

Health Sector News

New HBN: Tightening up window safety

The Department of Health has published revised HBN guidance on the technical design and output specifications of windows and associated hardware,

A new Health Building Note, 00-10 Part D: *Windows and associated hardware* (www.tinyurl.com/jvrub3j), which supersedes HTM 55 – 'Windows', published in 1998, has been produced 'to reflect changes in legislation, guidance, the structure of the NHS, and government policy and direction on health and social care', and to help minimise the risk of patients falling from windows. Input was provided by the HSE, which says the content supplements its own guidance on risks to vulnerable members of the public falling from height from windows (www.hse.gov.uk/safetybulletins/windowrestrictors.htm).

In November 2012, a Coroner's Rule 43 letter to England's Chief Medical Officer requested that action be taken to reduce the risk of such falls.

In July 2013 (*HEJ* – August 2013) Southend University Hospital NHS Foundation Trust pleaded guilty at Southend Crown Court to breaching



Regulation 3(1) of the Health and Safety at Work etc., and was fined £15,000, with £15,000 in costs, after the court heard that in July 2010 a 66-year-old patient at the hospital had sustained serious injuries, and subsequently died, after falling through the window of a side room. The window was found to be fitted only with a single angle bracket restrictor, bent to one side, allowing it to be fully opened. An HSE investigation found arrangements for managing the risk of patients falling from windows were 'inadequate'.

The latest guidance recognises that

window restrictors tested to current British standards 'may be inadequate in preventing a determined effort to force a window open beyond the 100 mm restriction'. With no current established performance standard, it recommends (dependent on risk assessments) testing loads on window restrictors used in healthcare premises using forces 'in excess of those quoted in BS EN 14351'.

HBN 00-10 Part D says healthcare providers seeking to identify the risks of patients falling from windows should 'take account of patient category and physical capability', and stresses the importance of specifying the 'correct type' of restrictor, and ensuring restrictors and their fittings are 'suitably robust to prevent vulnerable and determined adults from forcing them open beyond the 100 mm restriction'.

Preventative maintenance and monitoring schedules should include checking and inspection of restrictors, and, where they are found to be damaged, 'defeated', or defective, 'questions should be asked about the significance of the findings and any wider implications'.

Cover Story

Energy usage and power quality data are key to lower costs

Electrical power is the lifeblood of critical medical facilities, yet many still fail to recognise how monitoring energy consumption and energy quality can reduce costs and ensure high availability of supply.

To effectively manage energy, medical facilities must track the time-based usage by different departments and monitor energy quality. Bender UK's Comtraxx CP700 Condition Monitor provides a comprehensive view of energy consumption, and brings transparency to the electrical service network of critical medical facilities when used in conjunction with Bender power quality monitoring (PQM) systems.

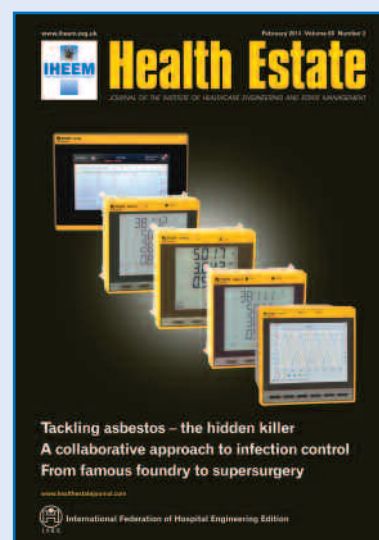
Complex loads use switch mode power supplies that are present in most portable electronic devices – PCs, chargers, televisions, monitors etc. These result in nonlinear waveforms, leading to 'dirty power' harmonic

problems and overheating in neutral conductors. In addition, many healthcare installations incorporate UPS systems that also introduce harmonic content onto the power system.

Monitoring ensures that the power supply quality within the healthcare premises is of the highest standard and, importantly, identifies when an issue is due to a complex load, or whether the regional supplier is delivering poor power quality.

The Bender CP700 Condition Monitor intelligent display and control unit has an integral 7-inch touchscreen which enables intuitive on-site operation and clear user customisation, visualisation, and diagnostics, for the Bender UK PQM devices.

No programming skills are required for set-up, and, in the event of a fault, CP700 provides guided fault analysis and optional active alarm generation. The system



also allows dial-in access from a remote computer for real-time updates.

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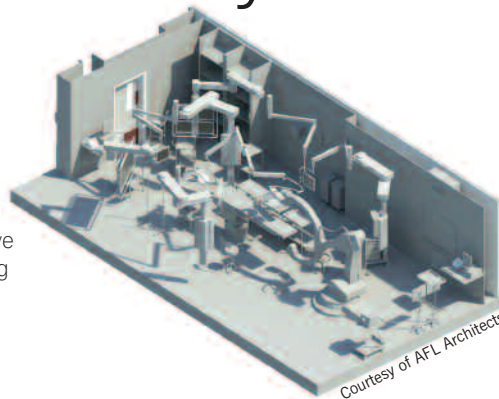
'Cutting edge' £6 million endovascular facility

Work has begun on a new £6 million hybrid endovascular theatre suite at Manchester Royal Infirmary, due for completion this April.

The Central Manchester University Hospitals NHS Foundation Trust says the suite will 'transform the treatment' of patients undergoing minimally invasive cardiovascular procedures, while making the MRI the UK's first hospital equipped with two adjacent fully hybrid theatres utilising a robotic imaging system with fully flexible theatre table.

Technology will include high definition imaging with two robotic Siemens Artis zeego C-arms, plus facilities for traditional surgery. The hybrid suite will 'provide better facilities where existing techniques can be performed more efficiently and safely, and enable new, innovative techniques and treatments not currently possible'.

Maquet will be both building, and supplying equipment including operating tables, lighting, and ceiling service units –



all controlled by its TEGRIS OR integration system – for the suite's two new endovascular theatres and an adjoining 'conventional' theatre.

Designed by the Trust and AFL Architects, the theatres will also incorporate Maquet's VARIOP modular walling system – designed for flexibility in room layout, rapid construction, and simpler, faster, integration of services.

EBME event's 'educational' content

Following 'extremely positive feedback' from the 2013 event, this year's EBME Seminar, on 1 May, will again be held at the Milton Keynes Double Tree Hilton Hotel – a luxury conference venue integrated into the west stand of the MK Dons stadium.

The 'educational event', at which IHEEM will have a stand, will bring together the medical engineering community with medical equipment manufacturers and suppliers. Attendance is free – to register, or for more information, visit: www.ebme.co.uk/seminar.

The organisers said: "This large venue allows the wide variety of independent

exhibitors to showcase their products and services in one hall. With an exciting theme this year of 'The latest innovations in medical devices', there is a full programme of expert speakers, plus a panel debate in which the audience can participate. The seminar's aim is to share knowledge, improve awareness, and bring together healthcare professionals responsible for the management of medical equipment in areas such as procurement, maintenance, user training, and managing inventories."

Each attending delegate will receive a CPD certificate.

News in brief

Medical maintenance framework

Asteral, the vendor-independent managed equipment and managed maintenance service provider to the NHS, has been awarded a place on the North of England Commercial Procurement Collaborative (NOE CPC) Framework for Medical Equipment Maintenance. The Framework, which went live on 2 December 2013, offers its 39 members and associate members an additional route through which to procure medical equipment maintenance services from pre-approved and highly-qualified suppliers. The contract can also be accessed by non-members upon payment of a contract access fee.

Registered engineers' earnings up

The Engineering Council's 2013 survey of professionally registered engineers and technicians indicates that those holding Engineering Technician (EngTech), Incorporated Engineer (IEng), and Chartered Engineer (CEng) titles are still enjoying pay increases and low levels of unemployment. Since the last survey in 2010, registrants have seen a rise in median total earnings of 8.1 per cent for Engineering Technicians, 5.1 per cent for Incorporated Engineers, and 14.5 per cent for Chartered Engineers.

Secure solution for hospital

ASSA, part of ASSA ABLOY Security Solutions, 'carefully balanced access and security' when supplying products for small, gender-specific apartments at Bradley Woodlands Hospital, a 23-bed learning disability facility near Grimsby. Lincoln Security Locksmiths recommended ASSA's P600 patented 6-pin cylinders to provide robust, cost-effective high security, with the capability to handle complex master key systems on one key profile. Based on a patented new pin technology, the P600 is claimed to afford 'unrivalled protection against bumping and picking', and can be used both internally and externally on an application.

FIM Expo goes to the races

The Fire Industry Manufacturers' (FIM) Expo will have a one-day stop on 2 April at Warwick Racecourse. Organised by the Fire Industry Association (FIA), FIM Expo will feature many of the UK's leading fire detection and alarm manufacturers, showcasing the latest products and developments. The event is aimed at personnel ranging from installers or maintainers of fire detection/alarm systems, to those managing and specifying them.

Rampton energy centre contract

Cofely has been awarded a Carbon Energy Fund framework contract by Nottinghamshire Healthcare NHS Trust to construct, operate, and maintain, a new Energy Centre at Rampton Hospital in Nottinghamshire.

The company will guarantee specified carbon and energy savings, delivering projected financial savings of around £112,000 per annum for the Trust.

The Energy Centre will provide heating, hot water, and electricity. The existing coal-fired boilers will be replaced with a 1 MW

biomass boiler, a 1.2 MW combined heat and power (CHP) engine, and three high-efficiency dual-fuel boilers running predominantly on gas.

The new plant will meet all the hospital's heating and hot water requirements, and approximately 87 per cent of the total electricity demand, reducing annual CO₂ emissions by around 8,000 tonnes. The site will convert from a high temperature (115°C) hot water system to a low temperature (90°C) hot water district heating system.

‘Uncompromising’ range of LED examination lights

Brandon Medical has launched a range of LED examination lights that it believes are the most advanced such products available worldwide.

Designed ‘to provide uncompromising lighting performance for clinicians’, the Coolview CLED23 examination lamp is reportedly ‘perfect’ for dermatology, general practice, gynaecology, and ICU departments.

The LED technology incorporated provides changeable colour temperature settings – with ‘warm white’ and daylight settings to help clinicians distinguish between different tissue conditions and aid accurate diagnosis. Coolview CLED23 provides 60,000 lux of intense light, giving a wide pool of illumination. Light intensity can be altered through four easily selectable settings.

Brandon says Coolview CLED23 also



boasts ‘the best manoeuvrability of any examination lamp’, with unrestricted lamp head rotation of 360°, and a 1,200 mm long arm reach, allowing positioning of the beam to suit any procedure ‘without restrictive stops and twisting cables’.

An antimicrobial active substance is moulded into the IP43 sealed lamp head, which has smooth surfaces for easy cleaning.

Room pressure products

BSRIA Instrument Solutions has added the TSI PresSura range of room pressure solutions to its portfolio of instrumentation suitable for healthcare facilities.

“For over 20 years many of the world’s leading healthcare facilities have relied on TSI’s PresSura room pressure products for effective 24/7 monitoring of isolation rooms, operating rooms, and other environment-critical spaces,” it explained.

The PresSura range can be integrated to building automation systems to allow for the data to be logged and tracked over long periods, and provided with a dedicated nurse station monitoring point to allow the environment in a number of rooms to be viewed from a single location.

‘World-class’ production centre

Howorth Air Technology’s pharmaceutical division is working within the integrated team for Cowlin Construction on the project to build South Devon Healthcare NHS Foundation Trust’s new multi-million pound Pharmaceutical Manufacturing Centre (PMU), near Paignton, scheduled for completion late in 2014.

The two-storey, 78,000 ft² building is designed to achieve a BREEAM ‘Very Good’ rating. Howorth is providing over 2,000 m² of specialised manufacturing facilities, equipment design, installation, and validation. The internal specialist fit-out project included specialist water treatment, licensed production, and the management of a substantial additional



budget for new equipment.

Howorth has been working ‘on the front end’ of the project for over two years, as an integral member of the design team, along with LHC Architects, Hoare Lea, and NG Bailey.

Medical air equipment proves 'earthquake-proof'

BeaconMedaes says 'stringent earthquake testing' has seen it become the world's first medical air equipment supplier to have its products rated 'earthquake-proof'.

The rating has been provided by the California Office of Statewide Health Planning and Development (OSHPD) under the Seismic Prequalification Program (OSP). BeaconMedaes products including scroll air equipment, lubricated rotary vane vacuum systems, and claw vacuum systems, proved 'resistant to the most severe earthquake conditions'.

BeaconMedaes supplies medical air, gas, and vacuum equipment, to hospitals globally, including in some of the world's most seismically active areas. It has recently invested further resources in designing earthquake-resistant equipment that is compliant with the International Building Code (IBC) – under which all equipment placed in a building must be



able to handle a predetermined g-force level or seismic spectrum (SDS), calculated according to the level of seismic activity in the area, with the maximum SDS being 2.48.

The tests saw its scroll air equipment, lube vane, and claw vacuum systems, 'placed on a huge hydraulic shaker table and shaken to the desired SDS value', measured through accelerometers.

Grant to help Eastwood Park grow

Specialist healthcare training centre, Eastwood Park, says its recent awarding of a £475,000 grant from the Local Enterprise Partnership and the West of England 'Going for Growth' fund will assist it both in safeguarding existing jobs, and creating a number of new roles, as part of a major redevelopment project at its Falfield, South Gloucestershire site, where it plans to build a new training centre that it claims will be the world's only one of its kind.

Having recently received planning approval (HEJ – October 2013), the facility

will replace many of the individual specialist training buildings that currently house replica hospital training environments on the 200-acre estate, bringing the facilities together in one purpose-built building.

Eastwood Park, says 'having the funding firmly in place' will enable it to equip and staff the centre 'much sooner than otherwise would have been possible'. Once fully operational, the new centre is expected to generate 11 new jobs – from specialist engineers, training administrators, and managers, to catering assistants.

Interim building absorbs pressure

Portakabin Hire has delivered a complex interim health building for emergency care in just six weeks – two weeks ahead of programme – to reduce the pressure on the Accident and Emergency Department at Worcestershire Royal Hospital.

The new Surgical Clinical Decisions Unit (SCDU), built for Worcestershire Acute Hospitals NHS Trust, provides 24 beds in two wards, and ancillary facilities including dirty and clean utilities, a nurses' base, consulting rooms, and two *en suite* isolation rooms, to allow patients arriving at A&E to be treated more quickly. It will remain in use for around five years. The principal contractor is Lend Lease Project Management and Construction.

Other features installed by Portakabin in the new unit include a nurse call system, fire alarms, medical gases, bedhead trunking, and access control. Linked to the hospital's existing building, the unit features full climate control and an air change ventilation system.

Kevin Gosney, assistant project manager at Lend Lease, said: "The culture of the whole Portakabin team was second to none. All the internal fitting out was completed by Portakabin, which improved co-ordination and reduced programme time."

