Correct use of load cell limit switches on cranes

WHAT HAPPENED

A recent investigation into load cell limit switches has evidenced the opportunity for failures to occur.

The load cell limit switches used on a 10 Ton crane had been calibrated to 10.4 Ton but had allowed an even heavier weight to be lifted without cutting out. The calibration had been set higher than the Safe Working Load capacity of the crane in order to allow equipment to be lifted without the need to strip it down. The consequences of any failure could result in collapse or drop of suspended loads.

LEARNING POINTS / ACTIONS TAKEN

Learnings from this are:

- Load limit switches must not be calibrated/set outside the parameters of the crane, i.e., for a 10 T crane, calibrate the limit switch to no more than 10 T
- Consider the type of load limit switch fitted and ensure that it is locked out to prevent any unplanned adjustment – any limit device must be robust and fail safe
- Consider if adjustment of load limiters can happen from either vibration or temperature
- If the lifting capacity of any crane needs to be increased, a process needs to be followed to allow for this, i.e., an external crane company to assess the feasibility. Under no circumstances should the limits be set above the capacity of the crane
- Calibration of limiters is to be undertaken by approved external contractors only.

Actions to be taken are:

- Review load limit switches on any cranes to ensure that they are locked out and cannot be adjusted unless at calibration stage by a competent external company
- Ensure that all calibrations are set within the parameters of the SWL of the crane.

LOCATION:	**CONCRETE PRODUCTS PLANT**	**ALERT STATUS:**	**Normal**
ACTIVITY:	**LIFTING**	**DATE ISSUED:**	**22/10/2019 23:26:33**
SUB ACTIVITY:	**NO SUB ACTIVITY AVAILABLE**	**INCIDENT No:**	**01531**