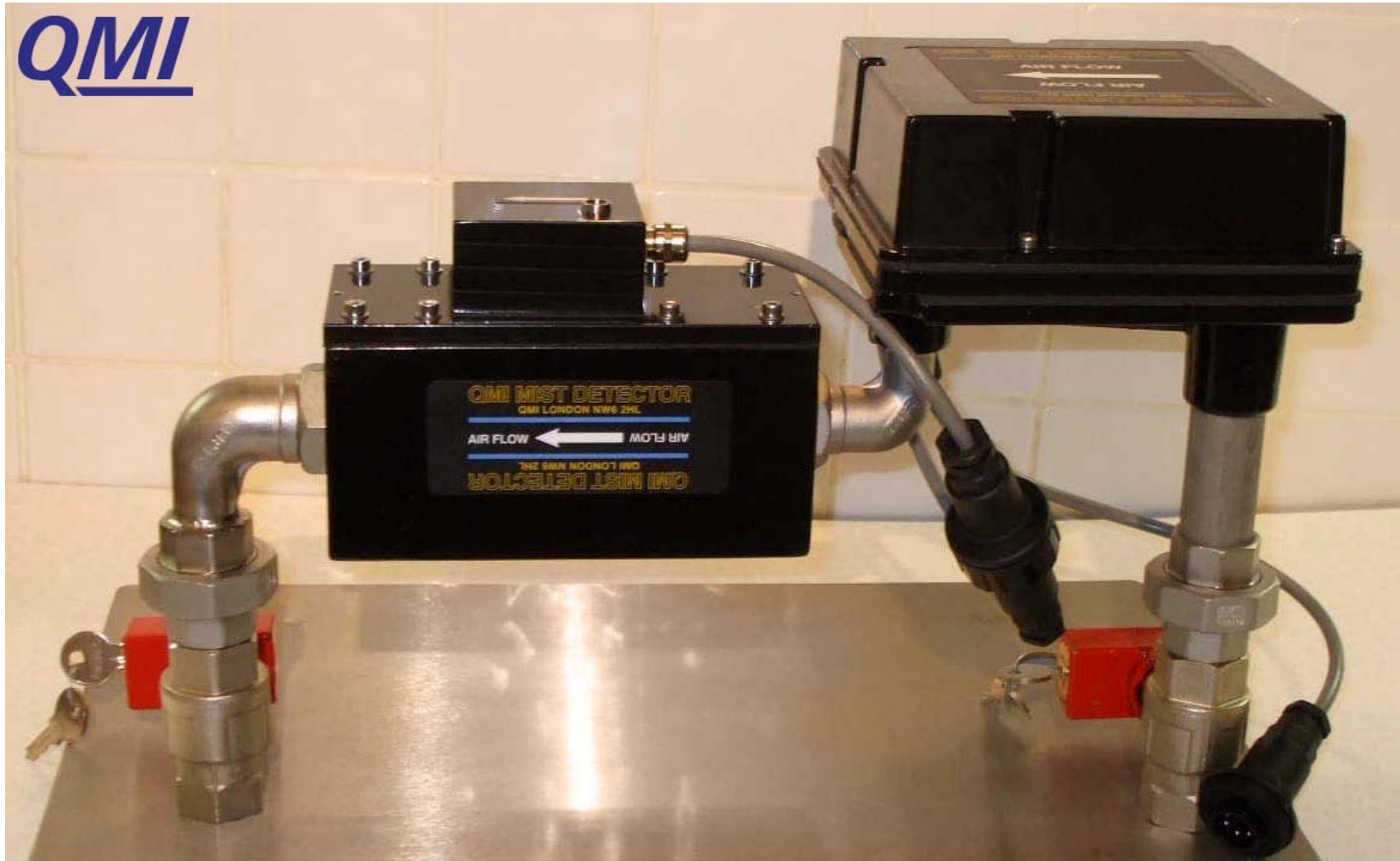
NPower East Cowes



This proved so successful that they then installed a more engineered installation in all of the NPower Gas Turbine Stations.

Further meetings with HSE were held and it was suggested that we developed the system to suit Zone 2 areas for the same mist problems as was being experienced on gas based gas turbine installations.

The final model that is going into production is as per this photo and the working is as we are demonstrating here. The detector itself has been passed and we are awaiting the certificates.



Prototype ZONE 2 Oil Mist Detector System Currently in Development



The latest two bulletins being sent out by the HSE are No. 10/2008 and No. 8/2009

Please see any of my colleagues to discuss further at the working demonstration.

May we suggest that you contact Liam Hewitt of Frazer Nash Consultants about the location of detector as they have a computer program specifically designed to show the main passage of the air flow.



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