1	3/10/05	Effective Date	3/17/05	
	lance Form)		
Generic Information				Ziens (Sector
•	oty Value Testing			Rev. No. 010-02
	ety Valve Testing			
Reference Procedure	Applicable TS/TRM	Applicability (TS/TF	L L	quency
SP 2730B	4.7.1.1, 4.0.5	MODES 1, 2,	and 3 S	ee Note*
Specific Information				
Schedule Start Date		AWO Number		Mntc Restoration
Performance Modes Pre	requisites Completed (Initials)	m2040. Precautions N		Yes 1
	an-	~ ~		
Test Authorized By	Ala	Date	15	Partial Surveillance
Performed By GB10,		Date U/		Yes V
Accepted By	<u> </u>	1/7/	25	Acceptance Criteria
Jeous Ch	Mu -		105	Satisfied
Approved By Department Heating	(Designee)	Date	65	
Surveillance Information		564 7/01	· /	
	#1 M	ain Steam Header (East)	#2 Main	Steam Header (West)
Test Equipment Typ	ATE QA Numbe		QA Numt	er Cal Due Da
Hydroset	1 QA-0210	17 2/6/06	104-21	78 2/6/06
Hydroset Pressure Gaug		66 3/29/06	04-00	618 9/26/05
Steam Header Pressure			QA-00	558 9/28/05
Pyrometer	QA-0121	9 12/9/05	+QA-12	20 12/9/05
Comments				•
CR# 05-03129				
*Note: Class 2 Main S	team Safety Valves: All	valves shall be tested	d within each :	subsequent
1	nimum of 20% of the val	ves tested within any	/ 24 months.	This 20% shall be
5 year period with a mi				
	lves, if they exist (from A		7 Part 1 Soot	ion (1,3,3)

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		Test In	formation		
Valve No. 2-MS	24	<u>3</u> Valve Serial	No.: BN-4974		
 Valve inspection (circle Leakage (check drip) Damaged parts Abnormal condition 		t and describe discrepancy i	f any): SAT/ UNSAT		
Check 🛩 below method	lused	to verify valve set pressure			
· ·	×	In-line test (hydraulic ass	ist lift test)		
"As Found"		Off-site test facility	· ·		
•	X	In-line test (hydraulic ass	ist lift test)		
"As Left"		Off-site test facility		•	
Record Test Results:		-site test facility, record:	Test Facility:N/A PO number:N/K "As Found" Set Pressure "As Left" Set Pressure (. 1035.6	
			"As Left" Set Pressure (
	_		"As Left" Seat Tightness	·	JNSAT 🗋
MSSV Operational Readiness	•	2 "As Left" set pressures Satisfactory "As Left" se	•	SAT 🛃 UNSAT 🗖	 Initials
est was conducted i est results are accur		cordance with SP 2730	B, "Main Steam Safety	Valve Testing	(IPTE)" and
est Engineer:	<	MA		Date: 4	17/05
Aanagement Test Le	ead:	240 Wl		Date: <u>4</u> Date: <u>4</u>	117/05
0					
		,			
		,		·	

	Test Information		
244			
result			
used	to verify valve set pressure:	·	1
X	In-line test (hydraulic assist lift test)		
	Off-site test facility		
×	In-line test (hydraulic assist lift test)		
	Off-site test facility	·····	
t off-	-site test facility, record: Test Facility: <u>N/A</u> PO number: <u>N/A</u>		
	"As Left" Set Pressure (1 "As Left" Set Pressure (2	st): <u>1014</u> Ind): <u>1010.8</u>	
•	"As Left" Seat Tightness 2 "As Left" set pressures within 1% of setpoint Satisfactory "As Left" seat tightness	SAT SAT INSAT	
ate.	ordance with SP 2730B, "Main Steam Safety Man C. Belu 240 WD	Valve Testing (IPTE)" an Date: <u>4/7 /04</u> Date: <u>4/ 2/05 ⁻</u>	d
	· · ·	2730B-001	
	used	used to verify valve set pressure:	244 Valve Serial No.: $BN-4970$ result and describe discrepancy if any): SAT / UNSAT Dan used to verify valve set pressure:

		Test In	formation		<u></u>
Valve No. 2-MS-	· <u> </u>	O Valve Serial	No.: <u>BN - 477</u> C		
 Leakage (check dri Damaged parts Abnormal conditio 	p pan)	t and describe discrepancy i	it any): (SAI)/ UNSAI		
Check 🛩 below meth	od used	to verify valve set pressure	:		
	X	In-line test (hydraulic ass	sist lift test)		
"As Found"		Off-site test facility			
	X	In-line test (hydraulic as	sist lift test)		
"As Left"		Off-site test facility			
If set pressure verifie	d at off	–site test facility, record:	Test Facility: <u>N/A</u> PO number: <u>N/A</u>	l	
Record Test Results:			"As Found" Set Pressure "As Left" Set Pressure ("As Left" Set Pressure ("As Left" Seat Tightness	1st): <u>1028.8</u> 2nd): <u>1021.3</u>	JNSAT 🗋
MSSV Operational Readiness	•	2 "As Left" set pressures Satisfactory "As Left" se	•	SAT 🕅 UNSAT 🗖	TRE Initials
Test was conducted est results are acc Test Engineer:	d in ac urate.	cordance with SP 2730.	B, "Main Steam Safety	Valve Testing 4 Date: <u>3</u> Date: <u>7</u>	تتراور بعد
Management Test	Lead:	<u> 9470 Ull</u>		_ Date: <u></u>	<u>7/05 —</u>

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	Valve No. 2-MS- Valve inspection (circle r • Leakage (check drip pa	_		mation 			
	Valve inspection (circle r	_	D Valve Serial No.		•		
	Valve inspection (circle r	_		BN-4971	•		
	Valve inspection (circle r	esult					
	 Damaged parts Abnormal condition 	an)	and describe discrepancy if an	y): SAT UNSAT			
ĺ	Check 🛩 below method	used	to verify valve set pressure:				
	<i>///</i>	×	In-line test (hydraulic assist l	ift test)			
	"As Found"		Off-site test facility		<u> </u>		
	"As Left"	X	In-line test (hydraulic assist l	ift test)			
			Off-site test facility		<u></u>		
	If set pressure verified at	off-	-site test facility, record:	N/A PO number:	<u> </u>		
	Record Test Results:		.4	"As Found" Set Pressure	1039.8		
				"As Left" Set Pressure (1			
				'As Left" Set Pressure (2			
·	MSSV Operational	•		"As Left" Seat Tightness		JNSAT	
	MSSV Operational Readiness	•	2 "As Left" set pressures wit Satisfactory "As Left" seat ti		SAT	Initials	
	Test was conducted in est results are accura		cordance with SP 2730B, "	•	Valve Testing	(IPTE)" and	
-	lest Engineer:		- Ein Der Burken - H-OWD	ill-	Date:	12/05	
]	Management Test Lea	ad:	- 24-OWD		، Date: <u>ب</u>	12/05-	

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<u> </u>		Test Inf	ormation		
Valve No. 2-MS-	24	Z Valve Serial N	io.: BN- 4.975		
Valve inspection (circl • Leakage (check drip • Damaged parts • Abnormal condition	pan)	t and describe discrepancy if	any) SAT/UNSAT		
Check 🛩 below metho	od used	l to verify valve set pressure:			<u> </u>
	X	In-line test (hydraulic assi	st lift test)		
"As Found"		Off-site test facility	·		
	X	In–line test (hydraulic assi	st lift test)	•	
"As Left"		Off-site test facility	····		
f set pressure verified	at off	-site test facility, record:	Test Facility:/A		·
Record Test Results:			"As Found" Set Pressure "As Left" Set Pressure ("As Left" Set Pressure ("As Left" Seat Tightness	lst): <u>/029./</u> 2nd): <u>/028. </u>	
MSSV Operational Readiness	•	2 "As Left" set pressures Satisfactory "As Left" sea	•		 Initials
est was conducted est results are accu est Engineer: Ianagement Test L	rate.	cordance with SP 2730B	, "Main Steam Safety Soofmall	Valve Testing Date: Date:	1/7/05
				2730B-001 . 010-02	

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	Test	Information	<u></u>
Valve No. 2-MS	254 Valve Ser	rial No.: <u>BN - 496</u> 2	•
Valve inspection (circle • Leakage (check drip • Damaged parts • Abnormal condition		cy if any):SAT / UNSAT	
Check 🛩 below metho	od used to verify valve set press	sure:	
	X In-line test (hydraulio	assist lift test)	
"As Found"	Off-site test facility		
	X In-line test (hydraulid	assist lift test)	
"As Left"	Off-site test facility		
If set pressure verified	at off-site test facility, record	l: Test Facility: <u>N/A</u> PO number: <u>N/A</u>	<u>1</u>
Record Test Results:		"As Found" Set Pressure "As Left" Set Pressure ("As Left" Set Pressure ("As Left" Seat Tightnes	(1st): <u>995, 5</u> (2nd): <u>992, 7</u>
MSSV Operational Readiness	 2 "As Left" set press Satisfactory "As Left 	ures within 1% of setpoint " seat tightness	SAT X UNSAT
Test was conducted test results are accu Test Engineer: Management Test L	rate.	30B, "Main Steam Safety <u>Mosfuniller</u>	Valve Testing (IPTE)" and Date: <u>4/2/05</u> Date: <u>7/2/05</u>
			2730B-001 v. 010-02

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	Test Iı	lformation		
Valve No. 2–MS–	Z41 Valve Serial	No.: BN-4468		
Valve inspection (circl • Leakage (check drip • Damaged parts • Abnormal condition		if any) SAT/ UNSAT		
Check 🛩 below metho	od used to verify valve set pressure	; ;		l
	X In-line test (hydraulic as	sist lift test)		
"As Found"	Off-site test facility			
<i></i>	X In-line test (hydraulic as	sist lift test)		
"As Left"	Off-site test facility	• 		
If set pressure verified	at off—site test facility, record:	N/A PO number: N/A	1	
Record Test Results:		"As Found" Set Pressure "As Left" Set Pressure ("As Left" Set Pressure ("As Left" Seat Tightnes	1st): <u>1010.1</u> 2nd):1008.1	
MSSV Operational Readiness	 2 "As Left" set pressure Satisfactory "As Left" set 	•	SAT 🗖 UNSAT 🗋	<u>TRI</u> Initials
est was conducted est results are accu est Engineer: Management Test I	Wan Be	B, "Main Steam Safety 	Valve Testing Date: Date:	17/05
	Set pressure 02 05-03129	<i>л</i> гіде. 3% о	cceptance	? CRITERIA
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Main Steam Safety Valve Testing

Acceptance Criteria

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"As Found" – On first lift, value opens at design lift setting (-3%), to less than +3%) "As Left "– On last two consecutive lifts, value opens at design lift setting $(\pm 1\%)$ (first lift may be included as one of the two consecutive lifts if first lift is within $\pm 1\%$) [*Ref. 6.4]

	Valve Set Pressure	Acceptance Crite	eria
Valve ID#	"As Found" (psig)	Valve ID#	"As Left" (psig)
2-MS-239	1004 to 1066	2-MS-239	1025 to 1045
2-MS-240	999 to 1061	2-MS-240	1020 to 1040
2-MS-241	980 to 1041	2-MS-241	1001 to 1020
2-MS-242	961 to 1020	2-MS-242	981 to 1000
2-MS-243	1004 to 1066	2-MS-243	1025 to 1045
2-MS-244	990 to 1051	2-MS-244	1010 tó 1030
2-MS-245	970 to 1030	2-MS-245	991 to 1010
2-MS-246	956 to 1015	2-MS-246	976 to 995
2-MS-247	956 to 1015	2-MS-247	976 to 995
2-MS-248	1004 to 1066	2-MS-248	1025 to 1045
2-MS-249	970 to 1030	2-MS-249	991 to 1010
2-MS-250	999 to 1061	2-MS-250	1020 to 1040
2-MS-251	990 to 1051	2-MS-251	1010 to 1030
2-MS-252	980 to 1041	2-MS-252	1001 to 1020
2-MS-253	1004 to 1066	2-MS-253	1025 to 1045
2-MS-254	961 to 1020	2-MS-254	981 to 1000

Lift settings are from Tech. Spec. Table 4.7–1, Amend. #195, and have been converted in this table from psia to psig to prevent transposition errors during testing. The following methodology of calculation was utilized:

Minimum criteria "As Found" = TS Setpoint x 0.97 - 14.7

Maximum criteria "As Found" = TS Setpoint x 1.03 - 14.7

Minimum criteria "As Left" = TS Setpoint x 0.99 - 14.7

Maximum criteria "As Left" = TS Setpoint x 1.01 - 14.7

All criteria is conservatively rounded toward the setpoint to the nearest whole number.

"As-Left Seat Tightness"		
All Valves	No audible leakage	
	No PPC alarm for flow switch of valve under test	

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Attachm	
Hydroset Correcti	
(Sheet 1	or 1)
AWO#: <u>M2-09-05237</u>	Valve ID# 2-MS- 240
(Blank copies of Attachment 7, Sheet 1	
Hudsonst OA No. (Internet CA	Hydroset Serial No. (45-547)
Hydroset QA No. (47(62191)	
<u>1030</u> psig MSSV Set Pressure (Step 4.2.3.a.)	
- <u>849.1</u> psig Steam Header Pressure (Step 4.2.1)	576.0
$= \underbrace{190.9}_{\text{Hydroset Influence (Step 4.2.3.b.)}} \div 0.312$	$= \frac{579.8}{\text{Expected Hydroset Pressure}}$ (Step 4.2.3.c.)
psig Required Pump Pressure from Hydros	
- <u>583</u> psig Applied Pump Pressure from Hydrose	
= -3 psig Hydroset Correction (Step 4.2.3.e.) x ($0.312 = (^{+}/_{-}) \underbrace{\frac{931}{\text{Hydroset Influence}}}_{\text{Correction}} (\text{Step 4.2.3.f.})$
<u>7.0%</u> ft Elevation difference from steam head in sensing line (Step 4.3.9.a.)	er pressure instrument centerline to highest point
x <u>(-)0.43</u> psig/ft	
= -3.9 Main Steam Header Pressure Elevation	on Correction (Step 4.3.9.b.)
Comments:	
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	A SP 2730B
Level of Use Continuous	Rev. 012–01 52 of 61

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				Attachm						
			Test Data S	heet Using Dres		66 Hydros	et			
	AWO#: 42-	64-05237)	(Sheet 1	of 1)	Valv	: ID# 2-M	15-24e	2	
				of Attachment 8 m	ay be reproduce				•	-
Hyd	roset Correctio	n calculatio	n based on H	eader Pressure of (849) ps	ig using Hy	droset QA	No. (1)	7198)
			Test Da	ta			Val	ve Adjustn	ents After	Test
Step 4.5.15.d.1)	Step 4.5.15.d.3)	Step 4.5.16.c.2)	Step 4.2.3.g.	Step 4.3.9.c.	Step 4.5.15.d.3)	Step 4.5.16.d.	Step 4.5.19.b.		Step 4.5.20.a.	
Test No.	Hydroset	Hydroset	Ilydroset.	Main Sleam:-i- Header Pressure	"Steam Header O	Valve Set	No		Yes	
& Time	Pressure (psig)	Influence	L'Influence Carrection	lieader Pressure	Pressure 204	Pressure (psig)	Initial	Initial	CW or CCW	No. of Flats
1.0754	_519_	-190.4-	~-94	- 3.9	854	1029.8	5			
2 1004	5517	172.1	94	-3.9	45Y	1021.3	w			
3.				·						
		<u> </u>				<u> </u>				`
6.										└ ─────┤]
7.					<u> </u>					
8.								<u> </u>		
9.										
10.		1								
11.										
"As Left" Lea	ak Tightness 👂	(SAT DI	JNSAT			•				
2. Hydr 4. Hydr be co	mpleted prior to	Hydroset Pres nust be calcula performance (ssure (PSIG) x ated from Correct of test. Hydrose		e expressed as a (-	+) or (-) val	ue in gradu	ations of Hy	ation should droset Influe	ence.
	of Use linuous		ار مراکع د	TOP THINK	ACT HEV	ËŴ		F	SP 2730B Rev. 012-0 3 of 61	1
	- - 	20" (Nolac	di 1965 1387	Jential k	DETROPH) TC	17	sarg	e anc	2

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Attachm Hydroset Correcti (Sheet 1	ion Calculation
AWO#: <u>m204-052</u> 37 (Blank copies of Attachment 7, Sheet 1	Valve ID# 2-MS- <u>241</u> I may be reproduced as necessary)
Hydroset QA No. (02 198)	Hydroset Serial No. (45-547)
<u>1010</u> psig MSSV Set Pressure (Step 4.2.3.a.)	
- <u>\$54</u> psig Steam Header Pressure (Step 4.2.1)	
= <u>15</u> Hydroset Influence (Step 4.2.3.b.) \div 0.312	$= \frac{500}{\text{Expected Hydroset Pressure}}$ (Step 4.2.3.c
<u>500</u> psig Required Pump Pressure from Hydros	set Correction Chart (Step 4.2.3.d.1)
- <u>503</u> psig Applied Pump Pressure from Hydrose	et Correction Chart (Step 4.2.3.d.2)
= psig Hydroset Correction (Step 4.2.3.e.) x ($0.312 = (^+/_) $
in sensing line (Step 4.3.9.a.) x (-)0.43 psig/ft -7.49 Nois Steen Wesder Breezen Elemetic	er pressure instrument centerline to highest point
x (<u>-)0.43</u> psig/ft = <u>- 3.9</u> Main Steam Header Pressure Elevatio	
x (<u>-)0.43</u> psig/ft = <u>- 3.9</u> Main Steam Header Pressure Elevatio	
x (<u>-)0.43</u> psig/ft = <u>- 3.9</u> Main Steam Header Pressure Elevatio	
x (<u>-)0.43</u> psig/ft = <u>- 3.9</u> Main Steam Header Pressure Elevatio	
x (<u>-)0.43</u> psig/ft = <u>- 3.9</u> Main Steam Header Pressure Elevatio	
x (<u>-)0.43</u> psig/ft = <u>- 3.9</u> Main Steam Header Pressure Elevatio	
x (<u>-)0.43</u> psig/ft = <u>- 3.9</u> Main Steam Header Pressure Elevatio	
x (<u>-)0.43</u> psig/ft = <u>- 3.9</u> Main Steam Header Pressure Elevatio	

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				Attachn	ient 8					
		1	Test Data S	heet Using Dres		66 Hydros	et			
	AW0#: ma	204 05	737	(Sheet 1	of 1)	Valv	e ID# 2–M	s- 24	!	_
		(Blank copies	of Attachment 8 m	ay be reproduce	d as necess	ary)	07	198 1	छ
Hyd	roset Correctio	n calculatio	n based on H	eader Pressure of ((854)ps	ig using Hy	droset QA	No. (HS	-297).
			Test Da	ta			Val	ve Adjustn	ents After	Test
Step 4.5.15.d.1)	Step 4.5.15.d.3)	Step 4.5.16.c.2)	Step 4.2.3.g.	Step 4.3.9.c.	Step 4.5.15.d.3)	Step 4.5.16.d.	Step 4.5.19.b.		Step 4.5.20.a.	
Test No.	Hydroset		illydroset /	Mathusteamere	Steam Header f	Valve Set	No		Yes	
& Time	Pressure (psig)	Influence	- Influence Correction	Header Pressure	Pressure ic (s(psig))	Pressure (psig)	Initial	Initial	CW or CCW	No. of Flats
1. 1027	627	195.6	94	-3.9	854	1044.8	143			
2. IPYO	516	160.98	94	- 3.9	95Y	1010.1	407			
3. 1045	509.6	159	94	-3.9	854	1008.1	07			├
J.				,						├────
6.										
7.										
8.						<u>.</u>	 			<u> </u>
9.		ļ					ļ			<u> </u>
10. 11.						<u> </u>	<u> </u>			├
l				l <u></u>	l	1	[└──────────────────────────────
"As Left" Lea	ak Tightness 2	KSAT DU	JNSAT				<u> </u>			
 Hydr Hydr Hydr be co 	mpleted prior to a	Hydroset Pres ust be calculated and the calculated by the calculat	ssure (PSIG) x ated from Corr of test. Hydrose		e expressed as a (-	+) or (-) val	ue in gradu:	tions of Hy	ation should droset Influe	ence.
r	ofUse				Å Å			S	SP 2730B	
	tinuous		*: ;;	TOP' THINK	ACT REV	еw %		-	Rev. 012-0 3 of 61)1
		- , , , , ,	`							

hydroset level differential 20 "

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					ment 7			
			Hydros			lculation		
				(Sheet	t 1 of 1)			
				-	_		- 047)
	AWO#:		4.0523	.			115- <u>27-</u> 3	<u></u> _
			pies of Attac			eproduced as n	======================================	
Hydroset QA No.	(219	3)		·		Hydrose	et Serial No. #S-S	47)
<u>1035</u> ps	ig MSSV	/ Set Pre	essure (Ste	p 4.2.3.a.)	•			
- <u>854 p</u> s	ig Stean	n Header	Pressure	(Step 4.2.1)				
= <u>181 H</u>	ydroset Ir	nfluence	(Step 4.2.3	3.b.) ÷ 0.31	12 =	580.		
					<u> </u>	Expected Hy	droset Pressure	e (Step 4.2.3.c
							(Step 4.2.3.d.1))
- <u>587</u> ps	ig Appli	ed Pump	Pressure	from Hydro	oset Correc	tion Chart (Step 4.2.3.d.2)	
						+/_)-,94		
						Hydr Corre	oset Influence	(Step 4.2.3.1
0.00						_		
<u>9.08</u> ft					ader press	ure instrume	nt centerline to	highest point
	in sen		erence from (Step 4.3.		ader press	are instrume	nt centerline to	highest point
<u>9.08</u> ft x <u>(-)0.43</u> ps	in sen sig/ft	ising line	(Step 4.3.)	9.a.)	-			highest point
x <u>(-)0.43</u> ps = <u>-3.9</u>	in sen sig/ft	ising line	(Step 4.3.)	9.a.)	-	are instrumes		highest point
x <u>(-)0.43</u> ps = <u>-3.9</u>	in sen sig/ft	ising line	(Step 4.3. Header Pre	9.a.)	-	ction (Step 4		highest point 5^{\prime}
	in sen sig/ft Main	ising line	e (Step 4.3. Header Pre	9.a.) ssure Eleva	tion Corre	ction (Step 4		highest point
x <u>(-)0.43</u> ps = <u>-3.9</u>	in sen sig/ft Main	ising line	e (Step 4.3. Header Pre	9.a.) ssure Eleva	tion Corre	ction (Step 4		highest point
x <u>(-)0.43</u> ps = <u>-3.9</u>	in sen sig/ft Main	ising line	e (Step 4.3. Header Pre	9.a.) ssure Eleva	tion Corre	ction (Step 4		highest point
x <u>(-)0.43</u> ps = <u>-3.9</u>	in sen sig/ft Main	ising line	e (Step 4.3. Header Pre	9.a.) ssure Eleva	tion Corre	ction (Step 4		highest point
x <u>(-)0.43</u> ps = <u>-3.9</u>	in sen sig/ft Main	ising line	e (Step 4.3. Header Pre	9.a.) ssure Eleva	tion Corre	ction (Step 4		highest point
x <u>(-)0.43</u> ps = <u>-3.9</u>	in sen sig/ft Main	ising line	e (Step 4.3. Header Pre	9.a.) ssure Eleva	tion Corre	ction (Step 4		highest point
x <u>(-)0.43</u> ps = <u>-3.9</u>	in sen sig/ft Main	ising line	e (Step 4.3. Header Pre	9.a.) ssure Eleva	tion Corre	ction (Step 4		5% 79
x <u>(-)0.43</u> ps = <u>-3.9</u>	in sen sig/ft Main	ising line	e (Step 4.3. Header Pre	9.a.) ssure Eleva	tion Corre	ction (Step 4		5% 79
x <u>(-)0.43</u> ps = <u>-3.9</u>	in sen sig/ft Main	ising line	e (Step 4.3. Header Pre	9.a.) ssure Eleva	tion Corre	ction (Step 4		5% 79
x <u>(-)0.43</u> ps = <u>-3.9</u>	in sen sig/ft Main	ising line	e (Step 4.3. Header Pre	9.a.) ssure Eleva	tion Corre	ction (Step 4		5% 79
x <u>(-)0.43</u> ps = <u>-3.9</u>	in sen sig/ft Main	ising line	e (Step 4.3. Header Pre	9.a.) ssure Eleva	tion Corre	ction (Step 4		5% 79
x (<u>-)0.43 ps</u> = <u>-3.9</u> Comments:	in sen sig/ft Main	Steam F	e (Step 4.3. Header Pre	9.a.) ssure Eleva	tion Corre	ction (Step 4		5 <i>%</i> 74

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				Attachn	ient 8				•	
		4	Test Data S	heet Using Dres		66 Hydros	et			
	AWO#: <u>M2</u>	04052	<u>3</u> 7 ·	(Sheet 1	of 1)	Valve	ID# 2-M	s- <u>24</u>	3	_
		()	Blank copies	of Attachment 8 m	ay be reproduce	d as necessa	ary)			
Hyd	roset Correction	n calculatio	n based on H	eader Pressure of (854) ps	ig using Hy	droset QA	No. (2198)
			Test Da	ta			Val	ve Adjustn	nents After	Test
Step 4.5.15.d.1)	Step 4.5.15.d.3)	Step 4.5.16.c.2)	Step 4.2.3.g.	Step 4.3.9.c.	Step 4.5.15.d.3)	Step 4.5.16.d.	Step 4.5.19.b.		Step 4.5.20.a.	
Test No.	Hydroset		Itydroset	Math Sizan 4	Steam Header	Valve Set	· No		Yes	
& Time	Pressure (psig)	Influence	Influence. Correction	Leaden ressure	(g (psig)	Pressure (psig)	Initial	Initial	CW or CCW	No. of Flats
1. il 45	603.7	188.4	94	8-3,9	852	1035£	TRE			
2. 1157	472.8	147,5	94	-3.9	853	995.7	TRI			
3.1158	5112	159.5	4Y	-3.9	853ps	1007.6	 	TRI.	$c\omega$	2
1270		174.6	9Ÿ	- 3.1	954	1023.8	w	WS	cw	
1232	596.99	181.3	94	-3.9	<u>\$54</u>	1035.4	w	ļ		
6. 12 40	611.63	190.8	94	- 3.9	452	103B	Ŵ3			
7. 8.										
9.					·	·		┦────		
10.	i									
11.	·									
}	ak Tightness 🔊	SAT DI	I JNSAT	L		l		1	I	·[]]
Notes: 1. Set P 2. Hydr 4. Hydr be co	Pressure = The sur roset Influence = 1 roset Correction m completed prior to p	n of the high Hydroset Pre- just be calculated	ighted columns ssure (PSIG) x ated from Corro of test, Hydrose		e expressed as a (.	+) or (-) valu	ie in gradu:	ations of Hy	ation should droset Influe	nce.
	l of Use tinuous		-194	TOP THINK	AOT AEV	iew ą	•	J	SP 2730B Rev. 012-0 53 of 61	1
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			Attachm	ent 7		
		Hydro	set Correcti	on Calculation		
			(Sheet 1	of 1)		
					- (1)	1.
		<u>n204052</u>		Valve ID# 2-		P
	(B	lank copies of Atta	achment 7, Sheet 1	may be reproduced as a	ecessary)	
Hydroset QA No. (2198	")		Hydros	et Serial No. (547)
<u>/020</u> psi	g MSSV S	et Pressure (Ste	ep 4.2.3.a.)			
- <u>854 psi</u>	g Steam H	leader Pressure	: (Step 4.2.1)		-	
= <u>166</u> Hy	droset Influ	ience (Step 4.2	.3.b.) ÷ 0.312		.05	
				Expected H	ydroset Pressu	are (Step 4.2.3.c.)
<u>530 psi</u>	g Require	d Pump Pressu	re from Hydros	et Correction Char	(Step 4.2.3.d.	1)
_ <u>533</u> psi	g Applied	Pump Pressure	e from Hydrose	t Correction Chart (Step 4.2.3.d.2)
				0.312= (+/_)	94	
1				Hyd	roset Influence ection	e (Step 4.2.3.f.)
····	•		<u> </u>			
<u> </u>	Elevatio	n difference fro	m steam heads	ar pressure instrume	nt centerline	to highest point
	in consis	a ling (Stop 1 2		or pressure matum		in month Point
	in sensin	ig line (Step 4.3	9.9.a.)	er pressure mstrume		
	in sensin	ig line (Step 4.3	8.9.a.)	er pressure instrume		
	in sensin g/ft	ng line (Step 4.3	3.9.a.)	n Correction (Step		
x <u>(-)0.43</u> psi =_ <u></u>	in sensin g/ft	ng line (Step 4.3 eam Header Pr	8.9.a.) essure Elevatio	-	4.3.9.b.)	
x <u>(-)0.43</u> psi = <u>```.9</u>	in sensin g/ft Main Ste	eam Header Pr	essure Elevatio	-		
x <u>()0.43</u> psi =_ <u>``3_9_</u>	in sensin g/ft Main Ste	eam Header Pr	8.9.a.) essure Elevatio	-	4.3.9.b.)	
x <u>()0.43</u> psi =_ <u>~</u>	in sensin g/ft Main Ste	eam Header Pr	essure Elevatio	-	4.3.9.b.)	
x <u>()0.43</u> psi =_ <u>~</u>	in sensin g/ft Main Ste	eam Header Pr	essure Elevatio	-	4.3.9.b.)	· · · · · · · · · · · · · · · · · · ·
x <u>()0.43</u> psi =_ <u>~</u>	in sensin g/ft Main Ste	eam Header Pr	essure Elevatio	-	4.3.9.b.)	· · · · · · · · · · · · · · · · · · ·
x <u>()0.43</u> psi =_ <u>~</u>	in sensin g/ft Main Ste	eam Header Pr	essure Elevatio	-	4.3.9.b.)	· · · · · · · · · · · · · · · · · · ·
x <u>(-)0.43</u> psi =_ <u></u>	in sensin g/ft Main Ste	eam Header Pr	essure Elevatio	-	4.3.9.b.)	· · · · · · · · · · · · · · · · · · ·
x <u>(-)0.43</u> psi =_ <u></u>	in sensin g/ft Main Ste	eam Header Pr	essure Elevatio	-	4.3.9.b.)	· · · · · · · · · · · · · · · · · · ·
x <u>()0.43</u> psi	in sensin g/ft Main Ste	eam Header Pr	essure Elevatio	-	4.3.9.b.)	· · · · · · · · · · · · · · · · · · ·
x <u>(-)0.43</u> psi =_ <u></u>	in sensin g/ft Main Ste	eam Header Pr	essure Elevatio	-	4.3.9.b.)	· · · · · · · · · · · · · · · · · · ·
x <u>()0.43</u> psi =_ <u></u>	in sensin g/ft Main Ste	eam Header Pr	essure Elevatio	-	4.3.9.b.)	· · · · · · · · · · · · · · · · · · ·
x <u>()0.43</u> psi =_ <u></u>	in sensin g/ft Main Ste	eam Header Pr	essure Elevatio	-	4.3.9.b.)	· · · · · · · · · · · · · · · · · · ·
x (<u>-)0.43</u> psi = <u>3-7</u> Comments:	in sensin g/ft <u> </u>	eam Header Pr	essure Elevatio	-	4.3.9.b.)	
x (<u>)0.43</u> psi =_ <u></u> Comments:	in sensin g/ft Main Ste	eam Header Pr	essure Elevatio	-	4.3.9.b.) <u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u>	30B 012-01

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				Attachn						
				heet Using Dres		56 Hydros	et			
	AWO#: M			(Sheet 1	•			s- 24	ľ	_
		(Blank copies	of Attachment 8 m	ay be reproduce	d as necessa	ary)			
Hyd	roset Correctio	n calculatio	n based on H	eader Pressure of (854)ps	ig using Hy	droset QA	No. (O	U98)
			Test Da	ta			Val	ve Adjustn	ents After	Test
Step 4.5.15.d.1)	Step 4.5.15.d.3)	Step 4.5.16.c.2)	Step 4.2.3.g.	Step 4.3.9.c.	Step 4.5.15.d.3)	Step 4.5.16.d.	Step 4.5.19.b.		Step 4.5.20.a.	
	Hydroset		Altvaroset 2	CMain Sleam 1.	VSleam Header	Valve Set	·No	1	Yes	
Test No. & Time	Pressure (psig)	Influence	Influence Correction	Main Steam Deaden Pressure Correction	Pressure of	Pressure (psig)	Initial	Initial	CW or CCW	No. of Flats
1. 11.1	528.2	114.8	79¥	- 3.9	854	1013 104	ux			
2. 1119	518.2	141-7	94	-3.1	254 854	1010.8	U\$			
3.		<u> </u>						<u> </u>		
		ļ								
 6.										
o. 7.								<u> </u>		
<u>7.</u> 8.								{		
9.			<u> </u>		·	·				
10.		1								
11.							· · · · · · · · · · · · · · · · · · ·			
"As Left" Lea	ak Tightness 🛛 🖉	SAT DI	JNSAT	•		······	•	•		1
 Hydr Hydr Hydr be co 	mpleted prior to	Hydroset Pre- nust be calcula performance	ssure (PSIG) x ated from Corre of test. Hydrose		e expressed as a (-	+) or () val	ue in gradu	ations of Hy ugh.	ation should droset Influ SP 2730B	ence.
	l of Use tinuous			TOP THINK	ACT REV	ÉM		I	Rev. 012–(63 of 61)1

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Hydroset Correcti (Sheet 1	
AWO#: 112-04-05237	Valve ID# 2-MS- <u>248</u>
(Blank copies of Attachment 7, Sheet 1	1 may be reproduced as necessary)
Hydroset QA No. (ME 021917)	Hydroset Serial No. ($9236-2$)
<u>1035</u> psig MSSV Set Pressure (Step 4.2.3.a.)	
- <u>859</u> psig Steam Header Pressure (Step 4.2.1)	
= <u>176</u> Hydroset Influence (Step 4.2.3.b.) \div 0.312	= <u>564.1</u> Expected Hydroset Pressure (Step 4.2.3.
<u>565</u> psig Required Pump Pressure from Hydros	set Correction Chart (Step 4.2.3.d.1)
- <u>576</u> psig Applied Pump Pressure from Hydrose	
= <u>-5</u> psig Hydroset Correction (Step 4.2.3.e.) x (0.312 = (+/-)/.6 Hydroset Influence (Step 4.2.3.) Correction
<u>10.9</u> ft Elevation difference from steam head in sensing line (Step 4.3.9.a.)	
x (-)0.43_psig/ft = <u>-4.7</u> Main Steam Header Pressure Elevation	on Correction (Step 4.3.9.b.)
	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevation	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevation	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevation	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevation	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevation	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevation	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevation	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevation	on Correction (Step 4.3.9.b.)

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			Test Data S	Attachn						
	AWO#: <u>M2</u>	-04-05	237	heet Using Dres (Sheet 1 of Attachment 8 m	of 1)	Valve	ID# 2-M	s- <u>248</u>		-
Hyd	roset Correctio	n calculatio	n based on H	eader Pressure of (859) psi	ig using Hy	droset QA	No. (MA	= 02/91	,)
			Test Da	ta			Valu	re Adjustn	nents After	Test
Step 4.5.15.d.1)	Step 4.5.15.d.3)	Step 4.5.16.c.2)	Step 4.2.3.g.	Step 4.3.9.c.	Step 4.5.15.d.3)	Step 4.5.16.d.	Step 4.5.19.b.		Step 4.5.20.a.	
Test No.	llydroset		- Indine fi	Monstein	Steam Lleader	Valve Set	No	<u> </u>	Yes	
& Time	Pressure (psig)	linfluence	Influence + Correction	Hender Pressure	ry Pressure	Pressure (psig)	Initial	Initial	CW or CCW	No. of Flats
1. 1126	510.6	159.3	-1.6	-4.7	860	1013.0	203			
2. 1132	525,3	163.9	-1.6	-4,7	860	1017,6		BOB	ew	2.5
3. 1155	546.3	170.4	-1.6	-4.7	860	1024.1		gs-	cw	_ /
1208	562.3	175.4	-1.6	-4,7	860	1029.1	2a			<u> </u>
5. 1216 6.	560.7	174.9	-1.6	-4.7	860	1028.4	792	 		↓ ∥
6. 7.										↓
7. 8.		 	~							{
o. 9.										┼────┤
9. 10.								{	{	∤
11.										↓
"As Left" Lea	k Tightness N		I JNSAT	l	l	I	I	J	l	·
Notes: 1. Set P 2. Hydr 4. Hydr be co	ressure = The sur oset Influence = roset Correction n ompleted prior to	m of the high Hydroset Pre- nust be calcular performance	ighted columns ssure (PSIG) x ated from Corro of test. Hydrose		e expressed as a (-	+) or (-) val	ue in gradu:	ations of Hy	lation should droset Influ	l ence.
	l of Use tinuous		10 A	TOP THINK	ACT HEV	EW 1		I	SP 2730B Rev. 012-(53 of 61)1

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Attachn Hydroset Correct (Sheet 1	ion Calculation
AWO#: <u>M2-04-05237</u> (Blank copies of Attachment 7, Sheet	Valve ID# 2-MS- <u>250</u> 1 may be reproduced as necessary)
Hydroset QA No. (MIZ-02197)	Hydroset Serial No. ($Y - 23L - 2$)
_/030_psig_MSSV Set Pressure (Step 4.2.3.a.)	
- <u>859</u> psig Steam Header Pressure (Step 4.2.1)	
= $\frac{17}{1}$ Hydroset Influence (Step 4.2.3.b.) $\div 0.312$	$2 = \frac{548.0}{\text{Expected Hydroset Pressure}}$ (Step 4.2.3.c
<u>550</u> psig Required Pump Pressure from Hydro	oset Correction Chart (Step 4.2.3.d.1)
- <u>555</u> psig Applied Pump Pressure from Hydros	et Correction Chart (Step 4.2.3.d.2)
= <u>5</u> psig Hydroset Correction (Step 4.2.3.e.) x	$0.312 = (+/-) \frac{-/.6}{\text{Hydroset Influence}} \text{(Step 4.2.3.f} \\ \text{Correction}$
x <u>(–)0.43</u> psig/ft	
x (<u>-)0.43</u> psig/ft = <u>-4.7</u> Main Steam Header Pressure Elevati Comments:	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevati	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevati	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevati	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevati	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevati	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevati	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevati	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevati	on Correction (Step 4.3.9.b.)
= <u>-4.7</u> Main Steam Header Pressure Elevati	
= <u>-4.7</u> Main Steam Header Pressure Elevati	on Correction (Step 4.3.9.b.)

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			Test Data S	Attachm heet Using Dres		66 Hydros	et			
	AWO#: <u>M2</u>	04-05	237	(Sheet 1) of Attachment 8 m	of 1)	Valve	ID# 2-M	s- <u>25(</u>	D	-
Hyd	roset Correctio			eader Pressure of (ig using Hy		No. (11/4	5-0219	77)
			Test Da			8 8 7			ents After	
Step 4.5.15.d.1)	Step 4.5.15.d.3)	Step 4.5.16.c.2)	Step 4.2.3.g.	Step 4.3.9.c.	Step 4.5.15.d.3)	Step 4.5.16.d.	Step 4.5.19.b.		Step 4.5.20.a.	
Test No.	Hydroset	Livitoset	liydroset	Montsleim	Scan Header	Valve Set	No		Yes	
& Time	Pressure (psig)	sipfluence	Lafigence : Correction	Lleader Pressure	Pressure (slpsig) - ri	Pressure (psig)	Initial	Initial	CW or CCW	No. of Flats
1. 1008	593.4	185.1	-1.6	-4.7	861	1039.8	ger.			
2. 1018	510.2	159.2	-1.6	-4.7	861	1013,9	XB.	<u> </u>		
3.1025	488,2	152.3	-1.6	-4.7	861	1007.0		XD-	cw	3
1101	541.3	168,9	-1.6	-417	860	1023.0	N2	 		
5. <i>1109</i> 6. 7.	547.0	170.7	-1.6	-4.7	860	1024,4	83			
0. 7		┦────								
8.										
<u> </u>		┨─────		·		}·		}		<u>├</u>]
9. 10.						{				
11.		<u> </u>								
"As Left" Le	1Ar Tightness	SAT DI	I JNSAT	l		1	ł	I	I	┖
Notes: 1. Set F 2. Hyda 4. Hyda be co	Pressure = The su roset Influence = roset Correction r completed prior to	m of the highl Hydroset Pre- nust be calcula performance	ighted columns ssure (PSIG) x ated from Corr of test. Hydroso		e expressed as a (+) or (-) val	ue in gradu	ations of Hy	ation should droset Influe	snce.
Leve	l of Use tinuous			TOF THIR	The Hel	jew V		2 2 1	SP 2730B Rev. 012–0 53 of 61)1

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Attachmen	.t 7
Hydroset Correction	
(Sheet 1 of 1	
AWO#: <u>M2-04-052</u> 37	Valve ID# 2-MS- 254
(Blank copies of Attachment 7, Sheet 1 ma	y be reproduced as necessary)
Hydroset QA No. (MIZ 02197)	Hydroset Serial No. (4236-2)
990 psig MSSV Set Pressure (Step 4.2.3.a.)	
- <u>860</u> psig Steam Header Pressure (Step 4.2.1)	
$= \frac{130}{130}$ Hydroset Influence (Step 4.2.3.b.) $\div 0.312 =$	<u>416.7</u> Expected Hydroset Pressure (Step 4.2.3.c.)
<u></u>	Correction Chart (Step 4.2.3.d.1)
- 420 psig Applied Pump Pressure from Hydroset C	orrection Chart (Step 4.2.3.d.2)
= -5 psig Hydroset Correction (Step 4.2.3.e.) x 0.31	2= (+/_)/.6
	Hydroset Influence (Step 4.2.3.f.) Correction
<u>10, 9</u> ft Elevation difference from steam header p in sensing line (Step 4.3.9.a.)	pressure instrument centerline to highest point
(<u>-)0.43</u> psig/ft	
$= - \frac{4.7}{100}$ Main Steam Header Pressure Elevation C	Correction (Step 430 b)
Comments:	
<u> </u>	
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Level of Use	SP 2730B Rev. 012-01

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