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OSHA Docket Office

**Docket No. S-030**

Department of Labor  
200 Constitution Avenue NW  
Room N-2625  
Washington DC 20210

19 Feb. 04

**Suggestion for regulatory text**

Dear Sir or Madam:

There are difficulties in attempting to faithfully describe in pictures and words the concepts developed and minuted from the January CDAC meeting in Las Vegas.

The problem is that two differing quantities are mixed - one a function of crane size and the other one fixed. The Yellow and green zones relate to crane size and the red zone is almost always fixed at 10ft. Although this 10ft could increase in step intervals with increasing voltage for all practical purposes it is fixed.

**The critical issue for green or yellow zones is when they are breached.**

We therefore suggest:

1. A concept of Green Line, Yellow line and Red zone as shown in Fig 1

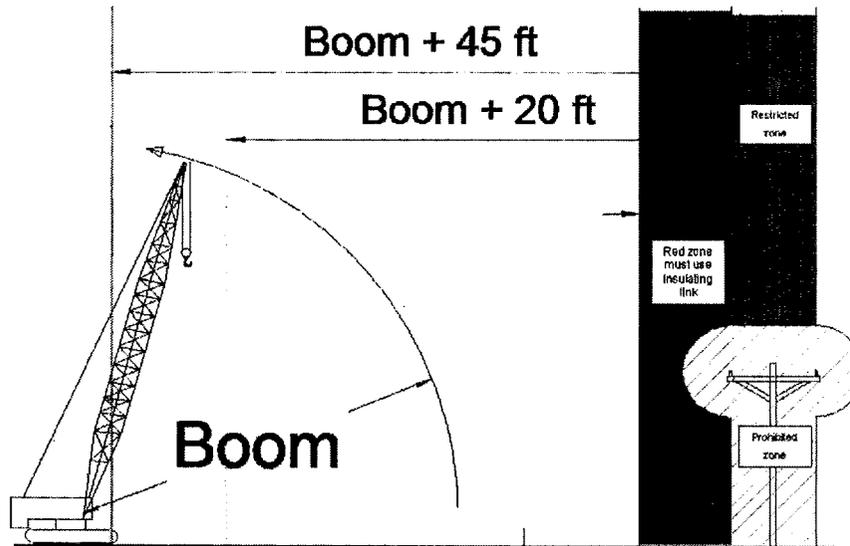


Fig 1 – Power line & zone concept

2. A power line decal on each crane with Green distance and yellow distance clearly marked as in a typical example in fig 2 below

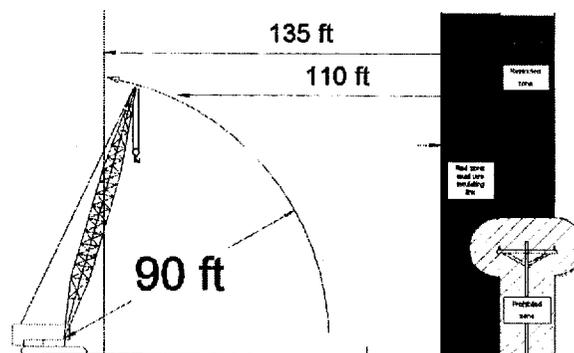


Fig 2 – Crane power line hazard decal

3. A clear definition of performance of the insulating link is included in the regulatory text, reflecting the 1980 desires of the crane industry - otherwise the layer of protection could be fatally flawed. A previously submitted text is included below:



**Addition to 1926.550 DEFINITIONS New Equipment Definitions :**

*insulating links* - a link that will insulate the rigger from a potentially lethal current during contact between an energized power line and crane.

*insulating links warning feature* - a warning system to alert the operator of an impending insulating links failure condition.

**Detailed definitions of**

*insulating links* - a (1) link which will (2) insulate the (3) rigger from a (4) potentially lethal current during contact between an (5) energized (6) power line and (7) crane.

(1) **Link** – shall have a design factor of 5, or greater, on the “nominal” breaking strength of the Link. Furthermore such Links must have been tested under conditions that simulate the expected lifting duty cycle and environment including both appropriate current and voltages together with any anticipated surface contamination. Any leakage current detected during such tests should not exceed five milli-amps, (5 mA).

In addition such Links must daily, and have the capacity to, self-check to warn of any adverse dielectric properties prior to and at any time during the lift.

If there shall be a testing procedure for ‘*insulating links*’ provided by ASME or UL with such links must be tested to this procedure.

(2) **insulate** - by the use of an "**insulator**" (as defined in NESC C2 1997 section 2 p.7) allow personnel to be "**insulated**" (as defined in NESC C2 1997 section 2 p.7)

(3) **rigger** - load handling personnel or persons involved in the rigging of lifting wires and devices at the time of lift.

(4) **potentially lethal current** - an electrical current above the threshold of "**ventricular fibrillation**" as defined in IEC 479-1 chapter 2 - 3.3 /4.3 and chapter 3 - 4.3.

(5) **energized** - as defined in NESC C2 1997 section 2 p.6.

(6) **power line** - "**electric power lines**" as referred to in ASME B30.5a 1995 - 5 - 3.4.5.1.

(7) **crane** - all cranes falling into scope

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