SPRING HANGER FAILURE

Near Miss (High Potential)

HSE ALERT

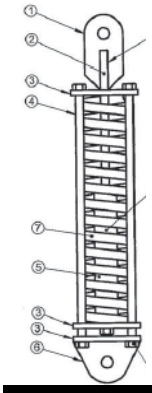
DESCRIPTION:

While making up a joint of 4 1/2" tubing the joint was initially walked in by a roughneck using a chain tong for the first 2 turns to ensure that the threads were not crossed. The Chromemaster tong was then applied and used to rotate the joint a further 5 turns with the Back Up released.

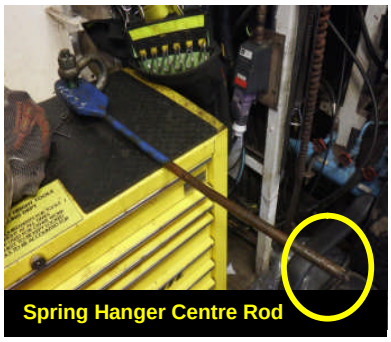
The Back Up was then engaged and as the tong operator was about to make the connection to the required torque the spring hanger parted. Part of the spring hanger and the lift cylinder fell approximately 4 meters to the drill floor while the inner rod recoiled up the derrick and came to rest at the sheave located just below the crown. The tugger line from the reel side of the sheave coiled down to rest on the drill floor.

Both spring hanger and lift cylinder weighed approximately 50Kg each. The tong remained clamped on to the tubing by the Chromemaster and the Back Up. There was no injury to any personnel. Operations were stopped, the drill floor was made safe and the investigation was initiated. Although the investigation is ongoing, it appears that the failure is caused by severe corrosion of the spring hanger center rod.

Position of failed Spring Hanger



Spring Hanger Drawing No 1058



Spring Hanger Centre Rod

Corroded Centre Rod

IMMEDIATE RECOMMENDATIONS:

- Advise all affected operations of the incident and emphasize the requirement to have a secondary retention sling in place between top and bottom plates of the spring hanger. At the same time ensure that a new risk assessment of the operation is completed taking into account potential snagging and other identified hazards.
- Inform BHI worldwide Tubular Services Operations of the incident and the requirement to ensure that secondary retention is fitted to the spring hanger.
- Quarantine all spring hangers pending a review of the individual inspection / testing history.
  Baker Hughes stipulates the following requirement:
  Visual every 6 months, MPI every 12 months and 1.5 x proof test every 2 years.
- Inspect and strip down all spring hangers:
  - Check condition of center and outer rods and replace as necessary.
  - Cut and remove stop tube from bottom spring hanger plate and replace with new, modified stop tube
- Rebuild spring hanger and ensure spring hanger is load tested and fully inspected in line with Tubular Services Workshop Maintenance Procedure.
- Review Enterprise Operational Control procedure and Life Rule! “Dropped Objects”

ACTIONS TO PREVENT REOCCURRENCE:

- Tubular Services Engineering department to review current spring hanger design and propose modifications to allow easy access for servicing and carrying out MPI inspection of critical areas.
- Tubular Services Engineering department to develop and issue design drawings and procedures in line with modified spring hanger design.

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Post for 30 days minimum

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