

Safety Alert

Catastrophic Rope Failure

An incident occurred on one of our sites recently involving a mobile crane and a catastrophic failure of a 3tonne single hoist (wire rope) during the lifting of a precast slab.

Slabs were being off-loaded from the flat bed lorry on to the ground by a Kato mobile crane, using a 3t hoist, lifting a weight of 2.5t (within the SWL). This operation had been going on all day (over 20 lifts had taken place). A slab had been hoisted and was being slewed from the wagon to the lay down area when the hoist rope snapped (approximately 7mtrs from hook). The slab fell 4mtrs to the ground hitting the combi-safe fail arrest arm/system.

Fortunately the slab pushed the combi-safe arm in the direction of the operator (slinger) who was hooked on. If the arm had been pulled in any other direction the slinger could have been dragged by the impact and seriously injured.

The Method Statement/Lifting Plan were being followed by the Operatives and an exclusion zone had been set up around this operation.

Crane documentation and certificates appeared correct and in-date. The crane had a thorough examination 20.04.2010. However there is no specific detail on the rope history i.e. if it's the original supplied rope, etc.

As a part of the investigation the wire rope was inspected by an expert who concluded that the cause of failure was due to heavy wear which had locally reduced the cross section periodically along the wires. In some cases there was less than half the original thickness remaining. The failure may also have been exacerbated by others factors such as hydrogen effects, fatigue and/or abuse of the wire at some stage in the past.





Site Managers/staff are therefore requested to check/complete the following against each of the cranes on their site (client cranes excluded but please pass message on):

1	Check all crane documentation	Compliant / Comments
	1a. Thorough examination certificate (latest date)	
	1b. Weekly crane inspection log	
	1c. Age of crane (Year of Manufacture) & Serial No	
	1d. Age of the rope(s)	
	1e. Is there a clear history of the use/maintenance of the crane since YoM	
2	Crane Operative (competent person) to visually check wire rope before commencing next lift (check for excessive wear, broken strands, any deterioration which leads to significant risks).	

If any rope wear/deterioration is apparent the crane must be quarantined and a thorough examination test administered immediately.

Please return all completed sheets (by email):

Dale Barnard (Group SHEQual Manager)
 Charlie Rowell (BStL Construction Director)
 Dave Pope (BPL Operations Director)

Site Managers will be advised if any further action is to be taken.

Raised by: Dale Barnard
Position: Group SHEQual Manager
Date: 22 Sept 2010