Shared Learning

Electrical Industry Health & Safety Group

Critical Risk: Dropped objects

Lifting Eye Failure During MIV Installation

What happened?

During the Installation of a Main Inlet Valve (MIV) at Cobb station, a lifting eye, failed. The lifting eye rated at 600kg was not one of the main lifting points but was being used by the contractors as an auxiliary to assist in tilting the MIV into the correct position. (Pic 2. Indicative only of description- Contractors were not standing in pit during lift).

The lifting eye supplied with the MIV had a 16mm thread, but the socket on the MIV was threaded at 18mm. The supplied lifting eyes were removed for tagging when the MIV arrived on site. When replacing the lifting eyes with tagged ones, it was not apparent to the contractors that the wrong ones were supplied originally and therefore the new tagged lifting eyes were also the wrong size.

As the lift was not considered overly complicated, MIV drawings were not reviewed.

MIV weighing over 4ton, rocked back and forward violently, when the lifting eye failed, but Contractors were standing in a safe location and no damage occurred to the MIV.

Location: Cobb (Tasman)

What did we learn?

- Eye bolts incorrect sizing.
- Eye bolts not certified, so as per procedure were replaced with exact size supplied with the MIV (16mm)
- Eyebolts removed & installed without noticing incorrect size. The Contractor stated there was no indication there was a size difference, No evidence of cross threading. Bolt size was not indicated on the MIV itself.
- Eye bolts not a familiar size. 18 mm Not commonly used in NZ. Nonstandard thread
- No drawings attached as part of lift study, as it was not considered a complicated lift
- New equipment supplied from OS needs verifying by drawings.
- Visual checks of drawing and inspection of equipment no matter if critical or non-critical lift.
- Stop work if unsure and seek assistance.