

## Ultrasonic Clamp Load Monitoring for Joint Durability

This test would verify the clamp load retention for a given joint after the joint is subjected to external loading. The joint is assembled to a target torque strategy and the clamp load generated at the time of build is measured. The joint may then be cycled in a key-life test, in a thermal chamber, or even in-service. Subsequent measurement of clamp loads may reveal load losses as a result of joint de-

sign and loading conditions. The end result is confidence that the joint is both designed and assembled to withstand expected loading conditions.

This type of testing can be performed on parts assembled by the customer using production assembly equipment. The bolts are prepared and calibrated for ultrasonic load measurement prior to installation.