**CRANE SLEWING RINGS CONNECTING BOLTS FAILURE**

**Incident Location:** Jubail /KSA

**Description of Incident:**

On 3rd August 2014 at around 6.20 am, a Tadano 25 ton truck mounted crane turntable collapsed in preparation to lift a bundle of scrap rebar at Contractor Lay Down yard.

The crane slew ring connecting bolts had broken when the operator began to hoist the load line to tighten the web slings that were attached on the load/lifting lugs. The crane turntable collapsed during the process of hoisting the crane load line before the tension on the slings was applied.

**Significant:**
- People: No
- Assets: Yes
- Environment: Yes
- Reputation: N/A

**Initial Findings / Learning’s:**

**Primary Causes**
- Management failure to validate crane was in proper working condition

**Contributing Causes**
- Lack of inspection/maintenance (crane was 16yrs old)
- Fatigue failure of slew ring connecting bolts
- The common practice of test lifting unknown loads (which in some cases exceeded capacity of crane) throughout its life span contributed to chronic stress on the connecting bolts.
- Inadequate implementation of crane lifting permit requirements
- 3rd Party crane inspections not being reviewed for completeness or accuracy as per ASME 30.5

**Recommendations:**
- 3rd Party crane inspection process must be reviewed and validated by the Equipment Manager.
- Routine inspections and periodic preventive maintenance on slew ring connecting bolts to be performed by a competent person and documented.
- Crane manufacturer inspection and maintenance procedures should be done in accordance to the operating manual.
- Rigger and Operator should determine as best to their ability the actual weight of the load to be lifted.

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