

Case Study: BlazeMaster® Fire Sprinkler Systems in Offshore Accommodation Platforms

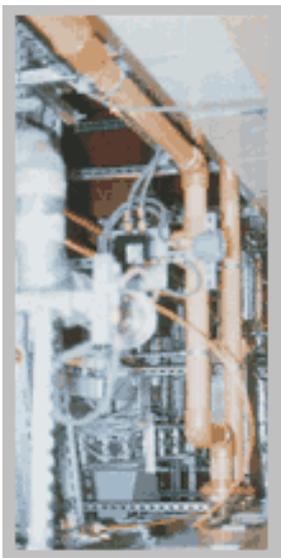


When leading marine offshore engineering company, SLP Engineering of Lowestoft, were constructing the free-standing accommodation platform for the Claymore offshore oil platform complex on behalf of Elf Enterprise Caledonia Limited, one of the key aspects to be considered was the installation of an effective, reliable fire sprinkler system which could also provide cost savings without compromising safety. The system chosen was BlazeMaster® CPVC fire sprinkler systems.

BlazeMaster® fire sprinkler systems offer considerable cost benefits when compared with other systems which are normally used in offshore platform installations.



According to Andy Bogg, senior mechanical engineer at SLP, "BlazeMaster® was able to show a reduction of 90% in installation costs when compared with Cunifer. Although this was the first time that we had used BlazeMaster®, we did not experience any problems whatsoever with the installation. We found it to be cleaner, healthier to work with and more maneuverable even in confined spaces. We saved many hours on the project and the handling and assembly of the pipes and fittings could not have been quicker or easier."



In the early stages of the project there was some skepticism about the use of new materials in this type of application. Also the BlazeMaster® system was not approved for this environment in Europe although it did have both Underwriter's Laboratories (UL), USA approval, and provisional approval from the Loss Prevention Council (LPC). By the time that the accommodation platform was completed full approvals were obtained from the LPC, from Lloyds offshore and from the Health and Safety Executive (HSE). The system can now be used in process areas as well. Jon Thomson, marketing manager for BlazeMaster® products comments, "The sprinkler system was subjected to numerous fire tests as well as physical property and pressure tests. During the direct fire exposure, peak temperatures exceeded 500°C and the system maintained operating integrity. The pipe is also approved for continuous operating pressures up to 12 bar and 50°C and has an excellent track record over the last 10 years."

The Claymore accommodation platform contract includes over 500 concealed sprinkler heads. The pipes were manufactured by Harvel Plastics Inc. and the fittings by Spears Manufacturing Co. Inc. Training for the installers was provided on-site by BlazeMaster representatives to enable the sprinkler system to be correctly assembled and to eliminate any uncertainties that the installers may have had in handling the BlazeMaster® fire sprinkler system for the first time.

When compared directly with Cunifer, the BlazeMaster® pipes and fittings are much lighter which is an important consideration particularly for offshore rigs. The pipes and fittings are very easy and quick to solvent-weld and also because of the superior hydraulic properties (Hazen Williams C 150) thinner bore pipe can be used to provide the same performance as a wider bore Cunifer pipe. In the



Claymore accommodation area, a 3" bore pipe was used where normally a 4" Cunifer pipe would be required. This was an added benefit because the complex arrangement of pipes and service ducts. With the handling so easy, long sections could be assembled in corridors and lifted into place without much effort or the use of special equipment.

The long-term reliability of BlazeMaster® CPVC fire sprinkler systems is supported by outstanding corrosion resistance, low flame spread, low smoke emission levels and a 50 year life expectancy. A further benefit was a reduction in inspection costs. The BlazeMaster® pipes and fittings were not required to be subjected to radiography or dye penetration examinations.

The system was hydro-tested up to 18 bar when it was first installed. The platform was then moved a considerable distance to its operative site. Tests have been subsequently carried out with the sprinkler system on the platform at its location in the North Sea in order to ensure that the transportation of the platform had not damaged any of the systems integrity. The system was found to be leak free and sound.

Andy Bogg adds, "Now that we have worked with the BlazeMaster® CPVC fire sprinkler system and seen how fast and easy it is to handle, assemble and install, with all the other benefits that this system can offer, we will not go back to using anything else. We will specify BlazeMaster® as an option on all new jobs and for in-house work we will always use BlazeMaster® from now on."