

Testing times ahead for crane hirers?

The CPA Crane Interest Group, which represents the UK's crane hire industry, held its annual open meeting in late September. Mark Darwin was there for Cranes & Access.

This year's meeting, while not quite so well attended as last year, was still a lively and informative gathering with representatives from about 40 crane rental companies and manufacturers.

Key issues covered included Thorough Examination and Testing of Mobile Cranes, Operating mobile cranes in high winds, an update on the best practice guide (BPG) on crane hire and contract lifting, the Michelin crane tyre recall, whether the CPCS crane operator test should include fly jibs and extensions and the fuel quality directive which covers the supply of virtually sulphur free gas oil.

Thorough examination and testing

Tim Watson outlined the background to the overload test being part of the thorough examination every four years, along with the arguments of why it should not be done. An increasing number of manufacturers and insurance companies are coming out against the overload tests on the basis that it may have a detrimental effect on the crane's structure. He said that as most failures are due to metal fatigue, so it is unlikely that an overload test will reveal any visible fault in the structure. And if a crane fails during testing it is not only dangerous but expensive.

What is now recommended is an improved or more thorough, 'Thorough Examination' (TE) which if carried out correctly should pick up any major faults. This is being formalised in a CPA Best Practice Guide (BPG) on maintenance, inspection and thorough examination of mobile cranes along the lines of the tower crane document produced a few years ago.

The aim is to have a draft ready for public comment by the end of October followed by a six week comment period with publication by February 2010. By having a good mix of companies within the working group it is hoped that the guide will reflect the range of opinions and therefore be readily adopted.

The BPG promotes planned preventative maintenance, inspections and improved maintenance procedures. The improved examination will take into account manufacturers information, maintenance history, previous TE history, the working environment (marine, humidity etc) and the number of lifting operations particularly those near to capacity.



Tim Watson

Supplementary tests may be asked for by the person carrying out the Thorough Examination, depending on the circumstances (eg load indicator, repaired crane etc), the thinking is that a more thorough examination will obsolete the overload test.

Watson summed up by saying that there should be no more automatic four year tests if the TE is carried out to the defined scope of examination.

Ian Simpson of the HSE pointed out that there is no legal requirement for the four year test, it only becomes a legal requirement if a



competent person specifies that it should be carried out before the next thorough examination.

Wind Speeds

An issue over equipment working in higher winds has been raised by the United Crane Operators Association (UCOA) which is concerned about a growing trend for mobiles and crawler cranes to be called in when tower cranes have been shut down due to excessive wind speeds.

Tim Watson reminded everyone that mobile cranes have a lower maximum operational wind speed (31 mph/14 metres/sec) than tower cranes (currently 45 mph/20 metres/sec) and therefore should have stopped working well before the tower cranes. A Technical Information Note is being prepared on this subject.

He also pointed out that contractors often overlook the fact that wind pressure on a load multiplies

exponentially as wind speed rises and gave the example of a 20mph wind on an 8ft x 4ft shutter where the force is 15kg. However if the wind increased by just over 50 percent to 31 mph, the force rises by more than 250 percent to 38kg. He also reminded the meeting that wind speed varies with height and that large surface area, light loads need reduced wind speed calculations. He advocated the fitting of anemometers on booms and jibs, rather than relying on general weather forecasts where wind speeds are measured at 10 metres above ground, while the wind speed at 100 metres is often 150 percent higher and in built up areas can it be twice the speed. Finally he reiterated the fact that the operator has the primary responsibility for stopping the crane in excessive winds, in conjunction with the appointed person - not site personnel.



Mobile cranes have a lower maximum operational wind speed than tower cranes

Best Practice Guide for crane hire and contract lifts

Ian Simpson of the HSE warned that companies are relying too much on the card system as a method of proving competence. He said that 'training cards are not enough' and companies could 'come unstuck' if they did not carry out additional training. He noted that several accidents investigated by the HSE showed that the operators had not been given additional training on the crane they were operating.



Ian Simpson

"We have an over-reliance on the card system but companies must go further to satisfy their legal requirement," he said. "The CPCS red cards are issued when a test is passed, but operators must be given additional training on each and every different crane they are to operate and they must be supervised and monitored. If there is an incident, the company needs to be able to show that this additional training has been given."

He said that crane familiarisation was probably best given by the crane manufacturers. Companies should also ensure that Appointed Persons are competent for the size and complexity of the lift. "We have many examples of AP's planning lifts way above their competency level," he said.

Hire desk training

A joint venture between the HSE and CPA, the first pilot hire desk training session involved 30 delegates from North Wales and North West in Bootle at the end of September. The scheme will be introduced at the end of this year and is aimed to help hire desk personnel direct the customer either to a crane hire or contract lift, hopefully reducing accidents.

The format of the question flow chart was agreed at the CPA meeting at Vertical Days earlier this summer and is now a finished document available on the CPA website. While the questions in essence have not changed, they are now more rigorous and a form ensures that all answers are recorded which will support the crane hirer should there be an accident.

Michelin tyre recall

Michelin representative Jock Aitken said that crane companies should already have received letters by registered post regarding the replacement of its 445/95R25 X Crane 174F tyre. If not Michelin can be contacted on 0800 454774.

The tyres should not exceed an axle weight of 15.6 tonnes, for cranes



below this weight there is no issue. Cranes registered after September 2008 should have an STGO plate stating that it forbids running with axle weights of more than 15.5 tonnes without the formal approval of the manufacturer. He said that to date Michelin had not received one request for approval and so took the decision to issue the recall.

The tyres can manage loads of up to the maximum 16.5 tonnes, BUT normally only at the reduced speed of 36 mph. He said that the tyres were designed for EU axle loads of 12 tonnes with higher loads permitted at reduced speeds. The speed ratings of the tyre is indicated by the last letter - an E representing a maximum of 70 km in an hour and F 80 km in an hour, not KPH!



Colin Wood



Diesel particulate filters

Kevin Minton of the CPA said that there had been little further activity, however, the Olympic Development Authority (ODA) is conducting a study into the matter. As it is unlikely to start until next year and probably last six months, the result will almost coincide with the 2011 emissions directive, while the ODA will be close to the handover stage of its contract.

Jib test

After the heated discussion last year as to whether operators should be tested on fly jib/boom extension installation as part of the CPCS test, a show of hands this year confirmed that it should not be included.



A diesel particulate filter fitted to a crane

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