

Title	REVIEW OF EMERGENCY LIGHTING AND WAY-GUIDANCE SYSTEMS FOR OFFSHORE STRUCTURES	
Publisher/Author	HSE	
Publication Date	1996	
Executive Summary	<p>This report presents a review of emergency lighting and way-guidance systems for offshore structures, carried out by the Environment Group and the Fire Research Station of the Building Research Establishment, for the Health and Safety Executive Offshore Safety Division and managed by the Marine Technology Support Unit.</p> <p>The review has examined current national and international codes and draft codes and discusses the parameters that are defined by these codes.</p> <p>Traditionally high-mounted emergency lighting has been provided to cater for those occasions when the power supply to the normal lighting fails and has not been specifically designed to cater for smoky situations or to be activated on the detection of smoke. Currently offshore, the luminance performance of the emergency lighting installed varies according to area, risk and operator. However, in general, the recommendations of BS5266 Part 1 are used as a minimum. Proposals in a draft CEN standard for emergency lighting suggest the need to introduce new luminance criteria for 'high risk task area lighting' and at locations of fire fighting and safety equipment. Other improvements to luminance criteria at changes of level and in open plan areas would need to be considered by the HSE.</p> <p>When smoke is present, low-mounted way guidance systems provide visual cues as to the configuration of the escape route, direction to emergency exits, and location of emergency exit doors. IN GENERAL, ELECTRICALLY POWERED WAY GUIDANCE COMPONENTS ARE MORE VISIBLE IN A GIVEN DENSITY OF SMOKE THAN NON-ELECTRICALLY POWERED COMPONENTS SUCH AS PHOTOLUMINESCENT COMPONENTS OR TRITIUM SIGNS.</p> <p>Two draft British Standards for application of non-electrically powered and electrically powered way guidance systems provide starting points for development of standards for way guidance systems for application offshore. Modifications will be necessary to the BS drafts to include minimum requirements for explosion protection of equipment, selection, installation and maintenance. Much of this should draw on parts of BS5501 and BS5345 dealing with individual types of protection.</p>	
Table of Contents	1 - INTRODUCTION..... 2 - EMERGENCY LIGHTING CODES AND STANDARDS..... 3 - WAY-GUIDANCE CODES AND STANDARDS..... 4 - SMOKE STUDIES OF EMERGENCY LIGHTING AND WAY-GUIDANCE SYSTEMS..... 4.1 - VISIBILITY IN SMOKE..... 4.2 - STUDIES OF PEOPLE'S MOVEMENT IN SMOKE..... 4.3 - DISCUSSION..... 5 - HAZARDOUS AREAS..... 5.1 - CLASSIFICATION OF HAZARDOUS AREAS..... 5.2 - STANDARDS ON EXPLOSION PROTECTION..... 6 - EMERGENCY LIGHTING..... 6.1 - AREAS AND EMERGENCY LUMINOUS RECOMMENDATIONS..... 6.2 - ILLUMINATION OF LOCATIONS OF FIRE FIGHTING AND SAFETY EQUIPMENT..... 6.3 - ESCAPE ROUTE SIGNS.....	1 5 7 9 9 17 20 23 23 23 27 27 32 32

6.4 - EQUIPMENT, INSTALLATION AND MAINTENANCE..	34
6.5 - MODE OF ACTIVATION.....	35
6.6 - VERIFICATION AND INSPECTION.....	35
7 - NUN-ELECTRICAL WAY-GUIDANCE SYSTEMS.....	37
7.1 – BACKGROUND.....	37
7.2 - ESCAPE ROUTE MARKING.....	40
7.3 - EMERGENCY EXIT DOOR MARKING AND ESCAPE ROUTE INTERMEDIATE SIGNS.....	42
7.4 - LOCATIONS OF FIRE FIGHTING AND SAFETY EQUIPMENT.....	43
7.5 - PHOTOLUMINESCENT PRODUCTS, INSTALLATION AND MAINTENANCE.....	43
7.6 - MODE OF ACTIVATION.....	45
7.7 - VERIFICATION AND INSPECTION.....	45
8 - ELECTRICAL WAY GUIDAMCE SYSTEMS.....	47
8.1 – BACKGROUND.....	47
8.2 - ESCAPE ROUTE MARKING.....	49
8.3 - EMERGENCY EXIT DOOR MARKING AND ESCAPE ROUTE INTERMEDIATE SIGNS.....	51
8.4 - LOCATIONS OF FIRE FIGHTING AND SAFETY EQUIPMENT.....	52
8.5 - ILLUMINATION OF ESCAPE ROUTE.....	52
8.6 - EQUIPMENT, INSTALLATION AND MAINTENANCE..	53
8.7 - MODE OF ACTIVATION.....	55
8.8 - VERIFICATION AND INSPECTION.....	55
9 - CONCLUSIONS A RECOMMENDATIONS.....	57
9.1 - CONCLUSIONS.....	57
9.2 - RECOMMENDATIONS.....	58
10 - ACKNOWLEDGEMENTS.....	63
11 - REFERENCE LIST.....	65