

Safer Means of Escape Made Possible in Hazardous Areas by LaserLite

Submitted by: Ainsworth Maguire

Friday, 26 September 2008

A safety lighting technical breakthrough by Chalmit Lighting (<http://www.chalmit.com>) will deliver significant advances over conventional safety light sources. LaserLite (<http://www.chalmit.com/more/on/details/00026>) is based on a solid state laser source to provide a continuous 150 metre strip of lighting. Recessed into the floor or installed on the wall near floor level, LaserLite illuminates corridors and stairwells to exits. It is also an ideal way to highlight obstructions or even provide illumination below water.

The technology has been jointly developed with Photo Synergy, a company owned by St Andrew's University, who supply the diode pumped laser light source. Linked to a side-emitting optical fibre cable, the LaserLite is a safe and effective light source for use in oil and gas exploration and processing facilities. The light source can be installed in Zones 1 and 21 (http://www.chalmit.com/default/off/page/Hazardous_Guide.html) and the optical fibre, with no live electrical component is safe for use in Zone 0 hazardous areas.

The light source is brighter than LED based optical fibre systems and has a green light output that is in the peak range for the human eye. This makes the system especially suited to emergency lighting where smoke could obscure conventional light sources at high level.

Petrofac Training, based in Montrose, who specialise in realistic on shore based safety training for North Sea and other oil and gas rig operators, have installed LaserLite on their new facility. This includes an accommodation module linked to a helideck and a lifeboat station. Fitted at low level the lighting provides safe illumination of escape routes during simulated emergencies and is unaffected by smoke logging.

The LaserLite has a rating of just 80 Watts. Fully compliant with the draft standard 60079-28 for optical radiation, the units are certified for use in Zone 1 and 2 areas. The light source is enclosed in a robust die cast housing requiring only minimum service attention. Laser light sources have an exceptionally long life. With only a laser cable, there is no re-lamping required throughout the life of the unit.

"There is no doubt that we can deliver significant improvements for gangway and escape lighting and the illumination of hazards, both above and below water. This is a completely new lighting technology and we are only beginning to appreciate the possibilities." concluded Chalmit Lighting's marketing manager, Gareth Bruce.

More Information

Gareth Bruce, Tel. 0044 (0)141 882 5555 Fax. 0044 (0)141 883 3704

E-mail: gbruce@chalmit.com, Web: www.chalmit.com (<http://www.chalmit.com>)

Chalmit Lighting, PO Box 5575, Glasgow, G52 9AP, Scotland

High/low resolution images are on the web at www.ainsmag.co.uk/ch232/4223ch1a.htm

(<http://www.ainsmag.co.uk/ch232/4223ch1a.htm>)

Additional Information for Editors

About Chalmit

Chalmit Lighting is part of Hubbell Electrical Products, a division of Hubbell Incorporated of Delaware. Chalmit is a world-class supplier of florescent and HID lighting products for use in hazardous areas. The company also offers customers a lighting design service and supply the unique Chalmlite™ (http://www.chalmit.com/ingenii.cgi?page=About_Chalmlite.html) software package that is rapidly becoming the industry standard for lighting design. Chalmit lighting can provide a complete product range for both IEC and NEC applications including enclosures, fittings, control stations and switchgear.

Background about Lasers

Laser is an acronym; it stands for 'light amplification by stimulated emission of radiation'. Light is made up of sub-atomic particles called photons and these are given off by atoms that are in a stimulated state. Atoms can be raised to a stimulated state by exposure to a radiant source of energy.

Amplification is achieved by containing this process of photon emissions so that stray photons strike adjoining atoms, stimulating them and causing them to emit further photons in a kind of chain reaction. This creates an intense source of light.

Laser Lite uses a diode as the primary photon source. Amplification is achieved by introducing light into a specially coated length of optical fibre through a device known as a grating that has similar properties to a mirror. A grating at the opposite end of the fibre prevents most of the photons escaping, other than those of a specific frequency. This stream of light passes down an optical fibre that has exceptional side emitting properties to create the continuous ribbon of light.