

# FIRE SAFE TEST WITNESS REPORT

Report No:  
E-KX-O/23/T1031277/11849

## General

Customer Name	Rapid Valves (India) P. Limited
Address	Plot No. 30 & 31, Genesis Industrial Complex, Vi. Kolgaon, Palghar East, Dist. – Palghar, Maharashtra, India
Date of Visit/Test:	2023.08.03
Reported by:	Kamal Shah
Verified by:	Kamal Shah

## Particulars of visit

### PURPOSE OF VISIT:

Witnessing of Fire safe testing of Ball Valve as per below description & applicable standard.

### DESCRIPTION OF VALVE TESTED:

Size & Type	2"NB (50DN), 150# Ball Valve (Lever Operated), Sr No: B9014
Drg No.	RV/BLV/150/2/SS, REV.0, Dt.15/05/2023
Design Std	ISO 17292
Testing Std	API 607 VIII <sup>th</sup> Edition, 2022.
Report No.	RV/FS/DNV/23/02 Dt : 03.08.2023

### MATERIAL OF CONSTRUCTION:

Body & Side Piece	ASTM A 351 Gr CF8
Ball	ASTM A 351 Gr CF8
Stem	ASTM A 276 TP 304
Seat	PTFE
Body Seat & Gland Packing	Pure Graphite
Fasteners	ASTM A 193 Gr. B8 & ASTM A 194 Gr.8

### CONCLUSION:

Fire Safe Testing is in accordance to API 607, VIII<sup>th</sup> Edition, 2022 and found that test results conforming to the required specification. For further details refer manufacturer's reports.

### Range Qualified :

This test for particular valve also qualifies following sizes and class rating as per API 607, VIII<sup>th</sup> Edition.

Tested Valve : 2"NB, 150# (Ball Valve)

Size Qualified
Size : 2"NB & below, 2 1/2"NB, 3"NB, 4"NB
Class : 150# & 300#

Issued at Ahmedabad on 2023.08.03

for DNV




Kamal Shah  
Sr. Surveyor



# FIRE SAFE TEST WITNESS REPORT

Report No:  
E-KX-O/23/T1031277/11848

## General

Customer Name	Rapid Valves (India) P. Limited
Address	Plot No. 30 & 31, Genesis Industrial Complex, Vi. Kolgaon, Palghar East, Dist. – Palghar, Maharashtra, India
Date of Visit/Test:	2023.08.03
Reported by:	Kamal Shah
Verified by:	Kamal Shah

## Particulars of visit

### PURPOSE OF VISIT:

Witnessing of Fire safe testing of Ball Valve as per below description & applicable standard.

### DESCRIPTION OF VALVE TESTED:

Size & Type	2"NB (50DN),150# Ball Valve (Lever Operated), Sr No: B9013
Drq No.	RV/BLV/150/2/CS, REV.0, Dt.15/05/2023
Design Std	ISO 17292
Testing Std	API 607 VIII <sup>th</sup> Edition, 2022.
Report No.	RV/FS/DNV/23/01 Dt : 03.08.2023

### MATERIAL OF CONSTRUCTION:

Body & Side Piece	ASTM A 216 Gr WCB
Ball	ASTM A 351 Gr CF8
Stem	ASTM A 276 TP 304
Seat	PTFE
Body Seat & Gland Packing	Pure Graphite
Fasteners	ASTM A 193 Gr. B7 & ASTM A 194 Gr.2H

### CONCLUSION:

Fire Safe Testing is in accordance to API 607, VIII<sup>th</sup> Edition, 2022 and found that test results conforming to the required specification. For further details refer manufacturer's reports.

### Range Qualified :

This test for particular valve also qualifies following sizes and class rating as per API 607, VIII<sup>th</sup> Edition.

Tested Valve : 2"NB, 150# (Ball Valve)

Size Qualified
Size : 2"NB & below, 2 ½"NB, 3"NB, 4"NB
Class : 150# & 300#

Issued at Ahmedabad on 2023.08.03

for DNV



Kamal Shah  
Sr. Surveyor



# RAPID VALVES (INDIA) PRIVATE. LIMITED.

Plot No. 30 & 31, Genesis Industrial Complex, Village - Kolgaon,  
Palghar East, Dist. - Palghar, Maharashtra, India.

## BALL VALVES FIRE SAFE TEST REPORT

Format No. QA/F/07

SHEET No. 1 OF 3

REPORTNO. :- RV/FS/DNV/23/01	DATE OF TEST :- 03/08/2023
TESTING STANDARD : API 607 -OCT. 2022, VIII ED.	MATERIALS
SIZE & CLASS : 50 NBx150# BALL VALVE	BODY & SIDE PC: ASTM A 216 Gr. WCB
RANGE OF VALVES QUALIFIED :50 NB & BELOW 65, 80 & 100, CLASS 150 & 300.	BALL: ASTM A 351 Gr. CF8 STEM : ASTM A276 Tp304
DRG.NO.: RV/BLV/150/2/CS, REV.0, Dt.15/05/2023	BALL SEATS : PTFE
DESIGN STD.: BS EN ISO 17292 VALVE Sr. No. : B9013	BODY SEAL & GLAND PACKING : PURE GRAPHITE
ACTUATOR : LEVER OPERATED	WEIGHT : 7.6 Kg

### OBSERVATIONS

A	CALIBRATION CONSTANT OF WATER IN VESSEL	100 ml/mm
B	LEVEL OF WATER IN THE VESSEL AT THE START OF FIRE	932 mm
C	TOTAL BURNING PERIOD	30 minutes
D	SEAT LEAKAGE DURING BURNING PERIOD	0 ml
E	TOTAL PERIOD FROM START TO COOL DOWN TO 100' C	40 minutes
F	TOTAL SEAT LEAKAGE DURING BURNING & COOL DOWN PERIOD	1200 ml
G	WATER LEVEL IN VESSEL AT & COOL DOWN PERIOD	920 mm
H	WATER LEVEL IN VESSEL AFTER STABILIZATION	920 mm
I	WATER EVEL IN VESSEL AT THE END OPERATIONAL TEST	911.0 mm
J	TOTAL SEAT LEAKAGE DURING OPERATION TEST	0.0 ml

### CALCULATION

		ACTUAL	MAX. PERMITTED
1	THROUGH-SEAT LEAKAGE DURING BURN PERIOD=D/30 (LTP)	50 ml/min	200ml/min
2	THROUGH-SEAT LEAKAGE DURING BURN PERIOD=D/30 (HTP)	50 ml/min	80ml/min
3	EXT. LEAKAGE DURING BURN & COOL-DOWN PERIODS (LTP)	11 ml/min	50ml/min
4	EXT. LEAKAGE DURING BURN & COOL-DOWN PERIODS (HTP)	11 ml/min	200ml/min
5	LTP THROUGH SEAT LEAKAGE AFTER COOL DOWN, 5 Min.	32 ml/min	80ml/min
6	EXT. LEAKAGE AFTER OPERATIONAL TEST (HTP)	32 ml/min	50ml/min

### OBSERVATIONS /CONCLUSIONS:-

(1) statement that the fire-tested valve has passed all the required hydrostatic and production pressure tests required by the standard to which the valve was manufactured (manufacturer's statement may be accepted) & Found accepted & valve complied with the requirements of this International Standard.

(2) The valve is capable of being unseated from the closed position against high test pressure differential The valve is moved to the open position one time & FOUND OK.

VALVE RATING	HTP PSIg	LTP PSIg	FINAL HYDRO. PSIg	FINAL SEAT PSIg
150 #	210	29	430	315
300 #	540	50	1110	815

(LTP) = LOW TEST PRESSURE, (HTP) = HIGH TEST PRESSURE & EXT. = EXTERNAL

ANNEXURE TO DNV CERTIFICATE No.:  
E-KX-O/23/T1031277/11848 Dt:- 03.08.2023

Rep.:- KEDKEM ENGINEERS & DESIGNERS

WITNESSED BY  
DNV, AHMEDABAD

ASSEMBLY FOREMAN

Q. C. ENGINEER

*Satish D.*

*K.M. Solanki*

Satish Solanki

K. M. Solanki

KAMAL SHAH



# RAPID VALVES (INDIA) PRIVATE. LIMITED.

Plot No. 30 & 31, Genesis Industrial Complex, Village - Kolgaon,  
Palghar East, Dist. - Palghar, Maharashtra, India.

## BALL VALVES FIRE SAFE TEST REPORT

Format No. QA/F/07

SHEET NO. :- 3 OF 3

REPORT NO. :- RV/FS/DNV/23/01

DATE OF TEST :- 03/08/2023

TIME FROM START IN MINUTE	UP STREAM PRESSURE IN PSIG	VALVE CAVITY PRESSURE IN PSIG	THERMO COUPLE READINGS DEG. C				
			BODY	BONNET	BELOW BODY	NEAR STEM	AVERAGE OF 3 & 4
			1	2	3	4	
15.5	2.0		816	852	750	803	
16.0	2.1		817	852	751	804	
16.5	2.0		819	853	753	804	
17.0	2.1		820	855	751	805	
17.5	2.1		823	857	753	810	
18.0	2.0		825	858	754	811	
18.5	2.0		828	859	754	815	
19.0	2.0		831	861	754	816	
19.5	2.1		833	863	754	817	
20.0	2.2		835	865	753	819	
20.5	2.1		838	866	752	820	
21.0	2.2		841	868	752	821	
21.5	2.2		843	871	751	821	
22.0	2.0		845	873	747	822	
22.5	2.0		847	876	747	822	
23.0	2.1		849	880	747	822	
23.5	2.1		851	882	747	822	
24.0	2.1		853	883	748	823	
24.5	2.0		855	885	750	825	
25.0	2.1		857	887	752	826	
25.5	2.1		857	889	753	827	
26.0	2.0		858	891	754	827	
26.5	2.1		859	893	753	826	
27.0	2.1		861	894	752	828	
27.5	2.1		863	895	751	827	
28.0	2.2		865	896	753	828	
28.5	2.4		866	897	755	829	
29.0	2.4		868	899	756	829	
29.5	2.4		871	901	757	829	
30.0	2.4		873	902	758	830	
			820	855	759	805	

Rep.:- KEDKEM ENGINEERS & DESIGNERS

WITNESSED BY

ASSEMBLY FOREMAN

Q. C. ENGINEER

DNV ~~GLAS~~ AHMEDABAD.

*Satish Solanki*

*K. M. Solanki*

Satish Solanki

K. M. Solanki

KAMAL SHAH



Witnessed  Reviewed  
And found to comply with

Date: *03/08/2023*  
Signature: *[Handwritten Signature]*

# RAPID VALVES (INDIA) PRIVATE. LIMITED.

Plot No. 30 & 31, Genesis Industrial Complex, Village - Kolgaon,  
Palghar East, Dist. - Palghar, Maharashtra, India.

## BALL VALVES FIRE SAFE TEST REPORT

Format No. QA/F/07

SHEET No. 1 OF 3

REPORTNO. :- RV/FS/DNV/23/02	DATE OF TEST :- 03/08/2023
TESTING STANDARD : API 607 -OCT. 2022, VIII ED.	MATERIALS
SIZE & CLASS : 50 NBx150# BALL VALVE	BODY & SIDE PC: ASTM A351 Gr. CF8
RANGE OF VALVES QUALIFIED :50 NB & BELOW 65, 80 & 100, CLASS 150 & 300.	BALL: ASTM A351 Gr. CF8 STEM : ASTM A276 Tp304
DRG.NO.: RV/BLV/150/2/SS, REV.0, Dt.15/05/2023	BALL SEATS : PTFE
DESIGN STD.: BS EN ISO 17292 VALVE Sr. No. : B9014	BODY SEAL & GLAND PACKING : PURE GRAPHITE
ACTUATOR : LEVER OPERATED	WEIGHT : 7.6 Kg

### OBSERVATIONS

A	CALIBRATION CONSTANT OF WATER IN VESSEL	100 ml/mm
B	LEVEL OF WATER IN THE VESSEL AT THE START OF FIRE	900 mm
C	TOTAL BURNING PERIOD	30 minutes
D	SEAT LEAKAGE DURING BURNING PERIOD	0 ml
E	TOTAL PERIOD FROM START TO COOL DOWN TO 100' C	40 minutes
F	TOTAL SEAT LEAKAGE DURING BURNING & COOL DOWN PERIOD	1050 ml
G	WATER LEVEL IN VESSEL AT & COOL DOWN PERIOD	889 mm
H	WATER LEVEL IN VESSEL AFTER STABILIZATION	889 mm
I	WATER EVEL IN VESSEL AT THE END OPERATIONAL TEST	880.0 mm
J	TOTAL SEAT LEAKAGE DURING OPERATION TEST	0.0 ml

### CALCULATION

		ACTUAL	MAX. PERMITTED
1	THROUGH-SEAT LEAKAGE DURING BURN PERIOD=D/30 (LTP)	40 ml/min	200ml/min
2	THROUGH-SEAT LEAKAGE DURING BURN PERIOD=D/30 (HTP)	40 ml/min	80ml/min
3	EXT. LEAKAGE DURING BURN & COOL-DOWN PERIODS (LTP)	10 ml/min	50ml/min
4	EXT. LEAKAGE DURING BURN & COOL-DOWN PERIODS (HTP)	10 ml/min	200ml/min
5	LTP THROUGH SEAT LEAKAGE AFTER COOL DOWN. 5 Min.	30 ml/min	80ml/min
6	EXT. LEAKAGE AFTER OPERATIONAL TEST (HTP)	30 ml/min	50ml/min

### OBSERVATIONS / CONCLUSIONS:-

(1) statement that the fire-tested valve has passed all the required hydrostatic and production pressure tests required by the standard to which the valve was manufactured (manufacturer's statement may be accepted) & Found accepted & valve complied with the requirements of this International Standard.

(2) The valve is capable of being unseated from the closed position against high test pressure differential The valve is moved to the open position one time & FOUND OK.

VALVE RATING	HTP PSIG	LTP PSIG	FINAL HYDRO. PSIG	FINAL SEAT PSIG
150 #	210	29	430	315
300 #	540	50	1110	815

(LTP) = LOW TEST PRESSURE, (HTP) = HIGH TEST PRESSURE & EXT. = EXTERNAL

ANNEXURE TO DNV CERTIFICATE No.:  
E-KX-O/23/T1031277/11849 Dt:- 03.08.2023

Rep.:- KEDKEM ENGINEERS & DESIGNERS

WITNESSED BY  
DNV, AHMEDABAD.

ASSEMBLY FOREMAN

Q. C. ENGINEER

*Satish Solanki*

*K. M. Solanki*

Satish Solanki

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KAMAL SHAH



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Plot No. 30 & 31, Genesis Industrial Complex, Village – Kolgaon,  
Palghar East, Dist. – Palghar, Maharashtra, India.

## BALL VALVES FIRE SAFE TEST REPORT

Format No. QA/F/07

SHEET NO. :- 2 OF 3

REPORT NO. :- RV/FS/DNV/23/02

DATE OF TEST :- 03/08/2023

TIME FROM START IN MINUTE	UP STREAM PRESSURE IN PSIG	VALVE CAVITY PRESSURE IN PSIG	THERMO COUPLE READINGS DEG. C				
			BODY	BONNET	BELOW BODY	NEAR STEM	AVERAGE OF 3 & 4
			1	2	3	4	
0.0	2.0		615	549	142	111	
0.5	2.0		640	640	162	181	
1.0	2.0		700	700	190	280	
1.5	2.0		750	753	215	401	
2.0	2.0		760	755	330	460	
2.5	2.0		761	761	350	502	
3.0	2.0		762	770	402	565	
3.5	2.0		763	781	448	621	
4.0	2.0		765	783	469	648	
4.5	2.0		768	785	511	665	
5.0	2.0		769	787	535	701	
5.5	1.8		769	785	542	719	
6.0	2.0		770	787	565	701	
6.5	2.0		772	789	582	733	
7.0	2.0		773	791	601	742	
7.5	2.0		775	792	606	756	
8.0	2.0		776	795	615	763	
8.5	2.0		778	796	644	768	
9.0	2.0		780	798	651	772	
9.5	2.0		780	801	684	777	
10.0	2.0		782	803	701	788	
10.5	2.0		781	805	720	790	
11.0	2.0		783	809	722	791	
11.5	2.0		785	811	723	793	
12.0	2.0		788	812	724	795	
12.5	2.0		789	815	726	798	
13.0	2.0		791	816	729	799	
13.5	2.0		793	819	735	801	
14.0	2.0		795	821	741	803	
14.5	2.0		796	823	750	804	
15.0	2.0		798	824	752	805	

Rep.:- KEDKEM ENGINEERS & DESIGNERS

WITNESSED BY

DNV ~~GLAS~~ AHMEDABAD.

ASSEMBLY FOREMAN

Q. C. ENGINEER

Satish Solanki

K. M. Solanki

Satish Solanki

K. M. Solanki

KAMAL SHAH



Witnessed  Reviewed  
and found to comply with

Date: \_\_\_\_\_  
Sign: \_\_\_\_\_

# RAPID VALVES (INDIA) PRIVATE. LIMITED.

Plot No. 30 & 31, Genesis Industrial Complex, Village - Kolgaon,  
Palghar East, Dist. - Palghar, Maharashtra, India.

## BALL VALVES FIRE SAFE TEST REPORT

Format No. QA/F/07

SHEET NO. :- 3 OF 3

REPORT NO. :- RV/FS/DNV/23/02

DATE OF TEST :- 03/08/2023

TIME FROM START IN MINUTE	UP STREAM PRESSURE IN PSIG	VALVE CAVITY PRESSURE IN PSIG	THERMO COUPLE READINGS DEG. C				
			BODY	BONNET	BELOW BODY	NEAR STEM	AVERAGE OF 3 & 4
			1	2	3	4	
15.5	2.0		801	825	755	801	
16.0	2.1		807	826	754	802	
16.5	2.0		809	828	753	803	
17.0	2.1		810	832	753	804	
17.5	2.1		813	835	754	807	
18.0	2.0		815	838	754	808	
18.5	2.0		818	840	755	810	
19.0	2.0		819	841	756	811	
19.5	2.1		820	843	754	812	
20.0	2.2		822	845	753	813	
20.5	2.1		824	846	752	815	
21.0	2.2		825	848	753	818	
21.5	2.2		833	851	751	819	
22.0	2.0		835	853	754	820	
22.5	2.0		837	856	757	822	
23.0	2.1		839	860	757	823	
23.5	2.1		841	862	758	824	
24.0	2.1		843	863	759	823	
24.5	2.0		845	865	760	825	
25.0	2.1		847	867	762	824	
25.5	2.1		847	869	763	823	
26.0	2.0		848	871	764	822	
26.5	2.1		849	873	763	823	
27.0	2.1		851	874	762	824	
27.5	2.1		853	875	761	826	
28.0	2.2		855	876	763	826	
28.5	2.4		856	877	765	827	
29.0	2.4		858	879	766	828	
29.5	2.4		861	880	767	829	
30.0	2.4		863	882	768	830	
			865	885	772	832	

Rep.:- KEDKEM ENGINEERS & DESIGNERS

WITNESSED BY

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