

# ISOPLAN - PSV Software

Calibration Management PSV Station

## Main Screens Presentation

# Register of Valve

The screenshot shows a software window titled "Instruments" with a menu bar (Main, Settings) and a toolbar (New, Save, Delete, Cancel, Copy, Paste, Edit, Close, Help). Below the toolbar is a "Registered Instruments" section with a dropdown menu showing "CRN 06715550" and a camera icon. The main area has three tabs: "Register" (selected), "Data Sheet", and "Photo". The "Register" tab contains several fields:

REG. NUMBER	Instrument Type	
CRN 06715550	SAFETY VALVE	
Manufacturer Serial Number	Manufacturer	
	HANSEN USA	
Model	Tags (Read Only)	
H5600A GA	PSV-1231004	
Scales		
<input type="checkbox"/> Inactive	<input type="checkbox"/> In Maintenance	<input type="checkbox"/> Reserve

Registration Valve Serial number, Manufacturer, Model...

# Register of Valve

The screenshot shows the 'Instruments' software window. The 'Registered Instruments' dropdown is set to 'CRN 06715550'. The 'Register' tab is active, and the 'Fixed Assets' dropdown is selected. Below the dropdown is a table with the following data:

property	Value
Fixed Assets	N/A
Input Connections	2 1/2"
Output Connection	3"
Threaded or Flanged Connection	FLANGED
Fluid	AIR
Body Material	STEEL
Disco Material	STAINLESS STEEL
Pressure Class	150#
Manufacturing Standard	ASME VIII
Hole	F

Valve Data Sheet info

# Register of Valve

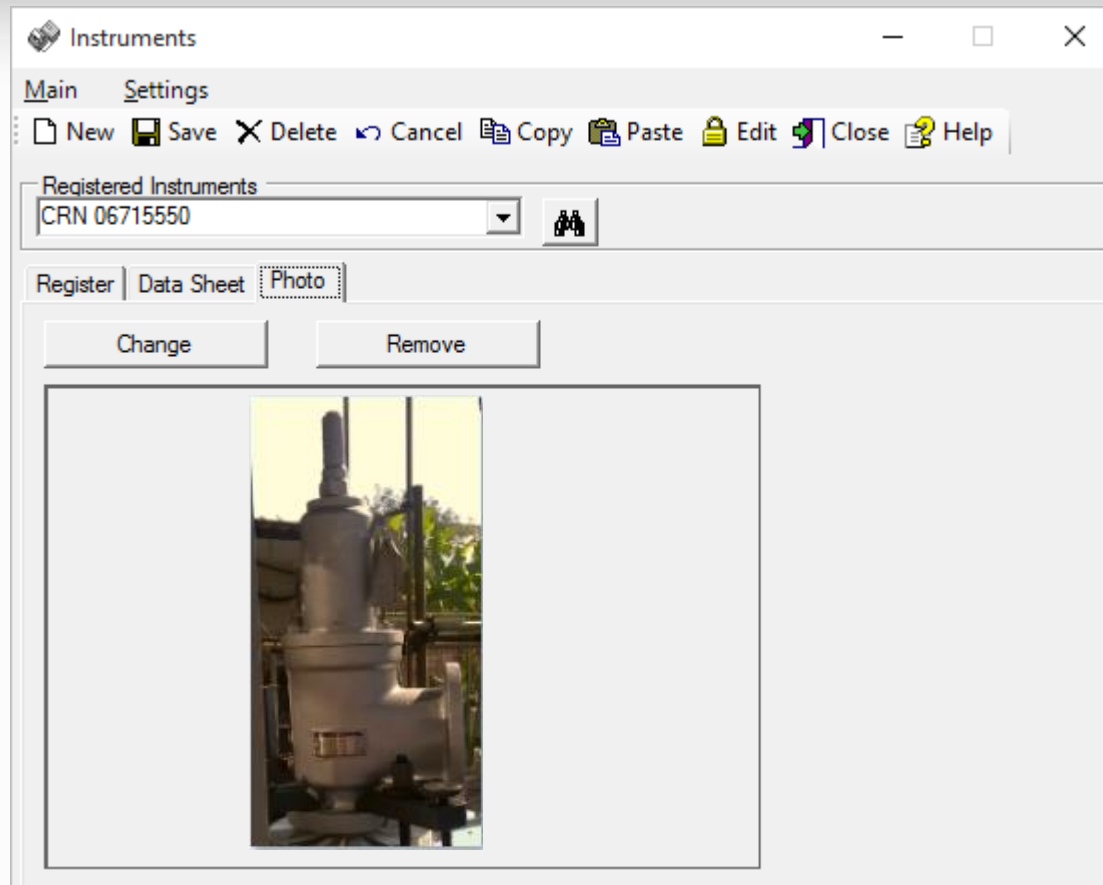


Photo of Valve

# Register of TAG

The screenshot displays the 'Tags' application window with the following details:

- Registered Tags:** PSV-1231004
- SECTOR:** \PLANT A\BOILER 1
- Tag Information:**
  - Tag Name: PSV-1231004
  - Cal./Verif.: Calibration
  - Criticality: SECURITY
  - Instrument: CRN 06715550
  - Inactive
- Function / Interval:** Instrument | Calibration | Strategy | Operation Conditions | Photo | Create Calibration
- Period:** 12 Months (with Calculate button)
- Last:** 18/09/2015 09:05:55
- Next:** 18/09/2016
- Function:** BOILER PROTECTION
- Procedure:** P-CO-04 Procedure of Calibration/Re Calibration of PSV

Main Tag information of valve in the process

# Register of TAG

The screenshot shows a software window titled 'Tags' with a menu bar (Main, Reports) and a toolbar (New, Save, Delete, Cancel, Copy, Paste, Edit, Close, Help). The interface is divided into several sections:

- Registered Tags:** A dropdown menu showing 'PSV-2112'.
- Client:** A dropdown menu showing 'Newcrest Lihir Island'.
- Area:** A dropdown menu showing '\1. Berg calibrations'.
- Tag Details:**
  - Tag Name: PSV-2112
  - Cal./Verif.: Calibration
  - Criticality: A
  - Instrument: BERG PSV001
  - Inactive
- Function / Interval | Instrument | Calibration | Strategy | Photo | Create Calibration** (tabbed interface)
- Reference:** An empty text box.
- Scale:**
  - Scale: Pressure PSV-psi
  - Min: 0 to Max: 9999999.9
  - Dec: 0 to 80
  - Man 1
- Options Presys Calibrators:**
  - Sensor P1: None

Calibration Range

# Register of TAG

The screenshot shows the 'Tags' software interface with the following details:

- Client:** Newcrest Lihir Island
- Area:** \1. Berg calibrations
- Criticality:** A
- Instrument:** BERG PSV001
- Inactive

Navigation tabs: Function / Interval | Instrument | Calibration | Strategy | Photo | Create Calibration

**Calibration Points:**

PSV Insert 2 Points  
Min = Reseat  
Max = Set

	Value (psi)	Accept. Crit. (psi)	
▶	60	6	Reseating
	70	2	Set

**Calibration Settings:**

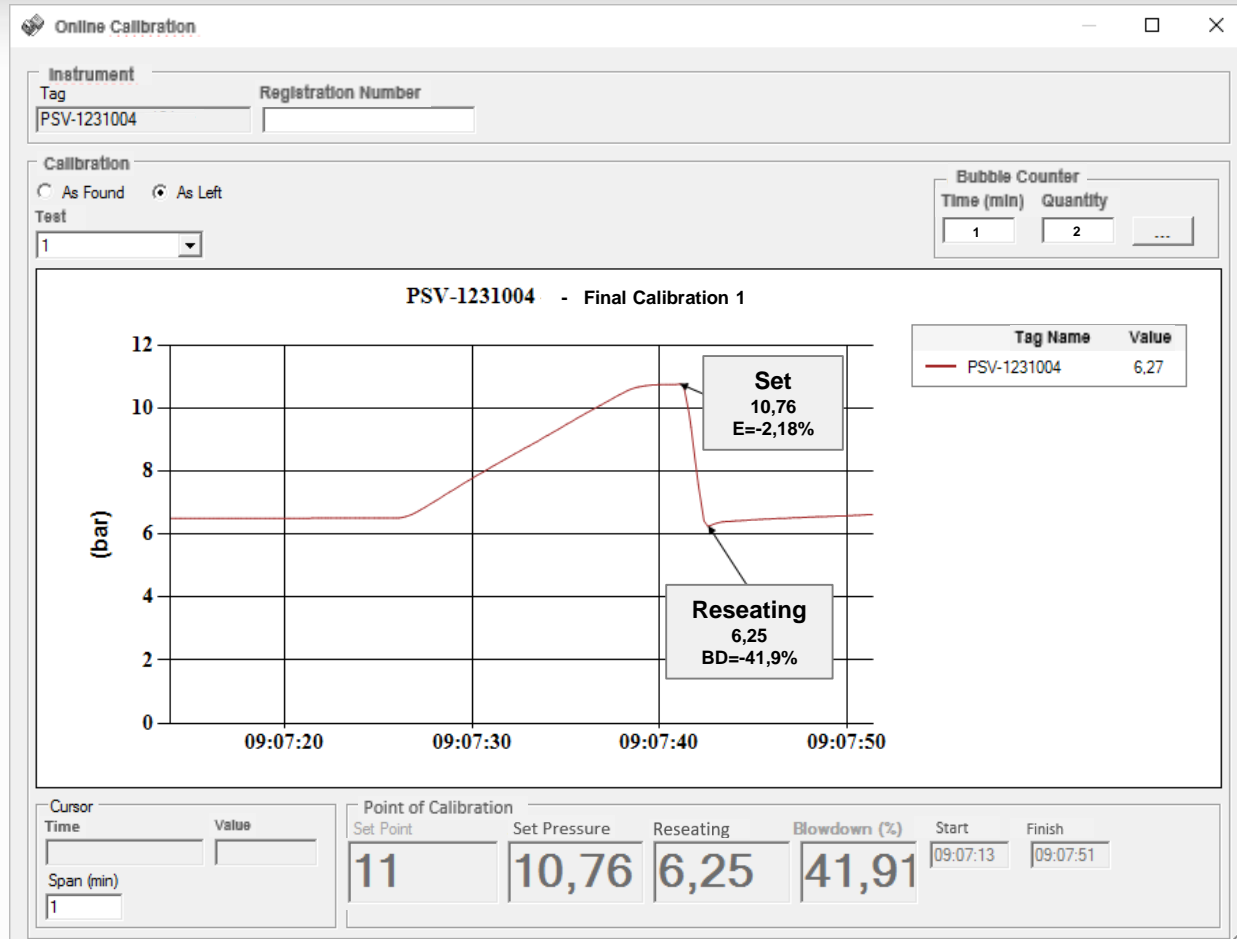
- Compensate Standard Error
- Valve Type:** Safety Valve
- Observation:** [Empty field]

**Accept. Crit.:** Error Plus Uncertainty

**Auxiliary Calculation:** ASME Section VIII (Gas) Constant  
0 (%) Reading (+) 0 Calculate

Calibration Set Points, Strategy and Acceptance Criteria

# Online Acquisition



Online Acquisition during calibration



# Results Analysis

Calibrations Results - Tag

Main Report

Save Delete Cancel Edit Close Help

Tag: PSV-1231004 Registration N.: CRN 06715550

Tags Strategy Environment / Settings Photos Diagnosis Signatures

Strategy: 1 Strategy:1 Pressure PSV 0 to 11 (bar) => Pressure PSV 0 to 11 (bar)

Values Standards / Operation Diagnosis Observations PSV

Point	Calibration	Reference	Corr. Cal.	Corrected Ref.	Value	Error
1	6,50	6,50	6,50	6,50	6,25	-0,25
2	11,00	11,00	11,00	11,00	10,76	-0,24
3	6,50	6,50	6,50	6,50	6,06	-0,44
4	11,00	11,00	11,00	11,00	10,74	-0,26
5	6,50	6,50	6,50	6,50	6,16	-0,34
6	11,00	11,00	11,00	11,00	10,74	-0,26

As Found (Initial)  As Left (Final)

Calibration Logger

It is not allowed to change data

# Results Analysis

Values | Standards / Operation | Diagnosis | Observations | PSV

<b>Initial Diagnosis</b> <input type="radio"/> No Diagnosis <input type="radio"/> Approved <input checked="" type="radio"/> Reproved	<b>Final Diagnosis</b> <input type="radio"/> No Diagnosis <input checked="" type="radio"/> Approved <input type="radio"/> Reproved	<b>Settings</b> <input type="checkbox"/> Correct Standards <input checked="" type="checkbox"/> Show Initial <input type="checkbox"/> Insert page break before of the strategy Acceptance Criteria Type Only Error  No Scheduling
<b>Errors Initial Calibration</b> Accept. Crit. 0,3 bar Max (U +  E ) 0,6 bar Max (E) -0,5 bar	<b>Errors Final calibration</b> Accept. Crit. 0,3 bar Max (U +  E ) 0,5 bar Max (E) -0,3 bar	

Tags | Strategy | Environment / Settings | Photos | Diagnosis | Signatures

Strategy 1 **Strategy:1 Pressure PSV 0 to 11 (bar) => Pressure PSV 0 to 11 (bar)**

Values | Standards / Operation | Diagnosis | Observations | PSV

**Observations**  
- Used Norm: ASME VIII (Gas)

# Results Analysis

Values | Standards / Operation | Diagnosis | Observations | PSV

Services Performed

Service	Description
PARTS REPLACED	SEATS
SEAT	GRINDING, LAPPING
STEM	POLISHED
CLEANING	SOLVENT, SANDBLASTED
PAINTING	SILVER
NOZZLE	MACHINED,
SPRING	VERIFIED
UPPER SEALING	SEALED
▶ LOWER SEALING	SEALED

Valve Tests

Leakage  
LEAKING (in Initial Test)

Internal State  
GOOD

Stem Displacement  
GOOD

Nom  
ASME Section VIII (Gas)

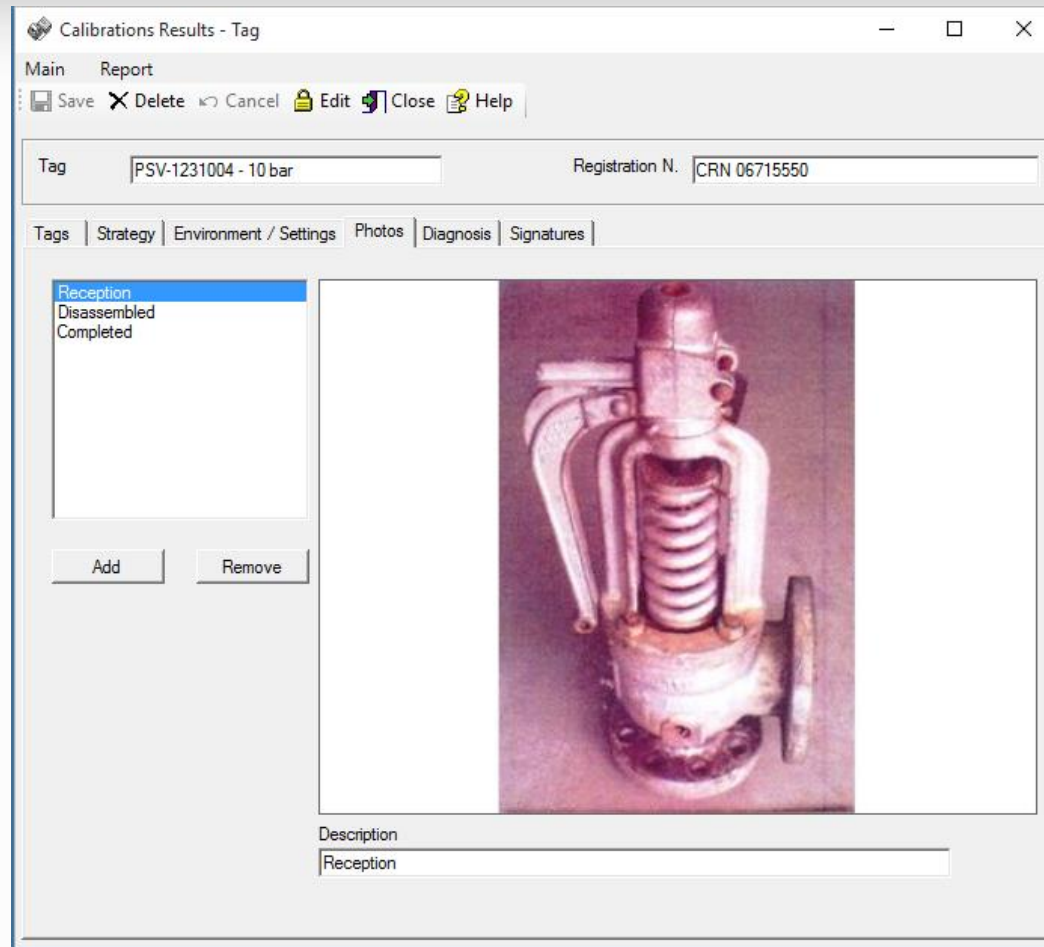
Valve Type  
Security Valve

Sealing Test

Fluid Air	Number of Bubbles 2	Duration Minutes 1
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Addition of extra information for the certificate( API 527)

# Results Analysis




Addition of photos at reception of valve

# Results Analysis

Tags | Strategy | Environment / Settings | Photos | Diagnosis | Signatures

Reception  
Disassembled  
Completed

Add Remove



Description  
Disassembled

The image shows a software interface for equipment management. At the top, there are navigation tabs: 'Tags', 'Strategy', 'Environment / Settings', 'Photos', 'Diagnosis', and 'Signatures'. On the left, a list of status options includes 'Reception', 'Disassembled' (which is highlighted in blue), and 'Completed'. Below this list are two buttons: 'Add' and 'Remove'. The main area of the interface is a large photograph showing a disassembled valve and its various components, including a large metal body, a handle, and several small parts, laid out on a wooden surface. Below the photograph is a 'Description' field containing the text 'Disassembled'.


Addition of photos: disassembled valve

# Results Analysis

Tags | Strategy | Environment / Settings | Photos | Diagnosis | Signatures

Reception  
Disassembled  
Completed

Add Remove



Description  
Completed

The image shows a software interface for photo management. At the top, there are navigation tabs: 'Tags', 'Strategy', 'Environment / Settings', 'Photos', 'Diagnosis', and 'Signatures'. On the left side, there is a list of tags: 'Reception', 'Disassembled', and 'Completed', with 'Completed' selected and highlighted in blue. Below this list are two buttons: 'Add' and 'Remove'. The main area of the interface is a large white rectangle containing a photograph of a silver metal valve assembly. The valve has a vertical stem with a handle and a flanged base. A red date stamp '26 2 2008' is visible in the bottom right corner of the photo. Below the photo, there is a 'Description' field containing the text 'Completed'.

Addition of photos: Final

# Results Analysis

Tags | Strategy | Environment / Settings | Photos | Diagnosis | Signatures

Failures

Add Remove

- 104-Valve Cleaning and Adjust
- 105-Lapping

Initial Diagnosis

No Diaq.  
 Approved  
 Reproved

Final Diagnosis

No Diaq.  
 Approved  
 Reproved

Maintenance

Preventive  
 Corrective  
 Not Authorized

Comments

Used Norm: ASME VIII (Gas)

Tags | Strategy | Environment / Settings | Photos | Diagnosis | Signatures

Signatures / Certificate Number

Operator

Sandeep Sign

Responsible

Sandeep Sign

Certificate Number


6/2016


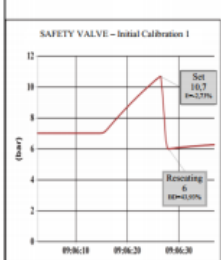
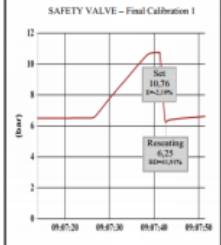
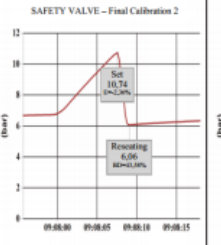
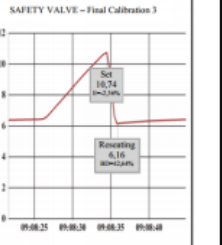
Correct

Corrections

Diagnosis, Maintenance Type,  
Electronic Signatures of Executant and Responsible


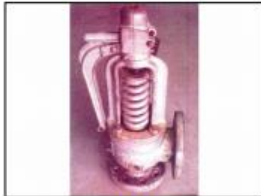




# Calibration Certificate

 <b>Calibration Certificate</b> N.: 5/2016										
COMPANY: RELIANCE INDUSTRIES LIMITED INSTRUMENT: SAFETY VALVE FUNCT.: BOILER PROTECTION SECTOR: PLANT ABOILER 1 CRITICALITY: SECURITY O.S.: SAP004										
REG. NUMBER: CRN 06715550 TAG: PSV-1231004 - 10 bar CALIBRATION PERIOD: 12 Months PROC.: P-CO-04										
PROCESS OPERATION INFORMATION										
Associated Equipment: B-403	Operating Temperature: Not Informed									
Operating Pressure: Not Informed	PMTP: Not Informed									
INSTRUMENT SPECIFICATION										
Manufacturer: HANSEN USA	Fluid: AIR									
Model: HANSEN USA	Body Material: STEEL									
Fixed Asset: N/A	Seat Material: STAINLESS STEEL									
Input Connection: 2 1/2"	Pressure Class: 150#									
Output Connection: 3"	Manufacturing Standard: ASME VIII									
Threaded or Flanged Connection: FLANGED	Hoic: F									
CALIBRATION AND ADJUSTMENT										
INITIAL CALIBRATION										
	Reference (bar)	Reading 1 (bar)	Average (bar)	Error (bar)	Blowdown (%)	U (bar)	k	Accp. Crt. (bar)		
SET PRESSURE	11,00	10,70	10,70	0,30	43,93	0,14	2,000	0,33		
RESEATING PRESSURE	6,50	6,00	6,00	-0,50		0,14	2,000	0,34		
FINAL CALIBRATION										
	Reference (bar)	Reading 1 (bar)	Reading 2 (bar)	Reading 3 (bar)	Average (bar)	Error (bar)	Blowdown (%)	U (bar)	k	Accp. Crt. (bar)
SET PRESSURE	11,00	10,76	10,76	10,74	10,75	-0,25	42,91	0,14	2,000	0,33
RESEATING PRESSURE	6,50	6,25	6,06	6,16	6,16	-0,34		0,20	2,197	0,34
<b>COMMENTS:</b> Used Norm: ASME VIII (Gas)										
SUMMARY OF PERFORMED SERVICES										
PARTS REPLACED: SEATS	NOZZLE: MACHINED,									
SEAT: GRINDING, LAPPING	SPRING: VERIFIED									
STEM: POLISHED	UPPER SEALING: SEALED									
CLEANING: SOLVENT, SANDBLASTED	LOWER SEALING: SEALED									
PAINTING: ALUMINUM 600°C										
LEAK TEST										
FLUID: AIR	NUMBER OF BUBBLES: 2									
	MINUTES DURATION: 1									
SHIFTING LIFT										
GOOD										
CALIBRATION CONDITIONS										
LOCATION: RELIANCE MAINTENANCE LABORATORY	TEMPERATURE: 25 °C									
HUMIDITY: 65%	PRESS: 1 atm									
USED STANDARDS										
MODEL: DMY-2017-4, Igh-1112-0-0-3-0-1 S.N.: 005.09.15 Cert. N.: R3060.07.15 Nest Calh.: 1509/2016 Scale: Pressure PSV (bar) IDe (I)										
INITIAL DIAG.: Not Approved	FINAL DIAG.: Approved									
CALIBRATION: 18/02/2016	NEXT: 18/02/2017									
COMMENTS										
Used Norm: ASME VIII (Gas)										

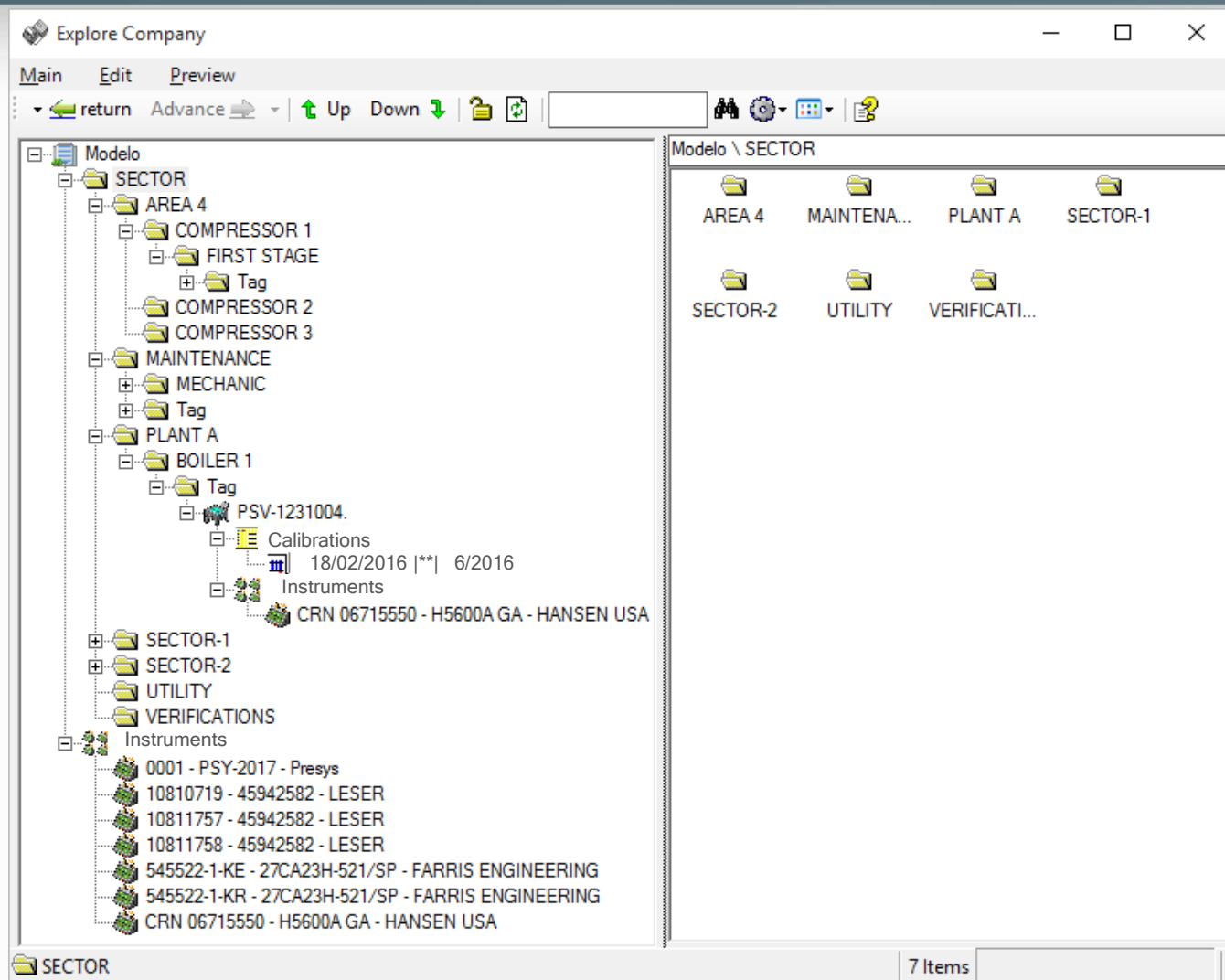
 <b>Calibration Certificate</b> N.: 5/2016	
COMPANY: RELIANCE INDUSTRIES LIMITED INSTRUMENT: SAFETY VALVE FUNCT.: BOILER PROTECTION SECTOR: PLANT ABOILER 1 CRITICALITY: SECURITY O.S.: SAP004	
REG. NUMBER: CRN 06715550 TAG: PSV-1231004 - 10 bar CALIBRATION PERIOD: 12 Months PROC.: P-CO-04	
CALIBRATION GRAPHIC	
	
	
	



# Calibration Certificate

 <b>Reliance</b> Industries Limited <small>Growth is Life</small>	<b>Calibration Certificate</b> N.: 5/2016
COMPANY: RELIANCE INDUSTRIES LIMITED	REG. NUMBER: CRN 06715550
INSTRUMENT: SAFETY VALVE	TAG: PSV-1231004 - 10 bar
FUNCT.: BOILER PROTECTION	CALIBRATION PERIOD: 12 Months
SECTOR: PLANT ABOLTER 1	PROC: P-CO-04
CRITICALITY: SECURITY	
O.S.: SAP004	
<b>PHOTOGRAPHIC REPORT</b>	
	
Reception	
	
Disassembled	
	
Completed	
 Sandeep Nath Executive 18/02/2016 17:10:08	 Sandeep Nath Responsible 18/02/2016 17:16:12

# Company Explorer



# Calibration Plan



## Calibration Plan - Tags

01/01/2016 to 31/12/2016

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COMPANY: RELIANCE INDUSTRIES LIMITED

Calibration not performed, deadline not expired

Area: \AREA 4\COMPRESSOR 1\FIRST STAGE

Tag	Function	Last Calibration	Planned Date	Reg. No.	Initial Diagnosis	Final Diagnosis
PSV-1231004	Proteção do Vaso de Ar		15/09/2016	545522-1-KE		
PSV-1231004-psi	Proteção do Vaso de Ar	15/09/2015	15/09/2016	545522-1-KE	Approved	Approved
PSV-1231004 - 8,8 bar	Proteção do Vaso de Ar		15/09/2016	545522-1-KE		
PSV-1231004 - 8,8 bar Well	Proteção do Vaso de Ar	16/09/2015	16/09/2016	545522-1-KR	Reproved	Approved
PSV-1231004 - 127,6psi	Proteção do Vaso de Ar		16/09/2016	545522-1-KR		

Area: \MAINTENANCE

Tag	Function	Last Calibration	Planned Date	Reg. No.	Initial Diagnosis	Final Diagnosis
PSV-0002	Válvula de Segurança	15/09/2015	15/09/2016	0001	Approved	Approved

Area: \MAINTENANCE\MECHANIC

Tag	Function	Last Calibration	Planned Date	Reg. No.	Initial Diagnosis	Final Diagnosis
PSV-1261814	Alívio de vaso de pressao	11/11/2015	11/11/2016	10810719	Approved	Approved
PSV-1261842	Alívio de vaso de pressao		11/11/2016	10811758		
PSV-1261841	Alívio de vaso de pressao		11/11/2016	10811757		


Area: \PLANTA\BOILER 1

Tag	Function	Last Calibration	Planned Date	Reg. No.	Initial Diagnosis	Final Diagnosis
PSV-1231004.	BOILER PROTECTION	18/09/2015	18/09/2016	CRN 06715550	Approved	Approved

Total (deadline not expired):10

Grand Total:16

# Calibration Plan

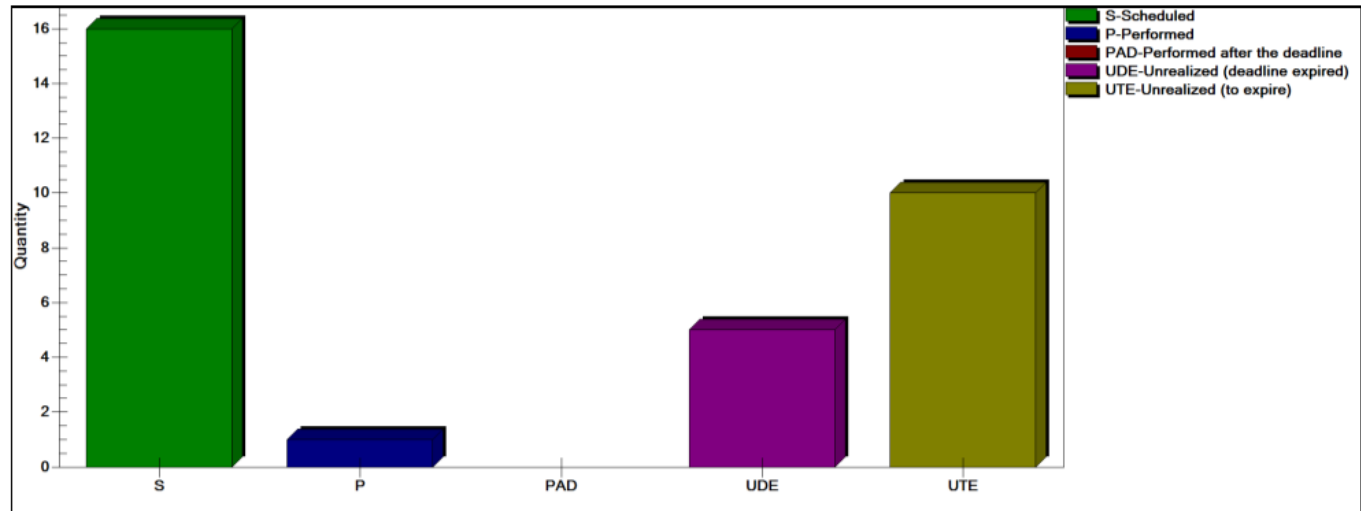
 <b>Reliance</b> Industries Limited Growth is Life	<b>Calibration Plan - Tags</b>						
01/01/2016 to 31/12/2016					Page: 1.2		
COMPANY: RELIANCE INDUSTRIES LIMITED							
Calibration not performed, deadline not expired							
Area: \PLANTA\BOILER 1							
Tag	Function	Last Calibration	Planned Date	Reg. No.	Initial Diagnosis	Final Diagnosis	
PSV-1231004.	BOILER PROTECTION	18/09/2015	18/09/2016	CRN 06715550	Approved	Approved	
						<b>Total (deadline not expired):1</b>	
						<b>Grand Total:1</b>	

# Calibration Plan

## Calibration Plan - Tags

01/01/2016 to 31/12/2016

COMPANY: RELIANCE INDUSTRIES LIMITED



14/04/2016

Date

Sandeep Nath

Operator

Responsible

# PRESYS

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marc@presys.com.br