

SAFETY ALERT

Safety Alert Issue No: CIM/006/2024

Date: 15th April 2024

High Potential Accident -Broken Bolts of a Ball Mill Shell Flange.

ACCIDENT:

On Tuesday, 9th April 2024, during night shift, a ball mill at a grinding circuit encountered excessive slurry spillage from the shell flange at the discharge end of the mill. This was identified by process plant operators, and they immediately stopped the ball mill safely. Upon inspection, approximately 50% of the shell flange bolts were either broken and/or cracked. The gap between the shell flange had opened to about 30mm.

An investigation has commenced.



INITIAL OBSERVATIONS:

- Incompetent; process plant operators, maintenance personnel and supervisors
- Lack of proper and regular inspection of the ball mill flange bolts,
- Failure to properly torque the flange bolts at the time of installation of the ball mill shell.
- Failure to retorque the flange bolts over an operating period,
- Improper or incorrect application of the bolt grade or class for the ball mill shell flange.
- Lack of proper maintenance system of the ball mill shell flange bolts
- Ball mill shell flange bolts were overdue for changeout.
- Improper operation of the ball mill

INITIAL RECOMMENDATIONS:

- Reassess the competency of process plant operators, maintenance personnel and supervisors.
- Develop and implement proper inspection and testing schedules of the ball mill shell flange bolts.
- Ensure competent maintenance personnel torque and retorques the flange bolts, including other mills.
- Remove and replace all components including the ball mill shell flange bolts that have exceeded their life cycle.
- Ensure all mills are being operated in compliance with the design specifications.

NOTE: *This safety alert may be displayed at conspicuous places within the project area and the information widely disseminated amongst all concerned.*