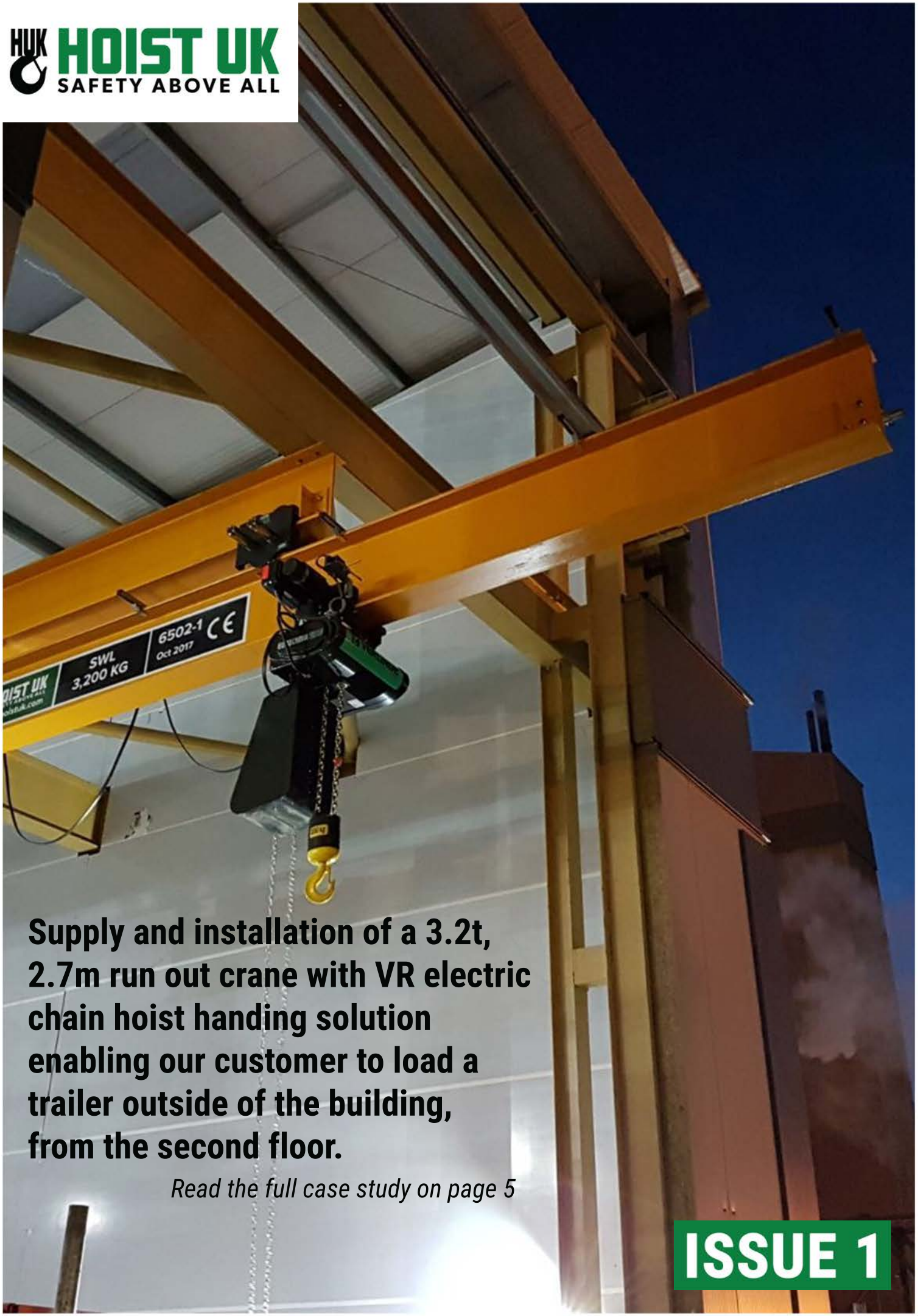
HOIST UK
SAFETY ABOVE ALL



Supply and installation of a 3.2t, 2.7m run out crane with VR electric chain hoist handing solution enabling our customer to load a trailer outside of the building, from the second floor.

Read the full case study on page 5

ISSUE 1

WELCOME TO OUR NEWSLETTER

PAUL JORDAN

Director, Hoist UK

It's been a busy year for Hoist UK and we're looking forward to another successful year in 2018. Our Hoist UK family grew in 2017 with new additions to our several our of teams, including Design Engineers, Technical Sales, Marketing, Accounts and Lifting Equipment Engineers.

We've had the opportunity to work with a variety of customers across a broad range of industry sectors, which has allowed us to continue building on our experience portfolio and assist customers in finding the most suitable lifting solution for their specific needs.

In 2018 we will continue to invest in our most valuable asset, our people, so we can fulfill our ongoing commitment to provide our customers with the most suitable products, that are technically correct, safe and fit for purpose, and of course, the highest level of customer service.

WHAT'S IN THIS ISSUE?

In this issue we'll be looking at some of our most recent news pieces and case studies, as well as a spotlight focus on some of our most popular products. All of the features within this newsletter are available on our website and if you have any questions or would like to discuss something further, please do not hesitate to contact our Technical Sales team on 0151 334 7682 or sales@hoistuk.com.

RIGGING HOIST STANDARDS EXPLAINED

BRITISH AND EUROPEAN STANDARDS

There are in fact several different European Standards and various codes of practice that have been written specifically to cover lifting operations within the entertainment industry, where loads are suspended overhead (static loads) or moving above people (dynamic loads) without the needs for additional safety arrangements.

In the UK we have British Standards BS7905 – 1 Specification for the design and manufacture of above stage equipment and more specifically BS7906 – 1 Code of Practice for Installation of said equipment. In addition to our own British Standard, our European counterparts have also adopted the German safety standards BGV D8, BGV D8+ and BGV C1.

We have highlighted below some points to consider when choosing the type of equipment required and have compared the relevant German and British standards that are generally followed.

Standard rigging hoists to the BGV D8 specification or a standard hoist meeting the BS 7906-1 Category B may be used for static suspension of loads, however it is essential to have a secondary suspension via safety steel, inertia reel or load arrestor.

Category B hoists are units that are not intended by the manufacturer for lifting or suspending loads above people. Rigging hoists to the BGV D8+ specification or a hoist meeting the BS 7906-1 Category A type may be used for static suspension of loads over people.

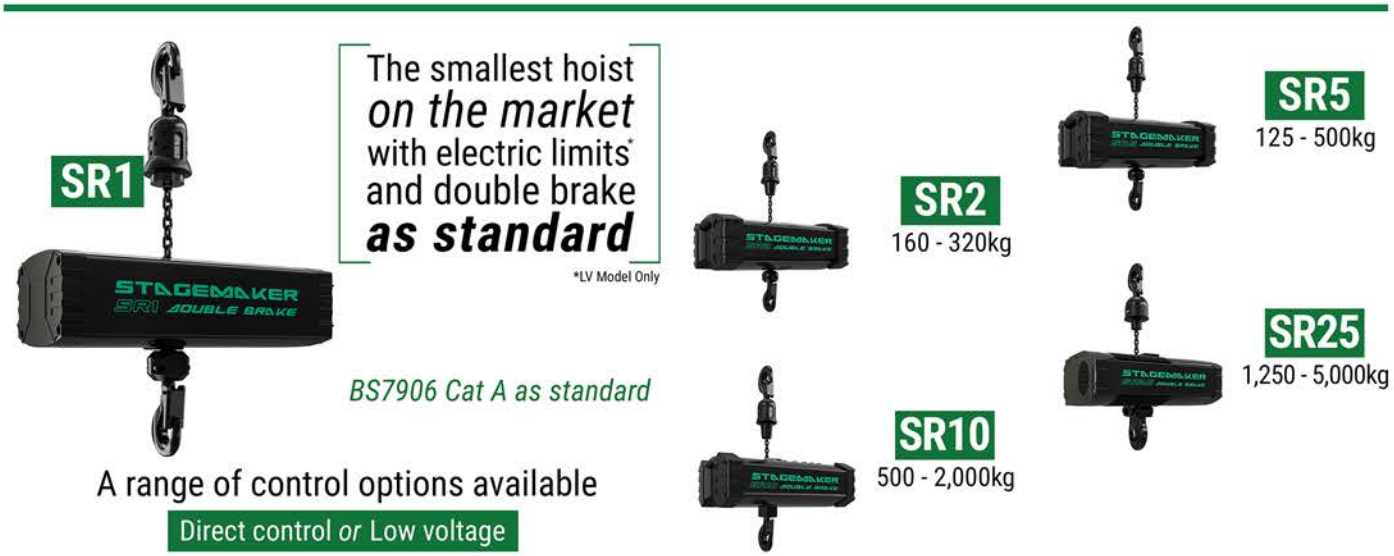
Category A hoists are units that are intended by the manufacturer for lifting or suspending loads above people.

Where the suspended load is required to move above people there are different requirements for mechanical and electrical safety. The British Standard BS 7906-1 adequately covers this situation for use in the UK although the German Standard BGV C1 will often be adopted within Europe.

The use of standard BGV D8, BGV D8+ or a Category B hoist is NOT permitted in this application.

Hoists that comply with BGV D8, BGV D8+ or BGV C1 requirements must be clearly identifiable and should be marked as such.

Rigging Standards Explained Table on page 4



RIGGING HOIST STANDARDS EXPLAINED

TABLE OF REFERENCE

Hoist Specification	BS7906 Category & Standard Rigging Hoist	BGV D8 Standard Rigging Hoist	BS7906 Category A	BGV D8+	BS7906 Category A	BGV C1
Use	Static Load with secondary suspension		Static Load without secondary suspension		Dynamic Load without secondary suspension	
Safety Factor	4:1	5:1	8:1	10:1	8:1	10:1
Brake Type	Single	Single	Double	Double	Double	Double
Brake Position	Brake may act via the clutch	Brake may act via the clutch	Direct acting brake required	Direct acting brake required	Direct acting brake required	Direct acting brake required
Electric Limits	Not a requirement	Not a requirement	Top, bottom & two ultimate limits required	Not a requirement	Top, bottom & two ultimate limits required	Top, bottom & two ultimate limits required
Mechanical Chain Stops	Not essential	Required	Required	Required	Required	Required
Emergency Stop	Not a requirement	Not a requirement	Required	Not a requirement	Required	Required
Secondary Suspension	Required	Required	Not a requirement	Not a requirement	Not a requirement	Not a requirement
Controller	Not a requirement	Not a requirement	Desirable	Desirable	Desirable	Required
Clutch	Load bearing clutch acceptable	Load bearing clutch acceptable	Load bearing clutch NOT acceptable	Load bearing clutch NOT acceptable	Load bearing clutch NOT acceptable	Load bearing clutch NOT acceptable
Overload Monitoring - Shut Down at 120% SWL	Not a requirement	Not a requirement	Not a requirement	Not a requirement	Not a requirement	Required
Underload Monitoring	Not a requirement	Not a requirement	Not a requirement	Not a requirement	Not a requirement	Required on guided loads or multiple group lifts
Incremental Encoder	Not a requirement	Not a requirement	Not a requirement	Not a requirement	Not a requirement	Not a requirement

SUPPLY AND INSTALLATION OF A 3.2T RUN OUT CRANE FOR A FOOD INDUSTRY CUSTOMER

A sub-contractor contacted us on behalf of a major food industry customer who required a lifting and handling solution to load a trailer outside of the building from the second floor loading bay doors.

THE REQUIREMENTS

The customer required a lifting system that could accommodate loads of up to 3,200kg and could extend out of the loading bay doors giving a healthy amount of clearance between the load and the building.

THE CHALLENGE

Following a site visit to plan the project we calculated that a 2.7m clearance would be needed to safely lift the load down from the second floor loading bay, which combined with the lifting capacity of 3.2 tonnes and the need for fast installation was a challenge.

THE SOLUTION

The lifting solution we planned and presented to the customer was a run out crane with electric chain hoist which would ensure that loads could be safely lifted up and far enough out away from the building before being lowered into the awaiting trailers.

The system consisted of an 11.5m monorail main beam completed with joint and end stops that was fixed to the buildings existing steelwork. Below the main beam there was a hand geared 9 metre runout beam featuring 2.7 metre length cantilever.

The runout beam was fitted with a Eurochain VR16 electric chain hoist providing the required 3.2 tonne load capacity, 8 metres height of lift and complete with a motorised travelling trolley. The VR electric chain hoist was supplied and installed complete with radio control.

PROJECT PHOTO'S

WHEN DOES YOUR HOIST NEED A GENERAL OVERHAUL OR TO BE REPLACED?

WHAT IS THE EXPECTED LIFETIME OF A HOIST?

Hoists, whether they are electric chain hoists, electric wire rope hoists or electric belt hoists are all manufactured with 10 years of serviceable life before a major overhaul or replacement is required. The ten year service life may not necessarily be a physical 10 years of operation but may be used up more quickly or slowly based on how the machine is being operated during its working life.

In order to help evaluate the working life of a hoist you need to be able to calculate how much of the original manufacturers Safe Working Period exists after your lifting operations have occurred.

WHAT IS THE SAFE WORKING PERIOD (SWP)?

All hoists start off with a 100% SWP and through use the percentage will reduce until it reaches 0%, and a General Overhaul (GO) is normally carried out by the manufacturer/their representative. If a general overhaul is not possible or financially viable the unit should be replaced as the serviceable life has been exceeded.

When you buy a new hoist you need to select a unit with the correct duty rating for your particular lifting operations, so that you will have a machine which does not use its SWP too quickly and require replacement.

Safe and reliable load handling are a primary concern for ensuring and maintaining safety during all lifting operations. Wear and tear due to normal use can easily result in potential problems, if they are not addressed in good time, so knowing your remaining SWP can help with early detection of hazards caused by material fatigue, can help with predictive maintenance and also give early notification of a required general overhaul or when replacement of the hoist should occur.

All users of hoists should be aware of the remaining SWP on all the hoists in their possession and it is recommended that a log book detailing all lifting operations is kept for each unit.

UNDERSTANDING YOUR HOISTS SAFE WORKING PERIOD (SWP)

Paul Jordan said “keeping a detailed log of all lifting operations is not something I have seen done by users of hoists in the past, but there are other methods available to help give an awareness of running / operating time on each of the hoist units”.

Hours in service meters fitted to your hoist help you to evaluate how long the hoist has been operating, but these types of devices only log the amount of time the mains contactor in the hoist has been energised and not how long the electric motor has been actually running to lift and lower the load, so it isn’t an accurate reflection of the hoists activity for use in Safe Working Period calculations.

Predictive maintenance devices which monitor all lifting operations and weigh the load lifted, running times and lots of other hoist parameters can be used and these are probably the most accurate way to understand the hoist status, as they constantly recalculate the remaining SWP. These devices are not normally fitted to equipment and could be a costly addition to your existing hoists or any new ones you are purchasing, plus its only normally electric wire rope hoists that have predictive maintenance devices fitted to them, so are not generally available for electric chain hoists.

OUR SAFE WORKING PERIOD (SWP) CALCULATOR

In order to help a user evaluate their remaining Safe Working Period (SWP), we have developed SWP calculator utility which will help you try to predict when a hoist is at the end of its working / serviceable life and should undergo a General Overhaul (GO) or be replaced.

The utility has been produced specifically for users who do not have a log book of lifting operations available for the unit in question and there are no other methods of evaluating the SWP.

You also need to bear in mind that during the hoists serviceable lifetime, the unit should still undergo regular servicing in accordance with the manufacturers recommendations and also be thoroughly inspected on a regular based by a competent person under the Lifting Operations and Lifting Equipment Regulations (LOLER), in the United Kingdom.

Our SWP calculation utility can also be used to check if a hoist is suitable for particular application as buying an M3 / 1Bm duty rated hoist for an application which always lifts the maximum load or runs for a prolonged period may not be the best decision as the SWP will be used up quicker.

In order to check if a hoist is suitable, key in data of how you would like to use the machine in the future and adjust the duty factor variable to see the effect on the machine operating at that level for the period of time you want it to operate. From that output data you will know if the machine is suitable or not. If you haven't already purchased the hoist, you will know the duty of the hoist you need to purchase do your lifting operations.

The SWP calculation utility has been designed to output a PDF document via email that can be printed for each hoist in your possession and updated periodically during the hoists lifetime to help predict your remaining SWP.

The indicative calculation of remaining serviceable life of the hoist can then be held with the EC Declaration of Conformity, service reports, LOLER inspection reports and any other relevant health and safety documentation for the unit.

TRY OUR FREE SWP CALCULATOR AT WWW.HOISTUK.COM/CALCULATOR

UNDERBRACED, COLUMN MOUNTED JIB CRANE FOR AN AUTOMOTIVE MANUFACTURING OPERATION

Working closely with an automotive customer to deisgn, manufacture, install and commission an underbraced, column mounted jib crane to assist within their manufacturing operation.

THE REQUIREMENTS

Our customer required a lifting solution to operate within a low headroom environment that could assist in tool handling within their manufacturing operations.

THE CHALLENGE

The customer required a lifting solution to operate within an environment with limited space and particularly reduced headroom. In order to provide the customer with the span and lifting capacity they needed we designed and manufactured an underbraced jib crane to fit into the facilities low headroom ceiling.

THE SOLUTION

In order to properly plan and design a lifting solution unique to our customers specific requirements, our technical sales team conducted a site visit which enabled us to quote and cost the project fully and our CAD design engineers prepared drawings of the lifting equipment in situ so the customer's technical site teams could review the drawings and approve prior to manufacturing work commencing.

Our client operates within the automotive industry and they required a lifting solution to assist in the handling of their tooling. The best solution available to accommodate our customers needs and manage the operating space and ceiling room challenges, our design engineers designed an underbraced column mounted jib crane that could fit within the specified operational position. The jib crane offers a lifting capacity of 500kg a radius of 2m and a 2.2m height to underside of beam, and was installed complete with a Eurochain VR Electric Chain Hoist and Push Travel Trolley so that the load can be manoeuvred along the jib cranes beam.

PROJECT PHOTO'S

TWO MOTORISED PERFORMER PLATFORMS AND FULL MOTOR CONTROL SYSTEM PACKAGE FOR AN INTERNATIONAL ENTERTAINMENT CUSTOMER

THE REQUIREMENTS

Working with the Franco Dragone Entertainment Group we commissioned a range of standard products for a large scale lifting solution, as well as designing, manufacturing and installation a motorised performer platform system.

THE CHALLENGE

Franco Dragone Entertainment Group envisaged a system that would enable performers to be tracked out into the void above the main stage, and so the solution would need to be certified for man-riding which is quite out of the ordinary and challenging.

THE SOLUTION

The House of Dancing Water' show at the City of Dreams theatre in Macau was planned for extravagance with more than $250,000,000 being invested into the production of this show. The show would be performed in a purpose built 270 degree 'in the round' theatre surrounding the world's largest commercial pool which is over 48.7 metres in diameter and 8 metres deep, holding more than 3.7 million gallons of water and larger than five Olympic sized swimming pools.

Working with entertainment production specialists Franco Dragone Entertainment Group Hoist UK commissioned, supplied and installed a motor and control system package with 38 Stagemaker electric chain hoists each fitted with a secondary brakes and encoders. The hoists were controlled by a 'Raynok' motion control system from Niscon Inc, using their fixed speed programmable CH800 controllers linked together with a main computer housed in one of the CH800 flight cases.computer housed in one of the CH800 flight cases.

We also provided two motorised performer platforms on different grid levels of the theatre to allow the performers to be tracked out into the void above the main stage / pool, so they can be connected to winches and access scenic elements, such as the Human Chandelier, so they can be lowered in on cue. The design of the tracking system was particularly out of the ordinary as the platforms had to be certified for man-riding and each of the platforms measured 5.7 metres by 4.3 metres and had to track out at a height of 36 metres above the pool with up to twenty performers on board. The platforms each ran in 30 metres of longitudinal tracking beam manufactured from a lightweight aluminium alloy with longitudinal motion provided by two variable speed electric trolley units for a smooth and quiet operation.

PROJECT PHOTO'S

KEEP UP TO DATE WITH OUR LATEST NEWS & CASE STUDIES

Find our latest news and case studies by searching online for 'Hoist UK News' or 'Hoist UK Case Studies', or by visiting the dedicated pages hoistuk.com/news or hoistuk.com/case-studies.

UNDERSTANDING MOBILE GANTRIES

This article has been written to provide you with a basic understanding of mobile gantries. Hoist UK are a gantry manufacturer and also a supplier of gantries available with a range of benefits depending on your planned lifting application...

Read this full feature by visiting hoistuk.com/understanding-mobile-gantries

WE ARE ISO CERTIFIED TO 2015 STANARDS

Hoist UK are pleased to announce that we have now transitioned to the newest standards for ISO 9001 and ISO 14001, becoming ISO 9001:2015 and ISO 14001:2015 certified, and we've also renewed our certification for OHSAS 18001:2007...

Read this full feature by visiting hoistuk.com/hoist-uk-are-iso-9001-and-iso-14001-2015-certified

A SIMPLE GUIDE TO LOLER

The Lifting Operations and Lifting Equipment Regulations 1998 (often abbreviated to LOLER) require that all lifting operations involving lifting equipment must be properly planned by a competent person, appropriately supervised and carried out in a safe manner...

Read this full feature by visiting hoistuk.com/simple-guide-lifting-operations-lifting-equipment-regulations/loler

ISSUE 2

In Issue 2 we'll be focussing on Clean Room projects, featuring case studies and editorial from Technical Director Paul Jordan.

We'll also be looking at our custom performer winch systems and how the sky really is the limit when it comes to bespoke performer winch design and manufacture from Hoist UK.

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