

High potential near miss: dropped object – buffer plate fell from crane boom

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During lifting operations with the main crane, a buffer plate fell from the crane boom.

What happened?

The buffer plate fell approximately 10 m, weighing 70 kg and was 90 cm x 40 cm. It landed inside the barriered off area on the back deck; there were no personnel nearby. Clearly this could have been a potential fatality had someone been struck by the plate. The purpose of the buffer plate is to be a buffer between the jib and the boom so the steel is not damaged.

What went wrong? What were the causes?

- The **immediate cause** was found to be that the bolts holding the buffer broke due to metal fatigue.
- The **root cause** was found to be inadequate or insufficient planned maintenance/inspection. Fatigue in the bolts had been allowed to develop over several years in operation as there had been no proper inspection of the bolts. It was not possible to see damage to the bolts during the visual inspections of the crane which were regularly carried out.

IOGP Life Saving Rules:



Line of fire



Safe mechanical lifting



What lessons were learned? What actions were taken?

- The bolts used subsequently to re-attach the buffer plate were increased in size from M12 to M14.

- Secondary securing of the buffer plate was installed to prevent it from falling.
- On all the members' vessels with similar cranes, the planned maintenance system was modified to include maintenance/inspection of the buffer plate including bolts.
- A DROPS check of all cranes was made in order to assess for potential dropped objects during operation.

Members may wish to review the following incidents:

- Dropped object near-miss: small parts falling from crane rest
- Near-miss: Dropped object from crane
- Crane boom dropped object

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