

TECH REPORT

HARRY CAMERON TECHNOLOGY CENTER
HOUSTON

Pressure, psi [kPa]	10,000 [68,947]
Temperature, D, E, F degF [degC], per API Spec 16A, 4th Edition	30, 240, 350 [-1.1, 115.6, 176.7]
Fatigue, cycles	78

Background

This latest dual-string interlocking shear and seal ram was developed in response to evolving regulations in the Gulf of Mexico.[†] Its more efficient cutting geometry requires 40% lower shearing force than previous interlocking shear rams while shearing everything from zero-tension wireline to dual strings and heavy drillpipe. The new seal geometry and design provide full wellbore coverage and enable the ram to seal under extreme heat. The DSI* rams were tested in conjunction with a major Middle East operator to 350 degF [176.7 degC] with an 8-h hold—simulating conditions seen in the Middle East's most challenging wells.

Technology

DSI dual-string interlocking shear rams

[†] Meets requirements of BSEE 30 CFR Part 250.733(a)(1): Electric-, Wire-, and Slick-Line with zero tension anywhere in the bore; Tubulars with external control lines.

Nonshearables Eliminated by 13⁵/₈-in 10,000-psi Shear and Seal Ram

New DSI dual-string interlocking shear rams enable greater performance in U and UM BOPs



Cameron DSI dual-string interlocking shear rams eliminate all vertical separation between the upper and lower blades. The interlocking feature provides the capability of shearing wireline and braided cable with zero tension in the line. DSI rams do not use a fold-over shoulder and thus have the capacity to shear larger-diameter pipe and casing.