



Work Safety Alert Struck by Wire Rope of a Crawler Crane under Repair

1. **Date of Accident :** October 2021
2. **Place of Accident :** A foundation site
3. **Summary :**

A team of four workers was carrying out wire rope replacement work of a crawler crane on a foundation site, with the crane boom raised in an upright position and the ends of the used and new wire ropes welded together. As the new wire rope was being pulled up the crane boom, the welding joint of the two wire ropes suddenly broke, and the used wire rope swung and hit lethally against one of the workers who was working on the crane platform.

4. **Work Safety Alert for Contractors/ Proprietors :**

To ensure the safety of workers/ employees engaged in wire rope replacement work of a crane, the contractors/ proprietors should provide and maintain a safe system of work which should include, but not limited to, the following:

- appointing an engineer/ competent person with adequate and relevant qualifications, competence and experience to conduct task-specific risk assessments to identify all potential hazards associated with the work, taking into account the nature of work and the work environment particularly the wire rope system of the crane, strength rating and specification of the wire rope being replaced and the line pull of the winch;
- formulating safe work methods and procedures for the work with due regard to the results of risk assessments, manufacturer's specifications/ instructions, and follow the requirements of safety legislation and relevant safety guidelines to minimise the risks exposed to the workers/ employees;



- lowering the crane boom to its horizontal position or completely to the ground for changing the wire rope as necessary;
- unwinding and pulling out the used wire rope completely from the winch drum and winding up the new wire rope in accordance to the instruction manual;
- prohibiting the replacement of wire rope by means of welding ends of the used and new wire ropes unless it is recommended by the manufacturer and the work is done by relevant specialists;
- where connecting the end of the new wire rope to the used wire rope for the replacement work is allowed in the instruction manual, among others,
 - using suitable device and method to connect the new and used wire ropes;
 - ensuring the connection work is performed by a specialist and the joint and connection have been checked by authorised and qualified workers/ employees before rendering the wire ropes under tension;
- ensuring the work are performed by trained and competent workmen, and under the direct supervision of an engineer/ a person who is competent by virtue of his knowledge and practical experience;
- ensuring that all workmen involved have access to the crane instruction manual or relevant literature, possess adequate working knowledge of the operation of the crane, and are fully aware of the hazards involved in the process;
- ensuring effective communication among all workmen involved throughout the work;
- providing all workers/ employees concerned with the necessary safety information, instruction and training, and ensuring that they are familiar with the safe work procedures and safety measures; and
- establishing and implementing an effective monitoring and control



system to ensure all safety measures are strictly followed.

5. Reference :

- [Safe Systems of Work¹](#)
- [Five Steps to Risk Assessment¹](#)
- [Five Steps to Information, Instruction and Training¹](#)
- [Code of Practice for Safe Use of Mobile Cranes¹](#)

DISCLAIMER

This Work Safety Alert (“the Alert”) is issued at the earliest possible opportunity after a serious accident with a view to drawing the attention of interested parties to the general safety precautionary measures necessary to protect people engaging in similar work activities. The material contained in the Alert constitutes general guidance only. It does not reduce, limit, or replace, any legal obligations upon any person to comply with any statutory duties under relevant legislation. Users such as Managers and Supervisors should make their own evaluation of the information contained in the Alert to determine if it can be applied to their own situations and practices. The Labour Department does NOT accept any responsibilities for any loss or damage resulting from the use of or failure to use of the information on the Alert.

Note: The material contained in the Alert is not exhaustive, and will be supplemented/ adjusted where necessary if more relevant information comes to light.

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