



TELEDYNE TEST SERVICES
Everywhereyoulook™

Valve Diagnostic Testing and Maintenance

Seventh Annual QUIKLOOK Users Group Meeting

August 14 & 15, 2013



Presented by: **Mike Richard**



TELEDYNE TEST SERVICES

Everywhereyoulook™

Valve Diagnostic Testing and Maintenance

MIDAS

Update

Manager Computer Interaction

Michael C Richard

MOV Software

Design Calculation MIDAS

Test Analysis MIDATEST

Midas Calculations for All Plants ALL VALVES GL 96-05

File Edits Tables References Tools Help

JOG-PV-11 GATE SB-3-150
JOG Complete

Valve	Operator	Motor	System	Output
Parameter	Ess	Value	Reference	
Valve Type	Y	GATE	3	
Gate Valve Disc Type	Y	Split Wedge	3	
Valve Vendor	Y	POWELL	3	
Valve Size	Y	20	3	
Valve Seat Diameter	Y	18.2	8	
Gate Valve Wedge Half-Angle	Y	5	1	
Calculation Method (close)		VF	10	
Calculation Method (open)		VF	10	
EPRI PPM Thrust (close)		0	10	
EPRI PPM Thrust (open)		0	10	
Valve Factor (close)	Y	0.67	32	
Valve Factor (open)	Y	0.67	32	
Non-Safety Related Valve Factor	Y	0	10	
HELB Related Valve Factor	Y	0	8	
Gate Valve Condition Load	Y	0	N/A	
Stuffing Box Load (close)	Y	11000	1	
Stuffing Box Load (open)	Y	11000	1	

N/A

Rev 1 Rich Enos 12/21/06 20:22 NOT APPROVED 12/21/06 20:22

MIDAS Maintenance for All Plants ALL VALVES GL 96-05

File Tables Tools Help

JOG-PV-11 GATE SB-3-150

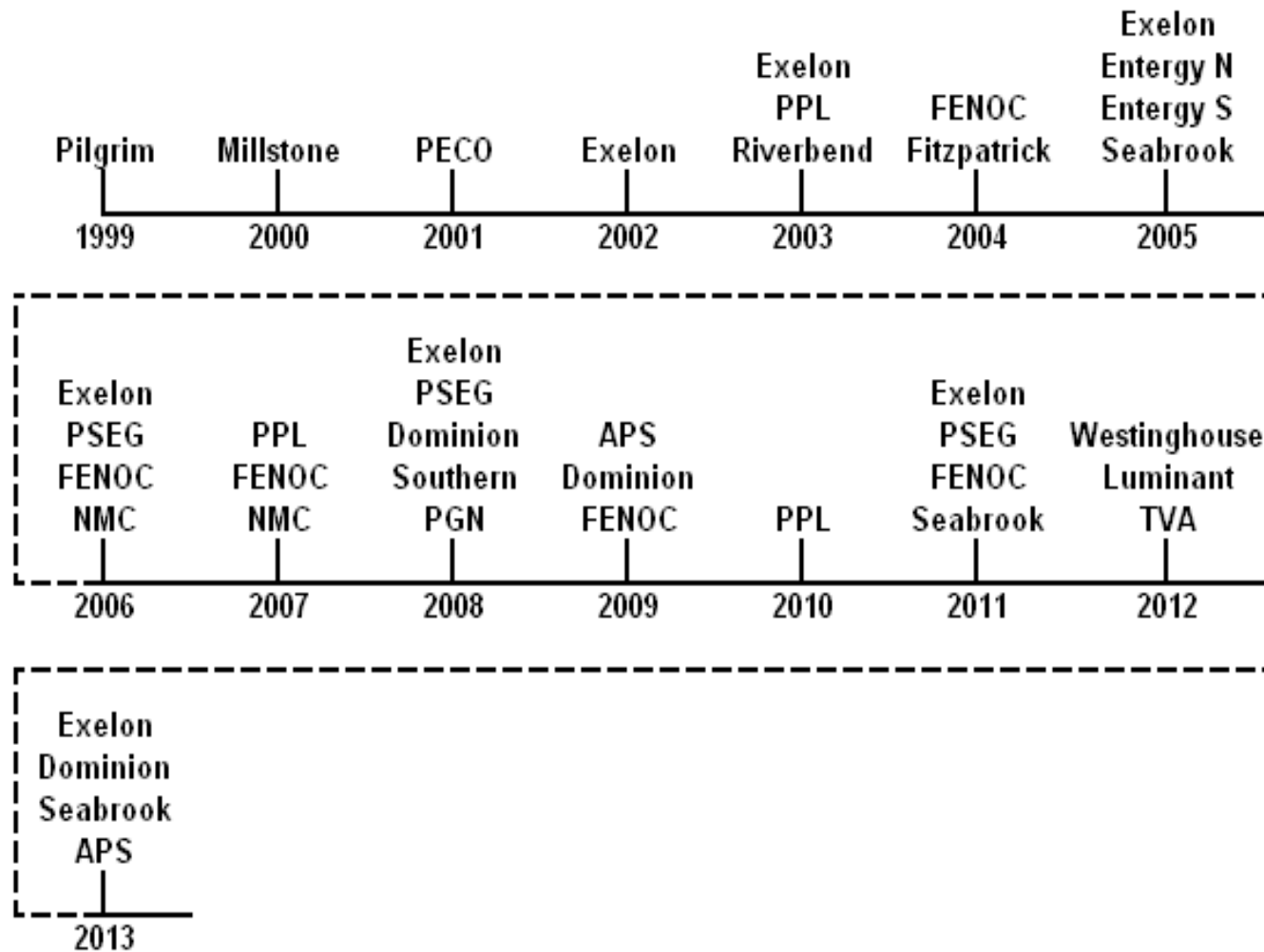
Design Rev: 1 Verified by: NOT APPROVED on 12/21/06 20:22

FUNCTION	OPEN	Last Edit	SIGNOFF	Last Signoff	PRINT
Sensitivity Calculations		10/29/03 09:10	SIGNOFF NOT REQUIRED		
Control Circuit Changes		10/29/03 09:10		11/11/03 15:24	
Pre-Test Information		01/08/07 14:52		N/A	
Limit Switch Settings		10/29/03 09:10		N/A	
Data Review		01/01/00 00:00		N/A	
Trending		01/01/00 00:00		N/A	

Add New Work Order

Work Order	Schedule	Status	Test Date	Test of Record
R0700222	1997	Complete	4/17/97	YES

MOV Software Timeline



Revised Industry Standards

- New AC motor curves for small frame aluminum rotor motors for use with ComED WP-125 methodology. KCI report released.
- New AC motor curves for large frame aluminum rotor motors for use with ComED WP-125 methodology. KCI report pending release.
- Replacement motor curves for use with BWROG DCMM. MPR report released (?).

2013 MIDAS Highlights

- Added method Copy To or From Mod Record
- Added method Compare to Mod Record
- Added method Compare to Other Valve
- Added tool Calculation List
- Revised Export To Excel User Interface
- Revised Build SQL User Interface
- Revised Select Reference User Interface
- Updated several customers to latest software specifications
- Teledyne Citrix Server

2013 MIDATEST Highlights

- Enhanced Main User Interface to Notify for Unsat Post-Test Evaluations
- Enhanced Add Workorder function to allow user control of previous test
- Enhanced Pre-Test function to allow user control of previous test
- Relocate Grease History Functionality
- Added tool Trend View
- Added tool Software Verification
- Added SQL Server compliance
- Updated several customers to latest software specification

Copy To Mod Record

Midas Calculations for All Plants ALL VALVES

File Edits Tables References Tools Help

Check ▾ **NEW TEST OPEN ISSUES**

Compare ▾ **JOG Incomplete**

Copy ▾ From ▾ Operator Motor System Output

Print ▾ To ▾ As-Built

Filters ▾ Disc Type

Exit ▾ Mod Record

	Ess	Value	Reference
	Y	GATE	171
	Y	Flexible Wedge	171
	Y	WALWORTH	171
Valve Size	Y	6	171
Valve Seat Diameter	Y	5.688	8
Gate Valve Wedge Half-Angle	Y	5	1
Calculation Method (close)		VF	10
Calculation Method (open)		VF	10
EPRI PPM Thrust (close)		0	10
EPRI PPM Thrust (open)		0	10
Valve Factor (close)	Y	0.67	56
Valve Factor (open)	Y	0.67	56
Non-Safety Related Valve Factor	Y	0.56	171
HELB Related Valve Factor	Y	0.58	N/A
Gate Valve Condition Load	Y	0	N/A
Stuffing Box Load (close)	Y	1250	1
Stuffing Box Load (open)	Y	1250	1

N/A

Rev 0 Rich Enos 2/11/05 17:26 TELEDYNE 2/11/05 17:26

Copy To Mod Record

Midas Calculations for All Plants ALL VALVES

File Edits Tables References Tools Help

MO-2-12-015 GATE SMB-0-25 **NEW TEST OPEN ISSUES**

JOG Incomplete

Valve Operator Motor System Output

Parameter	Ess	Value	Reference
Valve Type	Y	GATE	171
Gate Valve Disc Type	Y	Flexible Wedge	171
Gate Valve Condition Load	Y	0	N/A
Stuffing Box Load (close)	Y	1250	1
Stuffing Box Load (open)	Y	1250	1

Add Mod Record for MO-2-12-015

This feature adds a new valve by copying the current valve record to a new valve record. Enter the new valve and plant/unit below.

Valve ID: MO-2-12-015-M

Plant/Unit: Peach Bottom Unit 2

OK Cancel

N/A

Rev 0 Rich Enos 2/11/05 17:26 TELEDYNE 2/11/05 17:26

Compare To Mod Record

Midas Calculations for All Plants ALL VALVES

File Edits Tables References Tools Help

Check ▾ **GATE** SMB-0-25 **NEW TEST OPEN ISSUES**

Compare ▾ To As-Built **complete** Motor System Output

Copy ▾ To Historical

Print ▾ **To Mod Record**

Filters ▾ To Other Valve

Exit

	Ess	Value	Reference
	Y	GATE	171
	Y	Flexible Wedge	171
	Y	WALWORTH	171
Valve Size	Y	6	171
Valve Seat Diameter	Y	5.688	8
Gate Valve Wedge Half-Angle	Y	5	1
Calculation Method (close)		VF	10
Calculation Method (open)		VF	10
EPRI PPM Thrust (close)		0	10
EPRI PPM Thrust (open)		0	10
Valve Factor (close)	Y	0.67	56
Valve Factor (open)	Y	0.67	56
Non-Safety Related Valve Factor	Y	0.56	171
HELB Related Valve Factor	Y	0.58	N/A
Gate Valve Condition Load	Y	0	N/A
Stuffing Box Load (close)	Y	1250	1
Stuffing Box Load (open)	Y	1250	1

N/A

Rev 0 Rich Enos 2/11/05 17:26 TELEDYNE 2/11/05 17:26

Compare To Mod Record

The screenshot displays the 'Midas Calculations for All Plants ALL VALVES' application. The main window shows a dropdown menu with 'MO-2-12-015', a 'GATE' button, and a 'SMB-0-25' field. A red banner indicates 'NEW TEST OPEN ISSUES' and 'JOG Incomplete'. Below this are tabs for 'Valve', 'Operator', 'Motor', 'System', and 'Output'. A secondary window titled 'Compare MO-2-12-015 To MO-2-12-015-M' is open, showing a table with the following data:

Parameter	Location	Other Valve	New Value	%Change
Valve Seat Diameter	Valve	5.788	5.688	-1.7

At the bottom of the comparison window, there are fields for 'Other Valve' (TELEDYNE), a date/time stamp (1/5/11 01:00), a status (NOT APPROVED), and another date/time stamp (1/5/11 01:00). Below this is a large empty text area. At the very bottom of the application, there is a footer with 'Rev 0', 'Rich Enos', '2/11/05 17:26', 'TELEDYNE', and '2/11/05 17:26'.

Compare To Mod Record

Midas Calculations for All Plants ALL VALVES

File Edits Tables References Tools Help

MO-2-12-015 GATE SMB-0-25

JOG Incomplete NEW TEST OPEN ISSUES

Valve Operator Motor System Output

Compare MO-2-12-015 To MO-2-12-015-M

Print Exit

Input Output References

Parameter	Direction	Other Valve	New Value	%Change
Orifice Area		26.31	25.41	-3.4
Thrust due to DP Effect (close)	close	18985	18336	-3.4
HELB Thrust due to DP Effect		16435	15873	-3.4
Min Design Thrust (close)	close	21546	20897	-3.0
HELB Related Min Required Thrust		18996	18434	-3.0
Required Thrust (close)	close	21546	20897	-3.0
Required Torque (close)	close	306.2	296.9	-3.0
NSR Min Required Thrust		18443	17900	-2.9
NSR Min Required Torque		262.1	254.4	-2.9
Min Design Thrust Criteria (close)		21546	20897	-3.0
Margin D1 Denominator		387.6	375.9	-3.0
Margin D3 Denominator		458.4	444.6	-3.0
Min Required Thrust @CST		30993	30059	-3.0
Min Required Torque @CST		478	464	-2.9

Other Valve TELEDYNE 1/5/11 01:00 NOT APPROVED 1/5/11 01:00

Rev 0 Rich Enos 2/11/05 17:26 TELEDYNE 2/11/05 17:26

Copy From Mod Record

The screenshot shows the 'Midas Calculations for All Plants ALL VALVES' application window. The 'Copy' menu is open, and the 'From' sub-menu is selected, with 'Mod Record' highlighted. The main window displays a table of calculation results for valve parameters.

Ess	Value	Reference
Y	GATE	171
Y	Flexible Wedge	171
Y	WALWORTH	171
Y	6	171
Y	5.788	8
Y	5	1
	VF	10
	VF	10
	0	10
	0	10
Y	0.67	56
Y	0.67	56
Y	0.56	171
Y	0.58	N/A
Y	0	N/A
Y	1250	1
Y	1250	1

At the bottom of the window, there are status fields: Rev 1, TELEDYNE, 1/5/11 01:00, NOT APPROVED, and 1/5/11 01:00.

Copy From Mod Record

Midas Calculations for All Plants ALL VALVES

File Edits Tables References Tools Help

MO-2-12-015-M GATE SMB-0-25 **Check**

JOG Incomplete **OPEN ISSUES**

Valve	Operator	Motor	System	Output
Parameter	Ess	Value	Reference	
Valve Type	Y	GATE	171	
Non-Safety Related Valve Factor	Y	0.56	171	
HELB Related Valve Factor	Y	0.58	N/A	
Gate Valve Condition Load	Y	0	N/A	
Stuffing Box Load (close)	Y	1250	1	
Stuffing Box Load (open)	Y	1250	1	

Copy FROM Mod Record for MO-2-12-015-M

Are you sure that you want to Copy From Mod Record for this valve?

This process will do the following:

- 1) COPY the Mod Record WIP contents to the original valve record*
- 2) DELETE the MOD RECORD

*NOTE: The As-Built contents of the original valve record will not be effected

Yes No

N/A

Rev 1 | TELEDYNE | 1/5/11 01:00 | NOT APPROVED | 1/5/11 01:00

Compare To Other Valve

The screenshot shows the 'Midas Calculations for All Plants ALL VALVES' application window. The 'Compare' menu is open, with 'To Other Valve' selected. The main window displays a table of calculation results for valve SMB-0-25. A red banner at the top right indicates 'NEW TEST OPEN ISSUES'. The status bar at the bottom shows 'Rev 0', 'Rich Enos', '2/11/05 17:26', 'TELEDYNE', and '2/11/05 17:26'.

	Ess	Value	Reference
	Y	LIMITORQUE	171
	Y	SMB	171
	Y	0	171
Actuator Overall Gear Ratio	Y	69.56	59
Actuator Worm Gear Set	Y	37:1	1
Spring Pack	Y	0501-184	59
Spring Pack Curve Source	Y	GENERIC	N/A
Actuator Close Control Scheme	Y	TORQUE	633
Close TQ Switch Active Flag		N/A	633
Extended Close TQ Switch Bypass Flag		N/A	633
Extended Actuator Thrust Multiplier	Y	1.62	11
Extended Actuator Torque Multiplier	Y	1.1	1
Limiter Application Factor	Y	0.9	1
ComED Efficiency Factor	Y	0.95	1
Actuator Order Number		224977-1	3
Actuator Serial Number		L474829	3
Actuator Installation Date		N/A	3

N/A

Compare To Other Valve

Midas Calculations for All Plants ALL VALVES
File Edits Tables References Tools Help

MO-2-12-015 GATE SMB-0-25
JOG Incomplete NEW TEST OPEN ISSUES

Compare to Other Valve

This feature compares the current valve record to any other valve record. The WIP tables are compared. Select the other valve below.

Valve ID	GL 96-05	Valve Type	Valve MFG	Operator Size	Gearbox Size
JOG-PV-33	NO	GLOBE	VELAN	SMB-000	N/A
JOG-PV-34	NO	GLOBE	VELAN	SMB-000	N/A
JOG-PV-35	NO	GLOBE	VELAN	SMB-000	N/A
JOG-PV-36	NO	GLOBE	VELAN	SMB-000	N/A
JOG-PV-37	NO	GLOBE	VELAN	SMB-000	N/A
JOG-PV-38	NO	GLOBE	VELAN	SMB-000	N/A
JOG-PV-39	NO	GLOBE	VELAN	SMB-000	N/A
JOG-PV-40	NO	GLOBE1	ROCKWELL	SMB-000	N/A
JOG-PV-41	NO	GLOBE	VELAN	SMB-000	N/A
MO-2-12-015-M	YES	GATE	WALWORTH	SMB-0	N/A
MO-3-12-068	YES	GLOBE	ANCHOR DARLING	SMB-0	N/A
MO-3-23-014	YES	GATE	WALWORTH	SMB-1	N/A
MPR-Bal-Globe-1	NO	GLOBE	VELTEK	SB-3	N/A
MPR-Bal-Globe-2	NO	GLOBE	COPE-S-VULCAN	SMB-000	N/A
MPR-Butterfly-1	NO	BUTTERFLY2	CLOW	SMB-000	HOBC

OK Cancel

Rev 0 Rich Enos 2/11/05 17:26 TELEDYNE 2/11/05 17:26

Compare To Other Valve

Midas Calculations for All Plants ALL VALVES

File Edits Tables References Tools Help

MO-2-12-015 GATE SMB-0-25

NEW TEST OPEN ISSUES

JOG Incomplete

Valve Operator Motor System Output

Compare MO-2-12-015 To MO-3-23-014

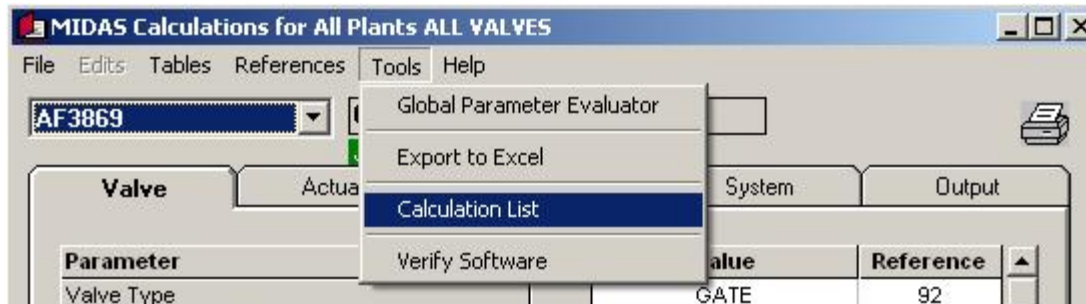
Print Exit

Parameter	Location	Other Valve	New Value	%Change
Valve Size	Valve	8	6	N/A
Valve Seat Diameter	Valve	6.938	5.688	-18.0
Valve Factor (close)	Valve	0.6	0.67	11.7
Valve Factor (open)	Valve	0.6	0.67	11.7
Non-Safety Related Valve Factor	Valve	0	0.56	Infinite
HELB Related Valve Factor	Valve	0	0.58	Infinite
Stuffing Box Load (close)	Valve	3000	1250	-58.3
Stuffing Box Load (open)	Valve	3000	1250	-58.3
Valve Limiting Thrust (close)	Valve	68338	43400	-36.5
Valve Limiting Thrust (open)	Valve	48696	31800	-34.7
Valve Limiting Part (close)	Valve	Stem	YOKE	N/A
Valve Limiting Part (open)	Valve	Stem	DISC	N/A
Maximum Seismic Thrust	Valve	73945	0	-100
Stem Diameter at Packing	Valve	1.5	1.25	16.7

Other Valve Rich Enos 2/28/08 16:37 TELEDYNE 2/28/08 16:37

Rev 0 Rich Enos 2/11/05 17:26 TELEDYNE 2/11/05 17:26

Calculation List Tool



Calculation List

Sort Exit

Valve	Valve Type	96-05	Prepared By	Prepare Date	Reviewed By	Review Date
2CHS-LCV115B	GATE	True	David Thrall	01/12/06 08:48:15	Rich Enos	11/01/11 13:46:20
2CHS-MOV289	GATE	True	David Thrall	01/12/06 08:44:38	Rich Enos	11/01/11 13:46:48
2CHS-MOV289-M	GATE	True	David Thrall	01/12/06 08:44:38	Rich Enos	11/01/11 13:46:48
2RHS-MOV701B	GATE	True	David Thrall	07/13/09 18:59:45	Rich Enos	11/01/11 13:47:01
2SIS-MOV8809A	GATE	True	TELEDYNE	10/20/11 09:31:41	Rich Enos	11/01/11 13:47:20
2SIS-MOV8809-X	GATE	True	Rich Enos	11/03/11 13:18:29	NOT APPROVED	11/03/11 13:18:29
2SWS-MOV113C	GATE	False	David Thrall	01/06/06 08:09:03	NOT APPROVED	01/06/06 08:09:03
AF3869	GATE	True	Rich Enos	11/01/11 13:59:47	NOT APPROVED	11/01/11 13:59:47
AF3870	GATE	True	Rich Enos	11/01/11 14:36:53	NOT APPROVED	11/01/11 14:36:53
AF3870-M	GATE	True	TELEDYNE1	11/19/11 13:15:47	TELEDYNE	11/19/11 13:26:58
AF3870-X	GATE	True	TELEDYNE	11/19/11 15:44:45	NOT APPROVED	11/19/11 15:44:45
BwROG-01	GATE	True	David Thrall	04/27/05 14:30:29	NOT APPROVED	04/27/05 14:30:29

N-1: Stroke length not measured. This value is based off of orifice diameter input.

Rev 5A Rich Enos 11/1/11 13:59 NOT APPROVED 11/1/11 13:59

Export To Excel Interface

The image displays two screenshots of the 'Export to Excel for Work in Progress Table' software interface. Both windows have a title bar with the text 'Export to Excel for Work in Progress Table' and standard window controls. The top window shows a 'File Tables' menu and two main sections: 'Database Fields' (circled in red) and 'Spreadsheet Columns'. The 'Database Fields' section has three tabs: 'Input Data', 'Output Data', and 'Test Data'. The 'Input Data' tab is active, showing a list of fields such as 'AC Voltage Drop Methodology', 'Accident Operating Environment', 'Actuator Close Control Scheme', 'Actuator Installation Date', 'Actuator Manufacturer', 'Actuator Model/Type', 'Actuator Order Number', 'Actuator Overall Gear Ratio', 'Actuator Serial Number', 'Actuator Size', 'Actuator Strokes per year', 'Actuator Weight', 'Actuator Worm Gear Set', 'Alternate Valve Identification', 'Assumed Hub TQ Coef, ft-lbs/in', 'Bearing Coefficient of Friction', 'BF DP at 10 Deg Open, psi', and 'BF DP at 15 Deg Open, psi'. Below the list is an 'SQL Statement' field and a 'Build SQL' button. The bottom window also has a 'File Tables' menu and 'Database Fields' and 'Spreadsheet Columns' sections. The 'Database Fields' section has four tabs: 'Special', 'Outputs', 'Test Data', and 'Controls'. The 'Valve' sub-tab is active, showing a list of fields including 'Valve Type', 'Gate Valve Disc Type', 'Globe Valve Sub-Type', 'Globe Valve Flow Direction', 'Valve Vendor', 'Valve Size', 'Valve Seat Diameter', 'Valve Disc Bore Area (Rockwell)', 'Valve Seat Contact Width (Rockwell)', 'Gate Valve Wedge Half-Angle', 'Calculation Method (close)', 'Calculation Method (open)', 'EPRI PPM Thrust (close)', 'EPRI PPM Thrust (open)', 'Valve Factor (close)', 'Valve Factor (open)', and 'Non-Safety Related Valve Factor'. To the right of the list are buttons for 'Move Up', 'Add', 'Remove', and 'Move Down', along with a 'Reset' button. At the bottom, there is an 'SQL Statement' field, a 'Build SQL' button, and an 'Export to Excel' button.

Build SQL Interface

The image displays two screenshots of a software interface titled "Build SQL Statement for work in Progress Table".

Left Screenshot: The "Parameters" tab is active, showing a list of parameters. The parameter "AB Voltage Drop Methodology" is selected and highlighted. Below the list, there is a note: "Drag Parameters into an available Criteria or Double-Click on parameter for next available Criteria". The "All Plants" button is visible at the bottom.

Right Screenshot: The "Criteria" tab is active, showing a list of parameters. The "Controls" tab is selected. The list includes: Calculation Name, Calculation Revision, Ready for Check, Design Change Status, Design Change Type, Design Change Reason, Test Data Update Computer Name, Test Data Update Name, Test Data Update Date, Preparer Computer Name, Preparer Name, Preparer Last Edit Date, JOG Evaluator, JOG Evaluation Date, Verifier Computer Name, Verifier Name, and Verifier Last Edit Date. Below the list, there is a note: "Drag Parameters into an available Criteria or Double-Click on parameter for next available Criteria". The "All Plants" button and a "Cancel" button are visible at the bottom.

Red circles in both screenshots highlight the "Parameters" list area.

Select Reference Interface

Parameter	Dir	Value/Ref
Valve Gate Disc Type		Flexible Wedge
		537

Not Applicable
 Note
 Reference

2006.300-001-124 , Rev. C , Motor Operated Valve 14-GM72FB

Reference No. All References

OK Cancel

Parameter	Dir	Value/Ref
Valve Gate Disc Type		Flexible Wedge
		537

Not Applicable
 Note
 Reference

2006.300-001-124 , Rev. C , Motor Operated Valve 14-GM72FB

Reference No. All References

OK Cancel

MIDATEST Main User Interface

FENOC MOV Test Analysis for All V&Y Test Units ALL VALVES

File Tables Tools Help

TEST-GT-02 GATE SB-3-150

GL 96-05

Design Rev: 4 Verified by: Rich Enos on 6/18/09 15:54

FUNCTION	OPEN	Last Edit	SIGNOFF	Last Signoff	PRINT
Sensitivity Calculations		11/24/09 09:27	SIGNOFF NOT REQUIRED		
Control Circuit Changes		11/24/09 09:27		N/A	
Limit Switch Settings		11/24/09 09:27		N/A	
Pre-Test Setup		11/30/09 12:36		N/A	
Post-Test Evaluation REVIEW		11/30/09 12:37		N/A	
Trending Evaluation		11/30/09 12:51		N/A	

Add New Work Order


Work Order	Status	Test Date	Time Frame	Test of Record
ALL-HIGH	Pre-Test	3/13/04	1R23	...
1234567C	Complete	6/6/03	1R24	...
ALL-LOW	Pre-Test	3/13/03	1R22	...
1234567D	Complete	6/6/02	1R24	...
1234567E	Complete	6/6/01	1R24	...

Review Post-Test Evaluations

Post-Test Evaluation for TEST-GT-02 WO# ALL-HIGH

Work Done		Sensor Review		Data Review	
As-Found Data		As-Left Data		Evaluations	
Parameter	As-Found Close Open	As-Left Close Open	Parameter	As-Found Close Open	As-Left Close Open
C14 UNDER THRUST	<input type="checkbox"/>	<input type="checkbox"/>	C14 OVER TORQUE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C16 OVER THRUST	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	C16 OVER TORQUE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
O9 OVER THRUST	<input type="checkbox"/>	<input checked="" type="checkbox"/>	O9 OVER TORQUE	<input type="checkbox"/>	<input checked="" type="checkbox"/>
O9 OVER THRUST (EPRI/PL)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	C14 UNDER TORQUE (QT)	<input type="checkbox"/>	<input type="checkbox"/>
C14 OVER THRUST	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RUN TORQUE HIGH/LOW	<input type="checkbox"/>	<input type="checkbox"/>
RUN THRUST HIGH/LOW	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SPRING PACK GAP HIGH	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
STEM FACTOR HIGH	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
STEM WEAR TIME HIGH	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

Evaluation Notes
N/A

OK Rich Enos 11/30/09 12:37  Cancel
NOT APPROVED 11/30/09 12:37

Enhanced Add New Workorder

MIDAS Maintenance for All Plants ALL VALVES

File Tables Tools Help

MO-3-23-014 GATE SMB-1-60

Add New Workorder

Test Scheduled by Outage

Workorder	Test Date	Time Frame
NEW W/O	01/19/2011	N/A
As-Left Test Date	09/16/2001	

Status Pending is LEGACY

Select the work order as the basis for the new Test Instructions

Test	Work Order	Status	Test Date	Test of Record
1	C0195426	Complete	09/16/01	YES
2	C0180487	Legacy	03/21/98	NO
3	OLD 97 Test	Complete	04/17/97	NO
4	OLD 92 Test	Legacy	08/17/92	NO

C0180487	N/A	Legacy	3/21/98	---
OLD 97 Test	N/A	Complete	4/17/97	---
OLD 92 Test	N/A	Legacy	8/17/92	---
Review V&V	2005	Pre-Test	12/3/91	---

Enhanced Pre-Test Function

MIDAS Maintenance for All Plants ALL VALVES

Pre-Test Setup for MO-3-23-014 WO# NEW W/O

Close Control Scheme: TORQUE Safety Function: OPEN

Setup Setup (cont'd) As-Found As-Left **Previous Test**

Select **Test Database Test 1***

Test	Work Order	Status	Test Date	Test of Record
1*	C0195426	Complete	09/16/01	YES
2	C0180487	Legacy	03/21/98	NO
3	OLD 97 Test	Complete	04/17/97	NO
4	OLD 92 Test	Legacy	08/17/92	NO

Parameter	Value
Test Work Order	C0195426
Test Number	01259202
Test Date	9/16/2001
Close Torque Switch Setting	1.5
Open Torque Switch Setting	1.5
Close Average Running Thrust (lbs)	2496
Close Thrust at CST (lbs)	30386
Close Maximum Thrust (lbs)	42284
Open Thrust at Disc Pullout (lbs)	7404
Open Average Running Thrust (lbs)	2446

Exit

TELEDYNE 1/19/11 02:29:46

NOT APPROVED 1/19/11 02:29:46

Cancel

Relocate Grease History

OLD: Post-Test Evaluation / Inspection

Post-Test Evaluation for TEST-GT-02 WO# 0912345

As-Found Data As-Left Data Evaluations


Work Done Sensor Review Data Review **Inspection**

Work Order: 0912345
PM Date: 06/04/2009

	Grease Type	Grease Rating					
		1	2	3	4	5	N/A
Main Gear Case	Nebula EP-0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motor Housing / Clutch Housing	Nebula EP-1	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gearbox (HBC / NDT)	N/A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Limatorque Switch Compartment	Mobil 28	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Stem	Superlube	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

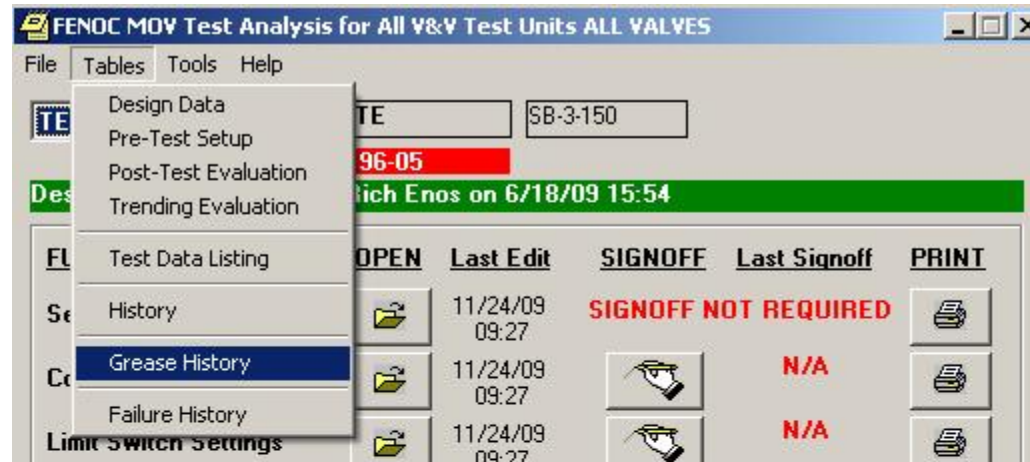
TEST DATA EVALUATION COMMENTS (DISPOSITION ALL FLAGGED EVALUATIONS)

Inspections performed between tests.

OK Rich Enos 6/19/09 16:41 NOT APPROVED 6/19/09 16:41  Cancel

Relocate Grease History

NEW: Tables



Grease History for TEST-GT-02

Item	Date	Workorder	Short Description
1	6/4/2009	0912345	Inspections performed bet
2	6/6/2006	1234567	Inspections performed bet
3	5/6/2000	9911709	Inspections performed bet
4	1/1/2000	N/A	N/A
5	1/1/2000	N/A	N/A
*	(Add)		

Relocate Grease History

Grease History for TEST-GT-02 Item 3

Print

Work Order: 9911709

PM Date: 05/06/2000

Click for --> Grease Ratings

Grease Type	1	2	3	4	5	N/A
Main Gear Case Nebula EP-0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motor Housing / Clutch Housing Nebula EP-1	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gearbox (HBC / NDT) N/A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Limatorque Switch Compartment Mobil 28	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Stem Superlube	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

TEST DATA EVALUATION COMMENTS (DISPOSITION ALL FLAGGED EVALUATIONS)

Inspections performed between tests.

OK Delete Cancel

Relocate Grease History

FEHOC Nuclear MOV Program
 MOV Diagnostic Test Instructions / Criteria

Sheet 1 of 1

Station / Unit Test Cases for Test Analysis Software UHIT 2

Valve Number TEST-GT-02

As-Found Grease Condition Table

Work Order 9911709

PMDate 05/06/2000

Location	Grease Type	Grease Rating					
		1	2	3	4	5	N/A
Main Gear Case	Nebula EP-0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motor Housing / Clutch Housing	Nebula EP-1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gearbox (HBC / NDT)	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Limiterque Switch Compartment	Mobil 28	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stem	Superlube	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TEST DATA EVALUATION COMMENTS (DISPOSITION ALL FLAGGED EVALUATIONS)

Inspections performed between tests.

Trend View

FENOC MOV Test Analysis for All V&V Test Units ALL VALVES

File Tables Tools Help

TEST-GT- SB-3-150

Design Rev 05 Enos on 6/18/09 15:54

Verify Software

FUNCTION	OPEN	Last Edit	SIGNOFF	Last Signoff	PRINT
Sensitivity Calculations		11/14/11 14:50	SIGNOFF NOT REQUIRED		
Control Circuit Changes		11/14/11 15:02		11/14/11 19:11	
Limit Switch Settings		11/14/11 15:14		11/14/11 19:11	
Pre-Test Setup		11/14/11 16:08		11/15/11 10:33	
Post-Test Evaluation REVIEW		11/16/11 10:13		N/A	
Trending Evaluation		11/16/11 10:27		N/A	

Add New Work Order

Work Order	Status	Test Date	Time Frame	Test of Record
1012345	Post-Test	3/13/11	1146	...
0912345	Post-Test	6/4/09	0921	...
1234567	Complete	6/6/06	1R24	YES
1234567A	Complete	6/6/05	1R24	...
1234567B	Complete	6/6/04	1R24	...

Trend View

Trending View for TEST-GT-02

All Parameters

Trending IN
Trending OUT

Post Test IN
Post Test OUT

Pre-Test IN
Pre-Test OUT

Design Data
Test Data

- A/L Time at CST (sec)
- A/L Time at Maximum Thrust (sec)
- A/L Time at Transition (sec) (O)
- A/L Time at Disc Pullout (sec)
- A/L Thrust at Transition (lbs) (C)
- A/L Average Running Thrust (lbs) (C)
- A/L Thrust at Hardseat Contact (lbs)
- A/L Thrust at CST (lbs)
- A/L Maximum Seating Thrust (lbs)**
- A/L Thrust at Transition (lbs) (O)
- A/L Thrust at Disc Pullout (lbs)
- A/L Average Running Thrust (lbs) (O)
- A/L Thrust Channel Offset (lbs)

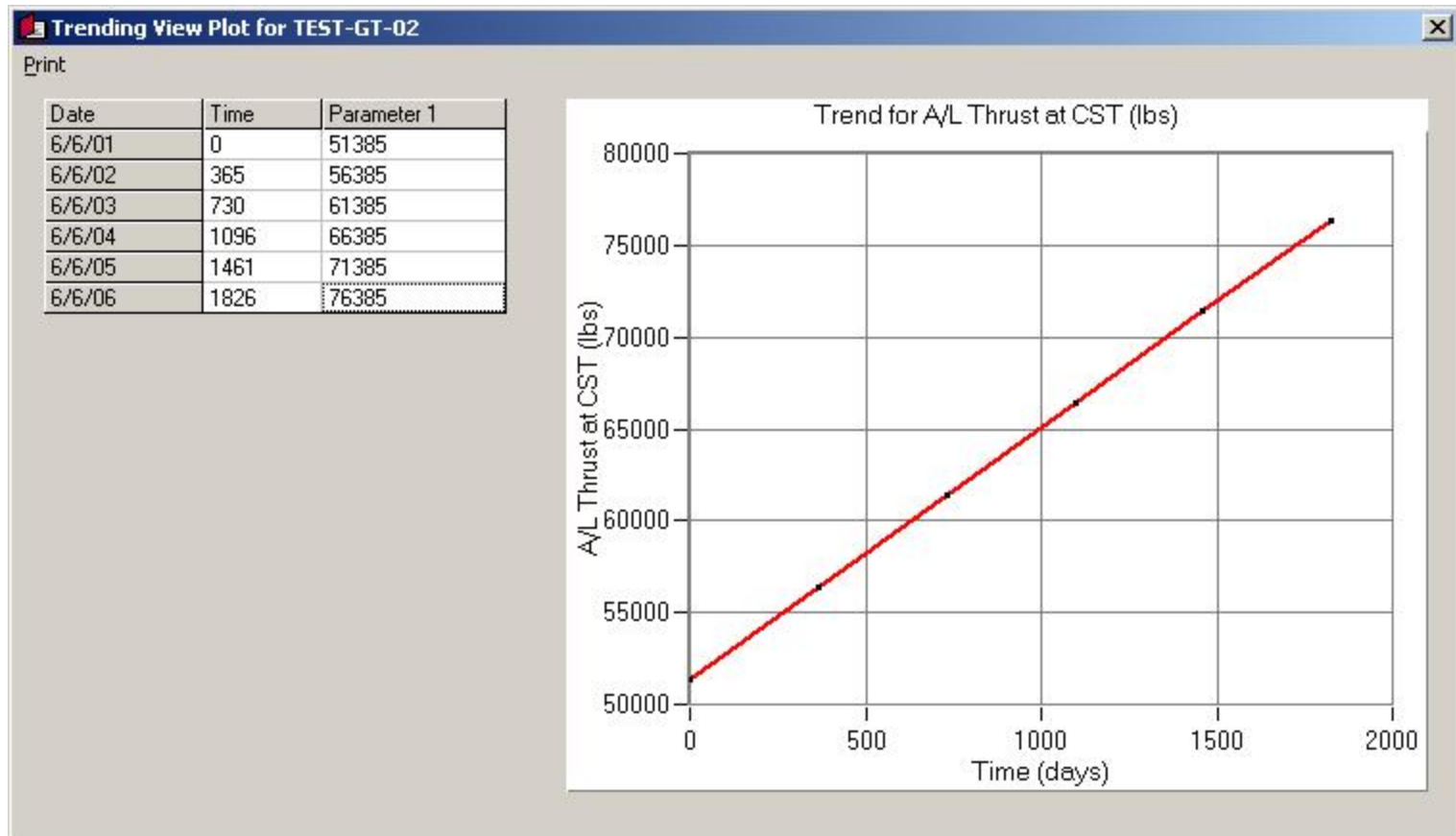
Selected Parameters

Drag parameters into an available field above or Double-Click on a parameter for next available field

Double-Click on the Parameter column below to graph

Work Order	Test Date	Time Frame	Parameter 1	Parameter 2	Parameter 3
1234567E	6/6/01	1R24	51385	30061	61422
1234567D	6/6/02	1R24	56385	29061	66422
1234567C	6/6/03	1R24	61385	28061	71422
1234567B	6/6/04	1R24	66385	27061	76422

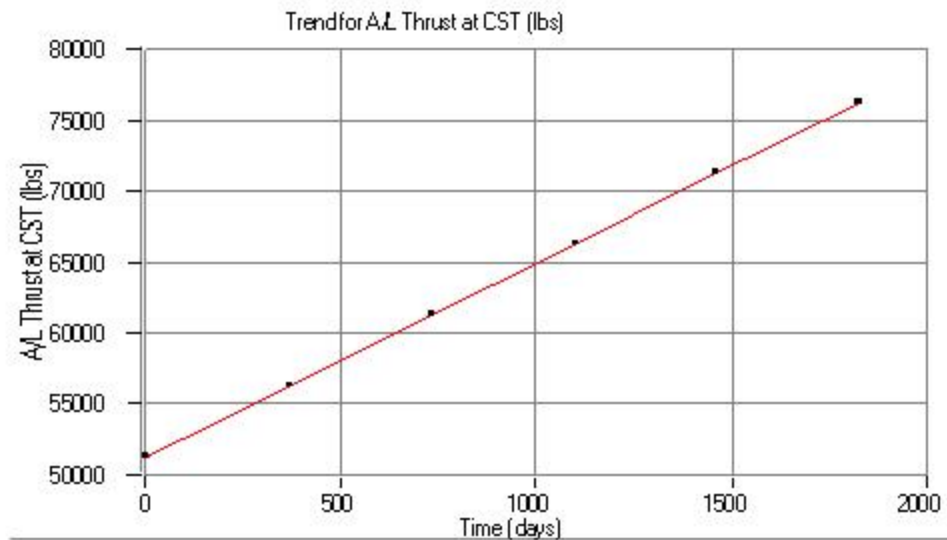
Trend View



Trend View

FirstEnergy

TRENDING VIEW REPORT
AC MOTOR OPERATED GATE VALVE
TEST-GT-02



Workorder	Test Date	Time (days)	Parameter
1234667E	6/6/01	0	51385
1234667D	6/6/02	365	56385
1234667C	6/6/03	730	61385
1234667B	6/6/04	1096	66385
1234667A	6/6/05	1461	71385
1234667	6/6/06	1826	76385

Verify Software

The screenshot displays two overlapping windows from a software application. The background window is titled "FENOC MOV Test Analysis for All V&V Test Units ALL VALVES" and has a menu bar with "File", "Tables", "Tools", and "Help". The "Tools" menu is open, showing options: "Export to Excel", "Trend View", and "Verify Software". Below the menu, there are input fields containing "SB-3-150" and "05", and a green bar with the text "Enos on 6/18/09 15:54". At the bottom of this window, there are buttons for "FUNCTION", "OPEN", "Last Edit", "SIGNOFF", "Last Signoff", and "PRINT".

The foreground window is titled "Verification History for FETEST 2011.322 11/18/2011 19:57:56 Version 3.0". It contains an "Exit" button and the instruction "Double-Click on the desired row to view the Verification details". Below this is a table with the following data:

Test	Prepared By	Date of Test	Computer	Revision	Status
1	TELEDYNE	11/03/11 18:49:54	MDWJR1	2011.307	ACCEPTABLE
2	Rich Enos	11/17/11 09:10:55	MRNENPC19	2011.320	ACCEPTABLE

At the bottom of the dialog, there are buttons for "Add New Verification Test" and "Cancel". Below the dialog, a partial table is visible with the following data:

1234567E	Complete	6/6/01	1R24	...
----------	----------	--------	------	-----

Verify Software

Verification History for FETEST 2011.322 11/18/2011 19:57:56 Version 3.0

Exit

Double-Click on the desired row to view the Verification details

Test	Prepared By	Date of Test	Computer	Revision	Status
1	TELEDYNE	11/03/11 18:49:54	MOVJR1	2011.307	ACCEPTABLE
2	Rich Enos	11/17/11 09:10:55	MRNENPC19	2011.320	ACCEPTABLE

Add Verification History

 This action will ADD Verification History
Do you wish to continue?

Yes No

Add New Verification Test Cancel

Verify Software

Verification History Details for New Test

Print Sort Exit

MidasTest 2011.18 installed on MOVJR1
Test Prepared By: TELEDYNE on 01/05/11 02:44:12
Most Recent Date of Last Edit is 01/19/11 02:29:46 for MO-3-23-014
OVERALL STATUS IS ACCEPTABLE

Valve	Workorder	Last Edit Information	Status	Notes
MO-3-12-068	C0140940 Legacy	TELEDYNE 06/19/08 22:02:14	PASS	N/A
MO-3-23-014	NEW w/O Pre-Test	TELEDYNE 01/19/11 02:29:46	PASS	N/A
MO-3-23-014	C0195426 Complete	Rich Enos 11/12/06 22:55:51	PASS	N/A
MO-3-23-014	C0180487 Legacy	TELEDYNE 06/19/08 22:02:14	PASS	N/A
MO-3-23-014	OLD 97 Test Complete	Rich Enos 01/05/07 13:03:09	PASS	N/A
MO-3-23-014	OLD 92 Test Legacy	Rich Enos 06/19/08 22:02:14	PASS	N/A
MO-3-23-014	Review V&V Pre-Test	Rich Enos 06/19/08 22:02:14	PASS	N/A
MPR-Gate-1	R0700222 Complete	Rich Enos 01/08/07 14:54:38	PASS	N/A
MPR-Gate-2	R0700222 Complete	Rich Enos 01/08/07 14:54:23	PASS	N/A
XCON-IN	C0195426 Review	Rich Enos 01/14/11 12:51:31	FAIL	EXPECTED

Verify Software

MIDAS TEST VERIFICATION HISTORY

Midas Test 2011.18 Installed on MOVJR1

Test Prepared By: TELEDYNE on 01/05/11 02:44:12

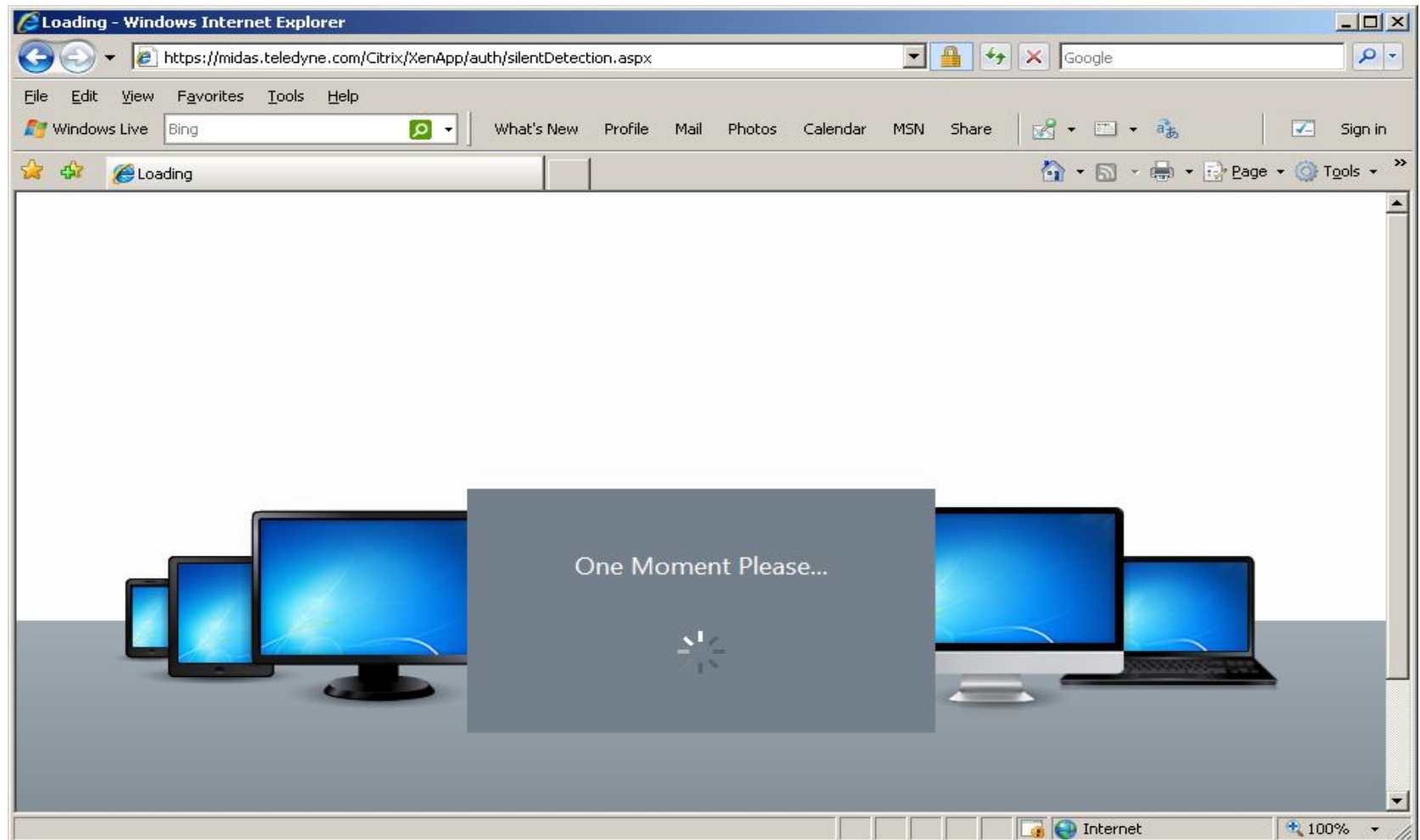
Most Recent Date of Last Edit is 01/19/11 02:29:46 for MO-3-23-014

OVERALL STATUS IS ACCEPTABLE

Value	Work order	Last Edit Information	Status	Notes
BWROG-01	TestCase P e-Test	TELEDYNE 12/21/10 14:06:40	PASS	N/A
EPR-BF-07	P0541639 P e-Test	Rick Eikos 06/19/08 22:02:10	PASS	N/A
FunctionG8	C0002345 P e-Test	Rick Eikos 06/19/08 22:02:10	PASS	N/A
FunctionG8.1	Review V&V P e-Test	Rick Eikos 06/19/08 22:02:11	PASS	N/A
FunctionG8.1	C0234567 P e-Test	Rick Eikos 06/19/08 22:02:11	PASS	N/A
FunctionG8.2	C0456789 P e-Test	Rick Eikos 06/19/08 22:02:11	PASS	N/A
FunctionGT	C0123456 Complete	Rick Eikos 10/29/06 13:21:16	PASS	N/A
FunctionGT	C0099876 Legacy	Rick Eikos 06/19/08 22:02:11	PASS	N/A
FunctionGT-DD	C0987654 P e-Test	Rick Eikos 06/19/08 22:02:11	PASS	N/A
FV-DO-101A	NEW W/O P e-Test	Rick Eikos 06/19/08 22:02:11	PASS	N/A
FV-DO-101A	P0532801 Legacy	TELEDYNE 06/19/08 22:02:12	PASS	N/A
FV-DO-101A	C0145761 Legacy	TELEDYNE 06/19/08 22:02:12	PASS	N/A
FV-DO-101B	TestCase 2 P e-Test	TELEDYNE 01/10/11 09:24:54	PASS	N/A
FV-DO-101B	TestCase P e-Test	TELEDYNE 01/06/11 14:27:09	PASS	N/A
FV-DO-101B	TestCase 1 P e-Test	TELEDYNE 01/06/11 14:45:38	PASS	N/A
FV-DO-101B	C0176799 Complete	TELEDYNE 12/21/06 11:15:41	PASS	N/A
HV-011-011A	C0876543 P e-Test	Rick Eikos 06/19/08 22:02:12	PASS	N/A
HV-012-031A	C0181853 Legacy	TELEDYNE 06/19/08 22:02:12	PASS	N/A
HV-012-032B	P0541639 P e-Test	Rick Eikos 06/19/08 22:02:12	PASS	N/A
HV-012-032B	Review V&V P e-Test	Rick Eikos 06/19/08 22:02:12	PASS	N/A
HV-049-1 F008	R0769302 Legacy	TELEDYNE 06/19/08 22:02:13	PASS	N/A
HV-049-1 F008	R0563834 Legacy	TELEDYNE 06/19/08 22:02:13	PASS	N/A
HV-049-1 F010	R0506425 Tiedling	TELEDYNE 12/11/06 11:19:52	PASS	N/A
HV-055-2 F105	R0801097 Review	Jim MMahon 06/06/08 14:27:07	PASS	N/A
HV-055-2 F105	R0720054 Legacy	TELEDYNE 06/19/08 22:02:13	PASS	N/A
JOG-PV-01	R0700222 Complete	Rick Eikos 01/08/07 14:50:38	PASS	N/A

Teledyne Citrix Server

<https://midas.teledyne.com>



Teledyne Citrix Server

The screenshot shows a Windows Internet Explorer browser window displaying the Citrix XenApp management interface. The address bar shows the URL <https://midas.teledyne.com/Citrix/XenApp/site/default.aspx>. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The toolbar contains Windows Live, Bing, What's New, Profile, Mail, Photos, Calendar, MSN, Share, and Sign in. The main content area features a search bar, a user login status of "Logged on as: tneckowicz", and navigation links for Messages, Settings, and Log Off. The Citrix logo is visible in the top right. Below this is a "Main" section with a "Select view:" dropdown and four application tiles: ACE - Exelon, MIDAS Exelon 2010, MIDASWL - Exelon, and Quiklook. A hint at the bottom states: "Hint: You can view your resources in several different ways. Use the Select view control to change the way that your resources are displayed." The browser's status bar at the bottom shows "Done", "Internet", and "100%" zoom.

Teledyne Citrix Server

MOV

Exelon MOV Program (2012.174)

THE POWER TO BE **BRILLIANT**
INNOVATIVE
EXCEPTIONAL
CREATIVE

MIDAS		MIDATEST
<input type="radio"/> Limerick	<i>new</i>	<input type="radio"/> Limerick
<input type="radio"/> Peach Bottom	<i>new</i>	<input type="radio"/> Peach Bottom
<input type="radio"/> Braidwood	<i>new</i>	<input type="radio"/> Braidwood
<input type="radio"/> Byron	<i>new</i>	<input type="radio"/> Byron
<input type="radio"/> Dresden	<i>new</i>	<input type="radio"/> Dresden
<input type="radio"/> LaSalle	<i>new</i>	<input type="radio"/> LaSalle
<input type="radio"/> Quad Cities	<i>new</i>	<input type="radio"/> Quad Cities
<input type="radio"/> Clinton	<i>new</i>	<input type="radio"/> Clinton
<input type="radio"/> Three Mile Island	<i>new</i>	<input type="radio"/> Three Mile Island
<input type="radio"/> Oyster Creek	<i>new</i>	<input type="radio"/> Oyster Creek
<input type="radio"/> Verification 2010	<i>new</i>	<input type="radio"/> Verification 2010

Teledyne Citrix Server

AOV

Exelon AOV Program (2012.53)

THE POWER TO BE **BRILLIANT**

INNOVATIVE
EXCEPTIONAL
CREATIVE

ACE 4.0	ACE DP
<input type="radio"/> Limerick	<input type="radio"/> Limerick
<input type="radio"/> Peach Bottom	<input type="radio"/> Peach Bottom
<input type="radio"/> Braidwood	<input type="radio"/> Braidwood
<input type="radio"/> Byron	<input type="radio"/> Byron
<input type="radio"/> Dresden	<input type="radio"/> Dresden
<input type="radio"/> LaSalle	<input type="radio"/> LaSalle
<input type="radio"/> Quad Cities	<input type="radio"/> Quad Cities
<input type="radio"/> Clinton	<input type="radio"/> Clinton
<input type="radio"/> Three Mile Island	<input type="radio"/> Three Mile Island
<input type="radio"/> Oyster Creek	<input type="radio"/> Oyster Creek
<input type="radio"/> Verification 2011	<input type="radio"/> Verification 2011

2014 MIDAS Enhancement

Margin Summary Form

As-Left Test Data Margins for MV-32016

Exit

Current PVT
 Schedule: **6R** Risk: **L** Interval: **10.0** (years)

Calculated PVT
 Max Interval: **10** (years) Margin: **40.9 %**

What-If Calculator **Test Data**

Torque @TST: **117** (ft-lbs)
 Total Torque: **134** (ft-lbs)
 Pullout Torque: **22.5** (ft-lbs)
 Run Torque (C): **0** (ft-lbs)
 Run Torque (O): **0** (ft-lbs)

Thrust @TST: **11657** (lbs)
 Total Thrust: **14314** (lbs)
 Pullout Thrust: **2935** (lbs)
 Run Thrust (C): **1082** (lbs)
 Run Thrust (O): **1082** (lbs)
 Run Load Basis: **N/A**
 TSS (Close): **2.125**

COF Analysis
 As-Left Test COF (Close): **0.104**
 As-Left Test COF (Open): **0.052**
 MAX Design COF (Close): **0.219**
 MAX Design COF (Open): **0.463**
 UnderThrust COF Limit: **0.192**

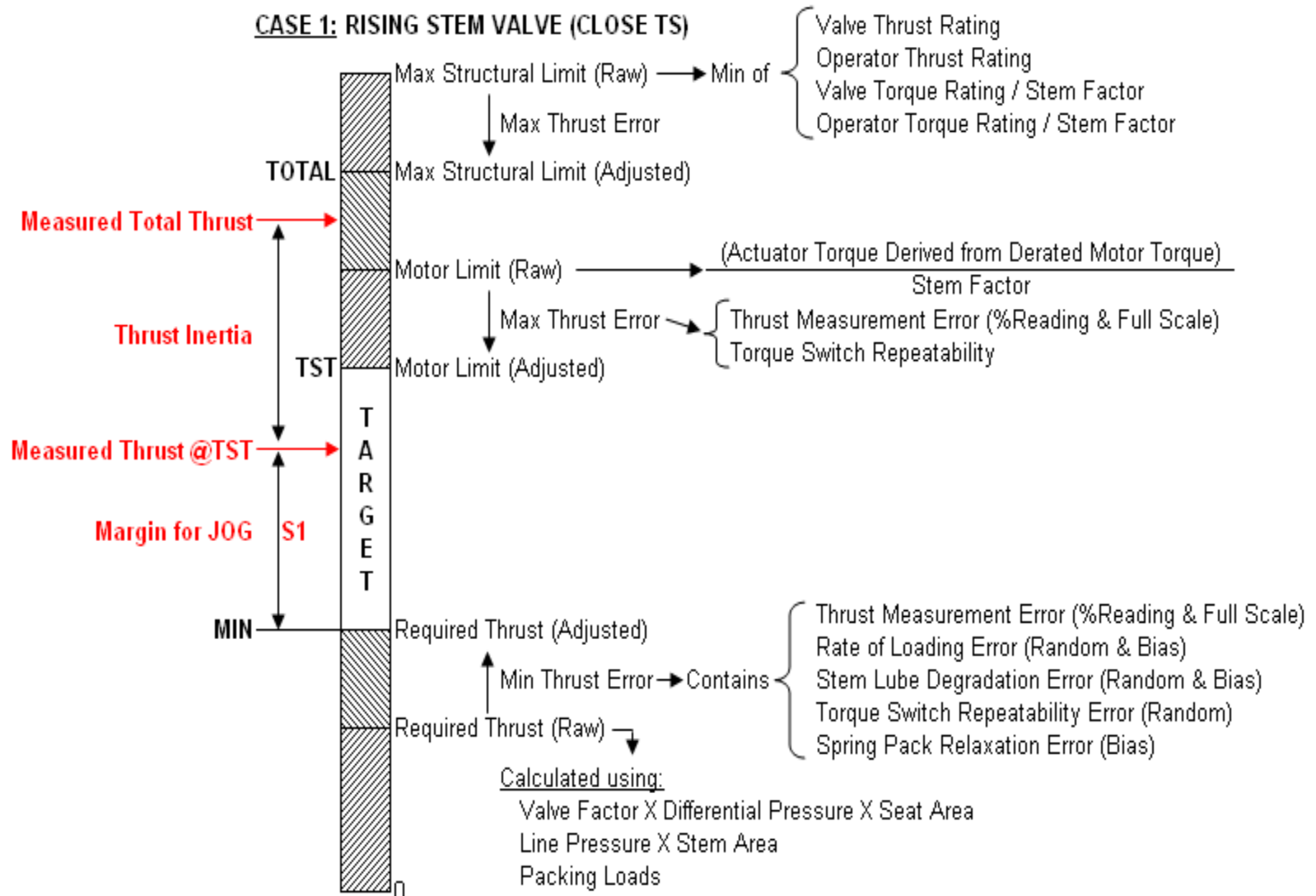
Valve Factor Capability
 (Close): **0.809**
 (Open): **0.998**

Safety Function: BOTH **Close Control: Torque**

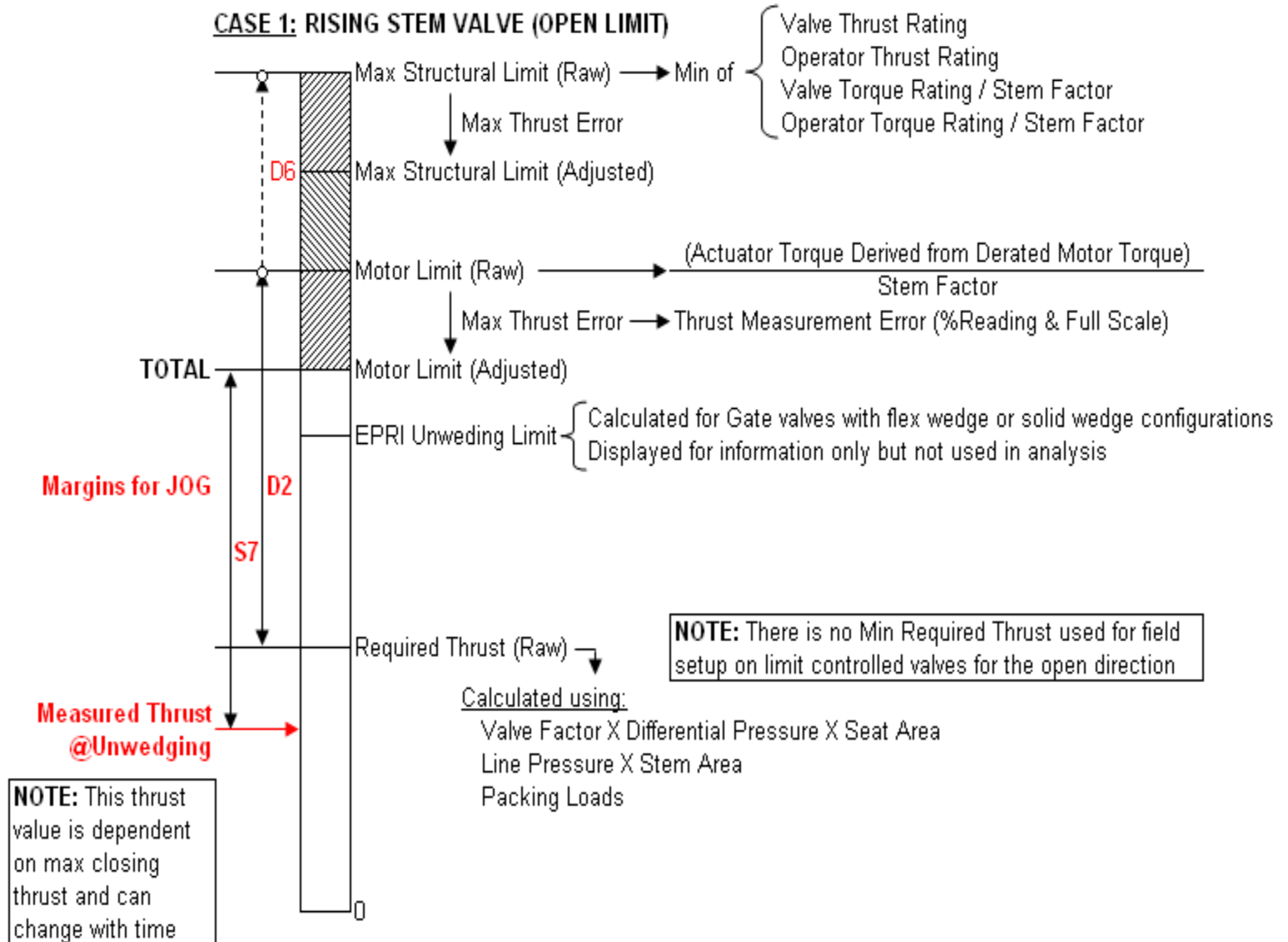
Eq.	Parameter	Close	Open
D2	*Design Capability Margin (RS)	--	88.6
D5	Design Structural Margin (RS)	277.7	--
D6	Design Structural Margin (RS)	--	336.2
D9	Alternate Design Capability Margin (RS)	--	35.6
D10	Design EPRI Thrust Margin @O9	--	80.6
P1	Pretest Capability Margin (RS)	4.5	--
P2	Pretest Capability Margin (RS)	--	46.7
P5	Pretest Structural Margin (RS)	141.7	--
P6	Pretest Structural Margin (RS)	--	239.2
S1	*Min CST Thrust Margin	40.9	--
S2	Min CST Torque Margin	18.8	--
S3	Max CST Thrust Margin	-34.9	--
S4	Max CST Torque Margin	8.2	--
S5	*Thrust Margin @C16	28.4	--
S6	Torque Margin @C16	45.6	--
S7	*Thrust Margin @O9	--	85.4

Test of Record: 0306446 09/16/04 VIPER

2014 Margin Form Enhancement



2014 Margin Form Enhancement



MOV Software

Questions?

