



Failure Of Lifting Devices In Construction Work

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Lifting devices have failed in several incidents, highlighting the potential hazards and risks involved in lifting heavy concrete blocks on construction sites.

These failures occurred when the concrete was lifted using a reinforcement steel bar, a prestressing wire or a strand imbedded in the concrete. Only the friction bonding between the concrete loads held the load and the bar, wire or strand.

Recommendations

A reinforcement steel bar should not be used as a lifting device, particularly if the bar has undergone hot or cold bending in the areas where lifting hooks or slings are to be attached. Hot or cold bending may have altered the steel's structural properties.

As a general rule, do not use a reinforcement steel bar, a prestressing wire or a strand to lift heavy concrete blocks or panels if the only thing holding the load is the friction bonding between the concrete and the bar, wire or strand.

Designers should be aware of the need for careful design for the attachment and lifting points in such devices. When using specially designed products, follow the manufacturer's recommendations.

Further information

For more information, contact Dan Leavy, (02) 4321 5202.

Issued by Workcover NSW and distributed by Dick Whitehead, Safety Officer, CFMEU (Construction & General Division)
NSW Branch, 12 Railway Street, Lidcombe NSW 2141 Ph: (02) 9749 0400
Email: dwhitehead@nsw.cfmeu.asn.au; Web: www.cfmeu-construction-nsw.com
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