

Greetings all. Today's Bulletin is about the importance of proper load distribution when lifting concrete panels.

Lifting concrete panels is a complex operation that requires precision, proper technique, and strict adherence to industry standards.

One of the most critical aspects of this process is ensuring that both crane winches can carry the full weight of the load. Australian Standards 3850.3-2021 cl. 4.3.1 requires either winch to lift the full load.

According to the [NSW Dogging and Rigging Guide](#), proper load distribution is essential to prevent equipment strain, ensure structural integrity, and maintain compliance with safety regulations.

Preventing Side-Loading

Side-loading on the sheaves occurs when perpendicular lifting technique causes excessive force to be applied at an angle rather than parallel along the crane boom's axis.

When both winches are engaged correctly, the panel's main axis should align with the crane's boom, allowing both hoist ropes to remain in line with the sheaves.

This alignment minimises side-loading forces on the boom head sheaves, reducing stress on the crane and mitigating the risk of unexpected failures.

Unbalanced lifting can lead to dangerous side-loading conditions, which can compromise the integrity of the lifting operation and pose significant safety risks.

Equalising Load Distribution

The [NSW Dogging and Rigging Guide](#) emphasises the importance of distributing loads equally between anchors in precast components.

When lifting precast concrete panels, any imbalance in weight distribution can lead to excessive strain on certain rigging components while leaving others underutilised.

This uneven distribution increases the likelihood of structural damage to the panel and excessive wear or failure of rigging components such as slings, shackles, and lifting eyes.

Avoiding Overloading

One of the most significant dangers of improper load distribution is overloading individual lifting points.

If one lifting device (clutch or insert) bears a disproportionate amount of weight, it can lead to forces exceeding twice the designed load capacity at certain points.

This excessive force is a real concern when lifting thin precast panels, as they are more vulnerable to cracking, failure, or even catastrophic collapse.

Maintaining an even weight distribution between lifting devices helps prevent overloading and ensures that lifting forces remain within the working load limits of the rigging system.

Maintaining Stability

Stable lifting operations are crucial to prevent accidents, injuries, and damage to materials.

When both crane winches carry weight their designed portion of the load, the concrete panel remains stable throughout the lift, minimising the risk of tilting, shifting, or overturning.

An unbalanced load can cause sudden and unpredictable movements, which may endanger workers on-site and lead to potential damage to nearby structures.

Stability during lifting operations is key to ensuring both worker safety and the integrity of the precast panel being lifted.

Compliance with Industry Standards

Adhering to proper load distribution practices is not only a matter of safety but also a legal requirement.

Ensuring both winches carry weight, aligns with the Australian Standard AS3850 and the [National Code of Practice for Precast and Tilt-up Construction](#).

These standards mandate that rigging systems be designed to distribute loads equally to prevent structural failures and enhance workplace safety.

Following these guidelines ensures compliance with industry regulations and helps prevent liability issues in the event of an accident.

To sum it all up

Lifting concrete panels is all about balance.

If the weight isn't shared equally between all anchor points, some parts of the rigging take on too much stress while others do very little.



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Getting load distribution right when lifting concrete panels isn't just about efficiency—it's about saving lives.

When things go wrong, the consequences can be catastrophic.

Panels can crack, rigging can fail, and worst of all, workers can be seriously injured or killed.

Every rigger, crane operator, and site manager has a responsibility to ensure proper lifting techniques are followed because no job is worth risking a life.

Everyone deserves to go home safely at the end of the day, and by making sure both crane winches carry their fair share of the load, we can prevent tragic accidents and keep our worksites as safe as possible.

The CICA Lift Supervisor Course is a proactive initiative designed to enhance the safety and efficiency of crane operations on construction sites and industrial projects. This program introduces the role of a crane lift supervisor, who acts as a dedicated overseer of all crane-related lifting activities.

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