Real-Time Coiled-Tubing Inspection

The Schlumberger CoilScan real-time coiled-tubing (CT)-pipe-inspection system (Fig. 1) minimizes nonproductive time by providing real-time pipe inspection during intervention operations to identify CT-pipe defects before entry into the wellbore. The CT-inspection system combines real-time dimensional measurements such as wall thickness and diameter, depth measurements, and defect detection to address CT-pipe failures proactively. A portable device that is attached to the CT reel rigged up at the surface, the CT-inspection system is the last component attached to the CT unit. The system feeds real-time data to surface acquisition and simulation software, where they are interpreted with 3D-modeling software during real-time operations. The CT-inspection system uses magnetic flux, eddy current, and depth encoders for nondestructive evaluation of pipe integrity in the manufacturing facility or in the field. Real-time dimensions are used to update the CT-fatigue life and the CT working envelope. The CT-inspection system provides a complete view of the CT-pipe condition at all times, enabling customers to consider all aspects of pipe management and act accordingly to mitigate failures. For additional information, visit www.slb.com/coilscan.