Code Case OMN-19
Alternative Upper Limit for the Comprehensive Pump Test

Background: Owners are having difficulties based on normal data scatter with implementation of the comprehensive pump test's current "Required Action Range" upper limit of 3% above the established reference value for the measured hydraulic value of differential pressure, discharge pressure, or flow. Owners have had to declare pumps inoperable for reasons other than a pump degradation issue. A "Required Action Range" upper limit of 6% above the reference value is a realistic value that should allow any true degradation issues to be captured and should alleviate unnecessarily declaring pumps inoperable.

This issue was also discussed at the ASME/NRC special meeting on June 4, 2007. The basis for the 1.06 upper limit is established in the white paper for the Code change that was approved under Standards Committee Ballot 09-610, record 09-657. This white paper discussed the impact of instrument inaccuracies, human factors involved with setting and measuring test parameters, readability of gauges, and other miscellaneous factors on the ability to meet the 1.03 criteria. Operating experience was also discussed in the white paper.

Inquiry: What alternative acceptance criteria may be used in place of the 1.03 reference value multiplier for the comprehensive pump test's upper "Acceptable Range" criteria and "Required Action Range, High" criteria referenced in the applicable ISTB test acceptance criteria tables?

Reply: It is the opinion of the Committee that a multiplier of 1.06 times the reference value may be used in lieu of the 1.03 multiplier for the comprehensive pump test's upper "Acceptable Range" criteria and "Required Action Range, High" criteria referenced in the ISTB test acceptance criteria tables listed in Table 1.

Applicability: See Applicability Index

Table 1 Test Acceptance Criteria Tables Affected by Alternative Upper Limit for the Comprehensive Pump Test

Applicable Code	Applicable ISTB Test Acceptance Criteria Table(s)
ASME OMc Code-1994 Addenda, ASME OM Code-1995 Edition, ASME OMa Code-1996 Addenda, ASME OMb Code-1997 Addenda	Table ISTB 5.2.3-1, Comprehensive Test Hydraulic Acceptance Criteria
ASME OM Code-1998, ASME OMa-1999 Addenda, ASME OMb Code-2000 Addenda, ASME OM Code-2001 Edition, ASME OMa Code-2002 Addenda, ASME OMb Code-2003 Addenda	Table ISTB-5100-1, Centrifugal Pump Test Acceptance Criteria Table ISTB-5200-1, Vertical Line Shaft and Centrifugal Pumps Test Acceptance Criteria Table ISTB-5300-1, Positive Displacement Pump (Except Reciprocating) Test Acceptance Criteria Table ISTB-5300-2, Reciprocating Positive Displacement Pump Test Acceptance Criteria
ASME OM Code-2004, ASME OMa Code-2005, ASME OMb Code-2006, ASME OM-2009	Table ISTB-5121-1, Centrifugal Pump Test Acceptance Criteria Table ISTB-5221-1, Vertical Line Shaft and Centrifugal Pump Test Acceptance Criteria Table ISTB-5321-1, Positive Displacement Pump (Except Reciprocating) Test Acceptance Criteria Table ISTB-5321-2, Reciprocating Positive Displacement Pump Test Acceptance Criteria