



Safety Alert

Failure of Lifting Eye on Pre-Cast Concrete Block

15 March 2023

The following pages of this safety alert were issued by:

MACE Dragados

NHa323

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home **safe**
and **well**

FAILURE OF LIFTING EYE ON PRE-CAST CONCRETE BLOCK

Date of incident:	18/01/2022	Incident type:	Lifting / Falling Item
Incident ref:	INC14552	Contractor:	MDJV / Barhale
Location:	Euston – Traction Substation Area		
Keyword Search:	Lifting, block, lifting eye, falling item, exclusion zone.		

Summary of Incident

While removing a delivery of new precast concrete blocks, (2.5t) the lifting eye (rated to 5t) of the final block sheered causing the block to fall.

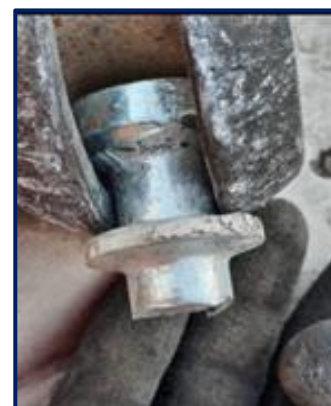
REVISED INVESTIGATION FINDINGS

Barhale / MDJV have undertaken a detailed investigation, liaising with suppliers and, in turn, the manufacturers of the lifting pins. A metallurgist report confirmed there was likely to have been overheating in the manufacturing process that may have weakened the pin. Additionally, oxidation may have occurred.

Pin was manufactured in 2021 and there are several 'unknown unknowns' regarding the state of the pin between manufacture and point of use. However, **root cause** of the failure has been identified as a manufacturing defect – the pin has been overheated during the forging process resulting in tensile failure

Manufacturer of the blocks are continuing their quality assurance checks with the manufacturer of the pin. It became apparent that Quality Control sample size is very small, 3 Pins from a batch of 10000 made were subject to test to achieve CE certification of conformity.

Photographs



Actions

All sites are urged to:

- Ensure any work equipment or materials supplied with integral lifting points or components are part of a POWER inspection regime. NB cast-in lifting components are specifically exempt from LOLER.
- Always undertake a visual inspection of integral lifting points on work equipment or materials prior to lifts.
- Always obtain documented evidence of conformity for integral lifting point or components
- Ensure RAMS Lift Plans and SSOW are fully communicated, understood, and adhered to.
- Ensure exclusion zones are in place and fully enforced.
- Report any such failures of these or similar cast in components for lifting in Horace and to the respective suppliers.