

TEST REPORT

LAPORAN HASIL UJI

Test Category <i>Kategori uji</i>	VIBRATION TEST		
Work order no. <i>Nomor perintah kerja</i>	WO/2022100064	Test report no. <i>Nomor laporan hasil uji</i>	QI-22/10/0174
Test performance date <i>Tanggal pengujian</i>	03 – 05 October 2022	Test report date <i>Tanggal laporan hasil uji</i>	06 October 2022
Sample submission date <i>Tanggal penerimaan sampel</i>	03 October 2022	Test laboratory <i>Laboratorium pengujian</i>	PT. Qualis Indonesia
Test Method <i>Metode uji</i>	Customer's Specification		
Sample condition <i>Kondisi sampel</i>	The sample was submitted by customer, received in good condition and with no defect observed		
Client's name <i>Nama klien</i>	PT. PERSADA APARINDO UNIVERSAL		
Client's address <i>Alamat klien</i>	Jl. Raya Prancis Pergudangan 8 Blok DK No.90 Jati Mulya Kosambi		
Part name <i>Nama part</i>	Fire Element Control		
Part no. <i>No. Part</i>	-		
Model <i>Model</i>	FEC 35 A		
Material <i>Bahan baku</i>	aluminium, plastik, cartridge, felt dan pemantik merah dan hitam		
Customer <i>Pelanggan</i>	-		

Approved and digitally signed on behalf of
PT. Qualis Indonesia



Andryo Lee

Laboratory Manager

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Testing and measuring equipment:

No.	Equipment	Type	Calibration Due Date
1	Vibration test system with temperature and humidity chamber	INV/2015/AT/12	20 March 2023
2	Digital accelerometer SN 06083	INV/2017/AT/39	11 November 2022

Summary of test result:

VIBRATION TEST			
No.	Requirement	Result	Judgment
1	No abnormality such as crack, leakage etc.	Sample no abnormality such as crack, leakage was observed	Pass

Reference test method:

- **Customer's Specification :**

1. Store the samples on vibration shaker and temperature chamber. Perform the test according to the following vibration endurance test profile:

Direction	Frequency [Hz]	Acceleration [G]	Time [Cycle]	Duration [h]
Vertical Direction (Vertical Orientation)	11	3.5	1.000.000	25.25
Vertical Direction (Horizontal Orientation)				25.25

2. Perform visual evaluation after test

Test result:

VIBRATION TEST		
Sample	Before	After
Fire Element Control	Good as tested	Sample no abnormality such as crack, leakage was observed

- Environmental conditions during inspection:

Temperature : 23±2°C

Relative humidity : 50±5% RH



--- END OF TEST REPORT ---

Annex 1 – Photo

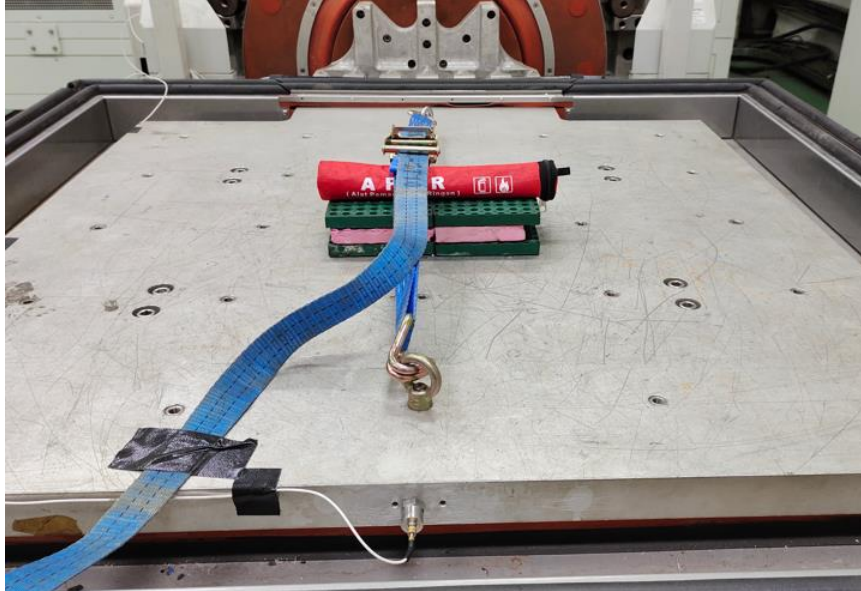


Figure 1: Set-up sample X-axis

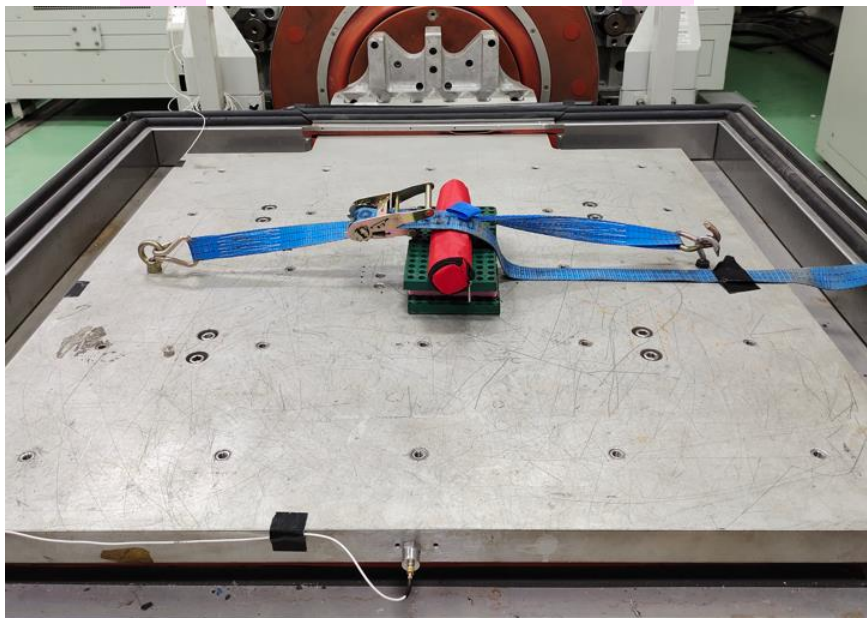


Figure 2: Set-up sample Y-axis

Annex 2 – Vibration Test Definition

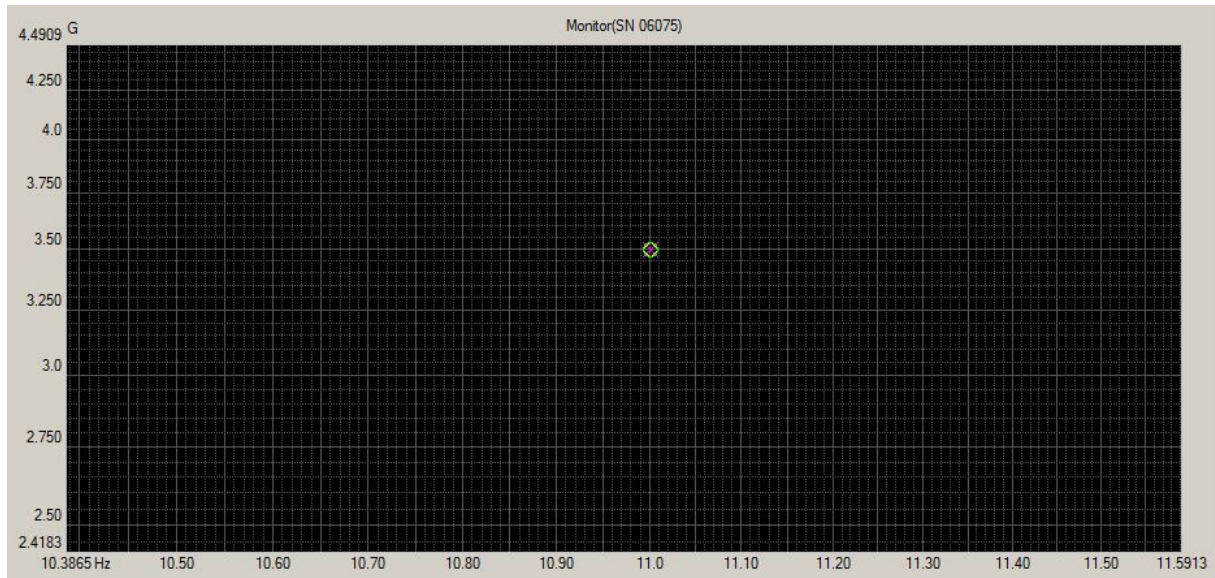


Figure 3: Graph of vibration test (X-axis)

Excitation is completed. (Test time is completed.)					
Frequency	11.00 Hz	2022/10/04 12:37:38 PM			
Ref.(G 0-p)	3.50	Resp.(G 0-p)	3.4985	Drive(mV)	351.7
Elapsed time	25:15:08				
Spot	1 / 1	25:15:09	1000 kcycle	(Remains 0 kcycle)	
Manual	0.00 dB				
Check result		Alarm	OK	Abort	OK
Real-time processing CPU load factor		0.62 %			
Reference/Response data					
	Acceleration	Velocity	Displacement		
	(G)	(m/s)	(mm)		
Ref.	3.50	0.4966	14.3706		
Resp.	3.4985	0.4964	14.3645		
Input channel data					
Peak estimation	Acceleration	Velocity	Displacement		
	(G)	(m/s)	(mm)		
SN 06075 (000-Ch1)					
RMS*	3.4985	0.4964	14.3645		
Average	3.4611	0.4911	14.2109		
Tracking	3.4927	0.4956	14.3404		
Max. peak	3.8451	0.5456	15.7875		
Ave. peak	3.6619	0.5196	15.0353		
Distortion	5.80 %	Signal tolerance	0.17 %		

Figure 4: Data of vibration test (X-axis)

Annex 3 – Vibration Test Definition (Cont'd)

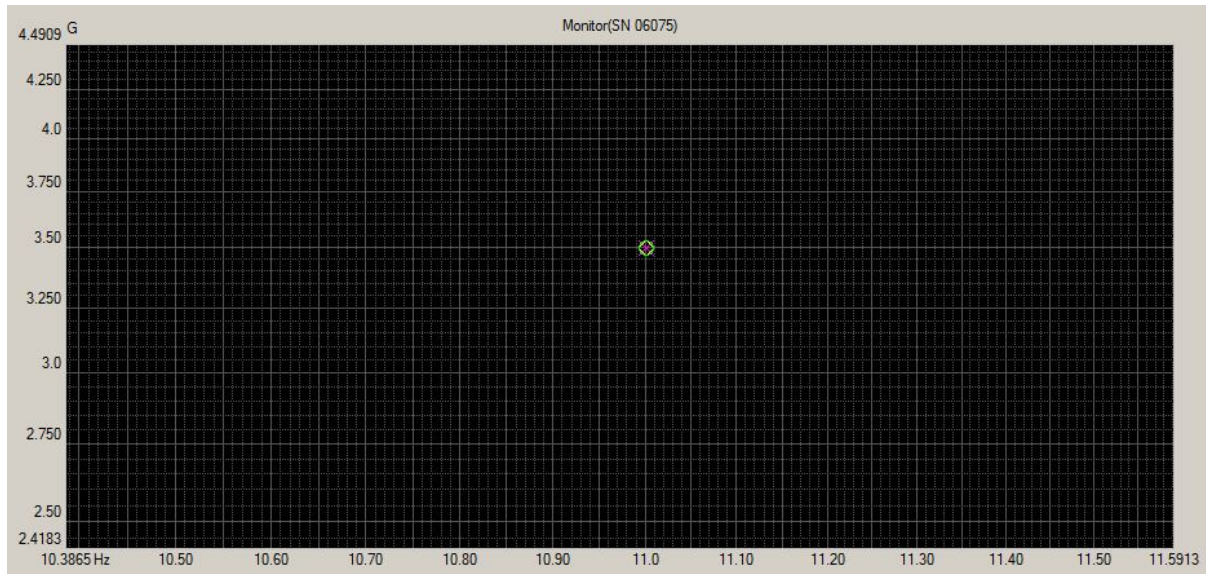


Figure 5: Graph of vibration test (Y-axis)

Excitation is completed. (Test time is completed.)

Frequency	11.00 Hz	2022/10/05 2:45:54 PM			
Ref.(G 0-p)	3.50	Resp.(G 0-p)	3.5001	Drive(mV)	347.3
Elapsed time	25:15:09				
Spot	1 / 1	25:15:09	1000 kcycle	(Remains 0 kcycle)	
Manual	0.00 dB				
Check result	Alarm	OK	Abort	OK	
Real-time processing CPU load factor	0.58 %				

Reference/Response data			
	Acceleration (G)	Velocity (m/s)	Displacement (mm)
Ref.	3.50	0.4966	14.3706
Resp.	3.5001	0.4966	14.3711

Input channel data			
Peak estimation	Acceleration (G)	Velocity (m/s)	Displacement (mm)
SN 06075 (000-Ch1)			
RMS*	3.5001	0.4966	14.3711
Average	3.4277	0.4863	14.0736
Tracking	3.4684	0.4921	14.2408
Max. peak	4.8487	0.6880	19.9081
Ave. peak	4.7796	0.6782	19.6245
Distortion	13.56 %	Signal tolerance	0.92 %

Figure 6: Data of vibration test (Y-axis)

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