

Birmingham Health, Safety & Environment Association

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Newsletter

December 2009

Welcome *to Our New Members*

We wish to extend a warm welcome to the following members, who have recently joined BHSEA: -

- David Myrie, Proprietor, Myries Ltd.
- David Crabb, Operations Director, City Office Interiors Ltd.
- Mick Spellar, UK Warehouse Manager, SILS UK
- Emma Spurrier, Administration, AGS Gas Ltd.

BHSEA Meeting, 14th December 2009

BHSEA Vice-Chairman, Ed Friend, opened the meeting by welcoming members and the speakers. The Secretary reminded members about the AGM on Monday and added that the HSE address would be given by the new HSE Head of Division, Rosi Edwards. Apologies were received from Bob Cole, Gerry Mulholland, Tony Hall and Bill Parker.

Provision of Industrial Lighting

(Presentation by Graham Archer and Curtis O'Donnell, Dexco Solutions.)



Graham Archer; Curtis O'Donnell

Curtis O'Donnell started the presentation with a brief description of his firm's activities. The Dexco Group comprised Dexco, involved in Conservation and Dexco, for the related activity of recycling. In addition they have a large manufacturing unit that can complete customer orders within 5 – 10 working days, supported by an in-house CE testing facility with a ½ hour turn-round time!

Curtis went on to say that it was essential to follow a systematic process by asking the searching question “Why to replace your existing lighting?” It could be “Not fit for purpose because of a stroboscopic, effect on machine tools; or lumen maintenance is reduced by aging; or may be its quality of light is poor; or maybe the luminaire uses High Frequency control circuits. He then showed us an example of poor quality of light, in the before and AFTER photos, below: -



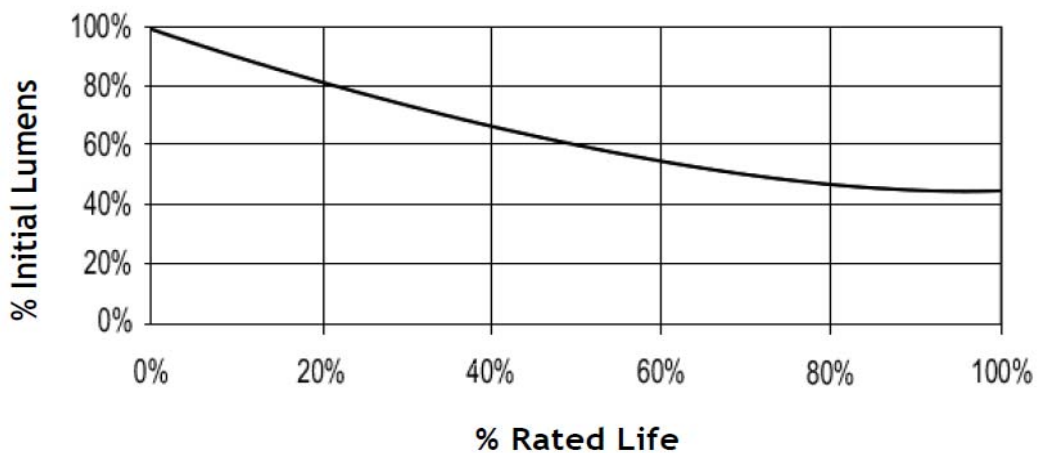
Before



After

The factor that made a difference in these shots was simply colour rendering, because the luminaires were still in their original positions, which were dictated by the warehouse racking. The difference was achieved by using Metal-Halide luminaires, instead of Sodium vapour lamps.

Lumen Maintenance



With the aid of the above graph, he explained how the lumen output reduced by 60 % over the full life of the luminaire. This effect can be reduced by using the T5 control for reduced loss and the deterioration goes largely un-noticed. there is also instant light at switch-on with the T5!

Curtis added that Dexeco's UK salesforce could help customers through this process by carrying out Lighting Surveys, Lighting Design and Energy Analysis. This support service takes account of Chartered Institute of Building Services Engineers (CIBSE) guidance and specification, together with Health and Safety standards and specific task lighting requirements. All of this information is uploaded into a Computer Aided Design (CAD) programme which is capable of demonstrating the performance and effect of any new lighting scheme, that can also be compared to the existing arrangements.



This photograph shows a typical output from this programme. Designs also take into account issues such as light obstruction by filing cabinets, racking and machinery. Another factor is glare, either direct or reflected, particularly when travelling from one area to another, and contrasts in lighting levels. Curtis added that provision of dedicated task lighting could significantly reduce the need for general area lighting and, hence the overall capital and running

costs!

Another feature built in to this programme is a provision for maintenance of the lighting system. This is important because of the deposits of dirt and dust, either on the luminaires or the surrounding structures may have an even more marked effect than the natural fading of light output. This effect is most noticeable when comparing requirements in offices, to those in factories.





Near each intersection



Near fire fighting equipment

Another significant area of lighting design is Emergency Lighting, which is treated as an individual requirement. The photographs show the salient positions for locating the luminaires, once the escape routes have been determined in accordance with the Building Regulations and the Fire Risk Assessment. As a general rule,

anywhere $>8m^2$ needs to have emergency lighting and this also applies to key areas in larger rooms.

As in all other things in business, there is always an associated cost and Dexeco Solutions laid emphasis on the balance between Energy Costs and the minimal health and safety requirements. This chart shows how alternative options are presented for a range of energy options to deliver varying savings in terms of cost and CO₂ savings.

Present Costs		Projected Costs				
Gear Type	Quantity	Gear Type	Quantity	Quantity	Quantity	Quantity
400W SON	100	4X80W T5	100	100	100	100
		Dexeco Product code / Gear	VRT480 DSI(E)	VRT480 DSI(E)	VRT480 DSI(E)	VRT480 DSI(E)
		Wattage	R14	R14	R14	R14
Gear Description	400W SODIUM	Load per lamp (inc. losses) in Watts	344.40	344.40	344.40	344.40
Total Load	43.40	Total Load	34.44	34.44	34.44	34.44
Maximum hours per day	24	Maximum hours per day	24	24	24	24
Days per week	7	Days per week	7	7	7	7
Days per year	365	Days per year	365	365	365	365
Maximum hours run per annum	8760.02	Maximum hours run per annum	8760.02	8760.02	8760.02	8760.02
Level of occupancy*	100%	Level of occupancy	100%	80%	60%	40%
Actual hours run	8760.02	Actual hours run	8760.02	7323.38	5571.38	3819.37
Annual consumption KWh utilising Presence Detection	380185.04	Annual consumption KWh utilising Presence Detection	301695.23	252217.21	191878.16	131539.12
Percentage of Daylight Saving	0	Percentage of Daylight Saving	15%	15%	15%	15%
Annual consumption KWh utilising Presence & Daylight Control	380185.04	Annual consumption KWh utilising Presence & Daylight Control	256440.94	214384.63	163096.44	111808.25
Unit rate (£)	0.090	Unit rate (£)	0.090	0.090	0.090	0.090
Annual Electricity Cost	£34,216.65	Annual Electricity Cost	£23,079.68	£19,294.62	£14,678.68	£10,062.74
		Annual Saving (£)	£11,136.97	£14,922.04	£19,537.97	£24,153.91
Annual Tonnes of Co2 Produced	204.16	Annual Tonnes of Co2 Produced	137.71	115.12	87.58	60.04
		Annual Saving Tonnes of Co2 Produced	66.45	89.03	116.58	144.12

Lighting needs can be predicted in individual areas and each lighting unit can be adjusted to suit needs, such as lower output near windows, in order to boost savings. The design programme is flexible enough to allow for differing levels of occupancy parameters, to give payback over 3 to 4 years. There are also government grants for differing Carbon Sources and a Capital Cost Allowance from the Carbon Trust. (<http://www.carbontrust.co.uk>)

At this point Graham and Curtis demonstrated a luminaire controlled by a movement sensor and commented on the smooth start-up characteristics. This is another means of economising on energy costs.

Some useful information: -

CIBSE LG7 Guide: www.lg7.info

BSEN 1838:1999 Lighting Applications. Emergency Lighting

BSEN 12464 – 1 2002 Light and Lighting Indoor workplaces

BS 5266 – 8: 2004 Emergency Escape Lighting

HSG 38 Lighting at Work

After this demonstration Ed Friend closed the meeting and thanked the speakers for their presentation and the members added their thanks in the traditional way.

Birmingham Schools Initiative

In March, BHSEA, along with HSE, was invited by the Birmingham City Council (BCC) Health and Safety Team (Enforcement) to sponsor a special initiative in Bournville School and Vith Form Centre. The aim was to raise Health and Safety Awareness amongst 200, 10th Year pupils, prior to them engaging in Work Experience. An awareness seminar was held at the beginning of July, with presentations being made by members of the BCC Inspectorate Team, based on the HSE Shattered Lives campaign and a prosecution case study in the West Midlands. This was followed up by a feedback session with some students, prior to a briefing on specific tasks to be undertaken by the whole Year Group for a competition in the Autumn term. The Award Categories were for a Poster, General H & S Leaflet, an H & S Webpage and Any Other Item related to a campaign or motivational material.



The Project Team, L to R: Janine Tickle, HSE; Brian Platts, Bournville School; Terry Mallard, BCC; Andy Chappell, BHSEA; Surindar Deshi, BCC.

The competition attracted an impressive set of entries from the pupils, which indicated an excellent response to the awareness training. The entries were judged by BHSEA, BCC and HSE representatives and BHSEA provided 25 WH Smith £10 Vouchers to pupils contributing to the winning entries. It is hoped to expand the initiative into other Birmingham Schools in 2010.



BHSEA Secretary presenting awards to some of the winning pupils at morning Assembly.



Some of the winning pupils with a selection of their entries

Silica Dust Safety Awareness Event

This event was held on 17th and 19th November at the Constitution Hill, Birmingham Depot of Brandon Hire, one of the UK's leading tool hire companies. This topic continues to be very high in the list of premier HSE targets for 2009 – 2010 as it represents a serious health risk in the Construction Industry.

As a result of BHSEA working with Brandon Hire during the summer, the company set up a series of Dust Control specialist depots across the Midlands, of which, constitution Hill was one.

On the days of the event we had a display to attract the attention of passing customers but relied on invited delegates for the demonstrations and awareness training. The Brandon Hire facilities are excellent and they also arranged for their Training Trailer



A selection of visitors on the second day



Visitors at the Brandon Hire Trailer

to come up from Bristol to stage the demonstrations. In addition, we had a representative from the well-known vacuum cleaner supplier, Dust Control Ltd., to present further demonstrations.



Close-up photo of the dust control suction casing on an angle grinder with disc cutting a thermal block.

The vacuum cleaner used in this demonstration has a 99.97% filtration efficiency and 193 m³/hr open flow rate, which guarantees clear air on this, so-called, 'dirty' job!

The demonstration showed that, with the correct equipment, properly adjusted and well maintained by the user AND the hire company, the health risk from respirable silica dust can be kept well under control!

This pre-supposes that the operators are properly trained to use the equipment and, all too often, this is

not the case. It is crucial to select a large enough vacuum cleaner to provide the capture velocity to ensure that all the dust particles are captured at the cutting edge. Tool selection must take account of the type of material being worked on, as materials are ejected at different rates on various tasks. This assessment cannot be left to the operator as it needs information on tool performance that is not readily available, particularly during the early morning rush at the counter of your typical tool hire centre. Good training, however, will help the operator to know when equipment is not right and might enable him to protect his own health!

Present instructions to HSE Inspectors are that any cutting or raking operations done without adequate dust suppression are to be considered to be a serious health risk. This means that any work done without Water Suppression or Local Exhaust Ventilation may be subject to a Prohibition Notice! Use of a FFP3 mask is also mandatory in order to comply with HSE Guidance.

Date of the next Meeting

**2.00 pm on Monday 11th January 2010
at the Birmingham Medical Institute
BHSEA AGM**

This is a good opportunity for members to find out more about YOUR Association and to do some productive networking with other members. This year we are holding elections for Honorary Officers and Council Members. There always vacancies for either elected or co-opted members so, if you would like to take a more active part in the development of BHSEA, please contact the Secretary.

Keynote Presentation

Rosi Edwards, Head of Division, HSE, Midlands Division

We always like to start the year with up-to-date guidance from the HSE. This year we are lucky to have the presentation from Rosi Edwards, Head of Division for HSE Midlands Division who will tell us how things have progressed in the Workplace and what the priorities will be for 2010 and beyond.

Rosi is no stranger to BHSEA, as she has worked in this Region for some years, having been previously the Head of Operations for the Midlands and South Wales Construction Group.

Don't forget the buffet lunch at 1.15 pm!