High Pressure Hose Safety

WHAT HAPPENED:

A high-pressure top-drive rotary hose ruptured under a pressure of 3000 psi. The hose fell to the rig floor and knocked down a roughneck. He was not seriously hurt, although the incident could have been potentially serious.

WHAT CAUSED IT:

The hose was rated for 5000 psi working pressure. An investigation following the incident revealed that the restraining safety clamps were not correctly placed around the yellow marker bands marked “Safety Clamp Here.” Instead, the clamps were placed closer to the threaded union where the diameter of the hose is larger.

In this case the hose ruptured when it blew out of the end ferrule. As the safety clamp was in the wrong position it did not properly restrain the hose, which passed completely through it. In addition, it was found that the safety clamps were too large to grip the smaller diameter of the hose below the ferrule.

A check on all the other Rotary Mud Hoses revealed that many of the safety clamps were not installed over the yellow marker bands as directed, or that the safety clamps were too large to be installed correctly.

CORRECTIVE ACTION:

1. Check the safety clamps on all high-pressure mud rotary hoses.
2. Ensure the Safety Clamps are in their correct positions.
3. Ensure that the Safety Clamps are of the correct size for the diameter of hose.