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ALLIANZ TEKNİK DEPREM & YANGIN TEST VE EĞİTİM MERKEZİ

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AB-1601-T
EQ-AZTEK-22-089
11-22

TEST RAPORU

TEST REPORT

Müşteri Temsilci Adı/Adresi Customer Representative Name/Address	: Serkan Üçgül - 3 Gül Danışmanlık Eğitim ve Belgelendirme Hizmetleri İvedik OSB. 1444. Sokak No:10 Kat:1 Yenimahalle/Ankara
Müşteri Adı/Adresi Customer Name/Address	: YESPAN ELEKTRİK SAN. Ve TİC. LTD. ŞTİ. Aydın Organize Sanayi Bölgesi 2.Cadde No:41 Umurlu/AYDIN
Teklif Numarası Order No.	: AZTEK-22-089
Numunenin Adı Ve Tarifi Name And Identity Of Test Item	: YESPAN Outdoor Free Standing Type Modular Enclosure (Model Number: H Series, Serial Number: YDS22246-1) Weight: 797 kg in total with 250 kg shelf weights
Numunenin Kabul Tarihi The Date Of Receipt Of Test Item	: 03.10.2022
Uygulanan Standart / Metot Applied Standard / Method	: TS EN/IEC 60068-3-3
Açıklamalar Remarks	: Allianz Teknik confirms that the above referenced item has been tested in accordance with the Seismic/Earthquake requirements of EN/IEC 60068-3-3 seismic earthquake testing.
Deneyin Yapıldığı Tarih Date Of Test	: 04.10.2022
Raporun Sayfa Sayısı Number Of Pages Of The Report	: 40

Deney laboratuvarı olarak faaliyet gösteren Allianz Teknik, TÜRKAK'tan AB-1601-T akreditasyon dosya numarası ile TS EN ISO/IEC 17025:2017 standardına göre akredite edilmiştir.
Allianz Teknik accredited by TÜRKAK under registration number AB-1601-T for EN ISO/IEC 17025:2017 as test laboratory.

Türk Akreditasyon Kurumu(TÜRKAK) deney raporlarının tanınırlığı konusunda Avrupa Akreditasyon Birliği(EA) ile Çok Taraflı Anlaşma ve Uluslararası Laboratuvar Akreditasyon Birliği(ILAC) ile karşılıklı tanıma anlaşması imzalamıştır.
Turkish Accreditation Agency (TURKAK) is a signatory to the European co-operation for Accreditation (EA) Multilateral Agreement (MLA) and to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) for the recognition of test reports.

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The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.

Bu rapor özel deney talebine istinaden düzenlenmiş olup, Standartlara Uygunluk Belgesi niteliğinde değildir. Partiyi temsil etmez, ayrıca ilan, reklam ve ihalelerde uygunluk belgesi niteliğinde kullanılmaz.
This test report was prepared upon customer's request, can not be used as certificate of conformity to standards, does not represent a batch and can not be used as conformity documents for advertisements and procurements.

Beykoz Gayrimenkul Yatırım İnşaat Turizm Sanayi ve Tic. A.Ş. bundan böyle rapor içeriğinde "Allianz Teknik" olarak anılacaktır.
Beykoz Gayrimenkul Yatırım İnşaat Turizm Sanayi ve Tic. A.S. hereinafter to be briefly referred to as "Allianz Teknik" in the content of the report.

Mühür/Kaşe Seal	***Yayımlandığı Tarih*** Report Release Date	***Deney Sorumlusu*** Person In Charge Of The Test	***Onaylayan / Tarih*** Approval /Date
BEYKOZ GAYRİMENKUL YATIRIM İNŞAAT TURİZM SANAYİ VE TİCARET A.Ş. Küçükbakkalköy Mahallesi Kayışdağı Caddesi No:1 Kat:20 Ataşehir / İSTANBUL	14.11.2022	Volkan Ayık	Erkan Özdağ 14.11.2022

1. GENERAL INFORMATION

1.1 Customer

YESPAN ELEKTRİK SAN. Ve TİC. LTD. ŞTİ.
Aydın Organize Sanayi Bölgesi 2.Cadde No:41 Umurlu/AYDIN

1.2 Customer Representative

Serkan Üçgül - 3 Gül Danışmanlık Eğitim ve Belgelendirme Hizmetleri
İvedik OSB. 1444. Sokak No:10 Kat:1 Yenimahalle/Ankara

1.3 Unit Under Test (UUT)

The test was performed on the following UUT:

- Description: YESPAN Outdoor Free Standing Type Modular Enclosure (Model Number: H Series, Serial Number: YDS22246-1)
- Dimensions: Width: 1200 mm, Depth: 800 mm, Height: 2200 mm
- Weight: 787 kg in total with 250 kg shelf weights.
- Geometry: The thickness of the frame and doors are 2.5 mm. The thickness of the covers is 2 mm.

Figure 1: YESPAN Outdoor Free Standing Type Modular Enclosure (Model Number: H Series, Serial Number: YDS22246-1)

1.4 Manufacturer

YESPAN ELEKTRİK SAN. Ve TİC. LTD. ŞTİ.
Aydın Organize Sanayi Bölgesi 2.Cadde No:41 Umurlu/AYDIN

1.5 Reference Documents

- EN/IEC 60068-3-3 : Environmental testing - Part 3-3: Supporting documentation and guidance - Seismic test methods for equipment
- EN 60068-2-6 : Environmental testing - Part 2-6: Tests - Test Fc: Vibration (Sinusoidal)
- EN 60068-2-47 : Environmental testing - Part 2-47: Tests - Mounting of specimens for vibration, impact and similar dynamic tests
- EN 60068-2-57 : Environmental testing - Part 2-57: Tests - Test Ff: Vibration - Time - history and sine - beat method

1.6 Test Objective

The purpose of the tests were to demonstrate that UUT (unit under test) behave in compliance with the standard with parameter selections of “Zone 4”; “K=2” and Damping Ratio = %5. Please see section 2.4.2 of this report for details and standard suggestions for parameters.

1.7 Overall Results

UUT provides the seismic criteria of TS EN/IEC 60068-3-3 standard. However, since there are no circuit breakers and busbars on the test sample, functional continuity checks as specified in the EN 60068-3-3 standard could not be performed and a criterion assignment to the test sample could not be performed.

1.8 Testing Laboratory

Allianz Teknik Earthquake & Fire Testing and Training Center
Türk-Alman Üniversitesi Şahinkaya Cd. No: 90, 34820 Beykoz/ İSTANBUL - TURKEY

1.9 Test Date

October 4th, 2022

1.10 Test Responsible & Visitors List

Erkan Özdağ, M.Sc.	- Allianz Teknik Manager
Volkan Ayık, M.Sc.	- Allianz Teknik Earthquake Lab. Supervisor
Berkay Aldırmaz, M.Sc.	- Allianz Teknik Test Engineer
Emin Karaş	- Allianz Teknik Laboratory Specialist
Serkan Üçgül	- 3 Gül Danışmanlık

1.11 Distribution List

Serkan Üçgül - 3 Gül Danışmanlık

1.12 Ambient Conditions

Temperature: 22.4°C
Humidity: 58% RH

1.13 Measurement Uncertainty

The Extended Measurement Uncertainty (U) value of the test system is 2.2% for the X, Y and Z axes.

1.14 Decision Rule

The decision rule was not applied.

1.15 Disclaimer

The report source test sample is evaluated as received by Allianz Teknik and the Report is created. Allianz Teknik is not responsible for the results of the test sample due to faulty, incorrect or non-production. Allianz Teknik does not accept any responsibility for the accuracy, completeness and being up-to-date of the information provided by an external party (Customer) and the effects of this information on the results of the Report.

2. TEST PROCEDURES

2.1 General Remarks

To perform the tests, three reference directions have been considered for the unit: X (front-rear), Y (side to side) and Z (vertical).

The sequence of the tests for UUT has been:

- Pre Test Functionality Control
- Vibration Response Investigation
- EN/IEC 60068-3-3 Earthquake (sequentially in X, Y, Z axis as 5S1 and 1 S2)
- Functionality Control During Test
- Post Vibration Response Investigation
- Post Test Functionality Control

2.2 Mounting Techniques

- UUT was mounted in accordance with EN/IEC 60068-2-47 for all tests.
- UUT was connected to the base under it with totally 12 M10 bolts. These bolts were welded bolts. The base was attached to the adapter fixture under a total of 12 M10 bolts (See Picture 6).
- The adapter fixture of the UUT was fixed to the MAST by torqued to 80 Nm with 16 M12 bolts. (See Picture 8 and Picture 16).

2.3 Control and Measuring Position

The signals of accelerometers integrated to MAST were used for the motion control. In the table below, model and serial number of the sensors mounted in the control and measuring positions are summarized.

Brand	Description	Serial Number	Calibration Due Date
MTS	353.20 MAST	EQ1-001	NA
HBM	eDAQXR	EQ4-001-E1&E2	22.06.2023
PCB	Accelerometer	12509	06.01.2023
PCB	Accelerometer	12511A	06.01.2023
PCB	Accelerometer	12512	06.01.2023
PCB	Accelerometer	12513	06.01.2023
PCB	Accelerometer	12525A	05.01.2023
PCB	Accelerometer	12526A	06.01.2023
PCB	Accelerometer	12527A	06.01.2023
PCB	Accelerometer	12528	06.01.2023
PCB	Accelerometer	12529	06.01.2023
Dytran	Accelerometer	7603D4	05.01.2023
Dytran	Accelerometer	1117	15.03.2023
Dytran	Accelerometer	1114	15.03.2023

Table 1. Test Equipment & Sensors

Figure 2. Accelerometer locations on UUT

Acc No	Location	Description
1114	1	Bottom of UUT
1117	2	COG (center of gravity) of UUT
7603D4	3	Top of UUT

Table 3. Accelerometer location descriptions

Measurements were recorded from the points shown in Figure 2 on the UUT as stated in 3.2 measuring points section of EN 60068-2-6. In addition to these points, a total of 9 unidirectional accelerometers integrated into the MAST table were used to comply with 3.2.3 of the same standard. In accordance with the imaginary reference point section, tests were carried out with respect to an imaginary point on the midpoint of MAST table surface. This imaginary reference point was calculated by the test software for each axis as "Observed Acceleration".

Tests were carried out by providing control as stated in the multiple reference control section referring to 4.2.2 in the 4.2 Control Method section of the EN 60068-2-6 standard.

2.4 Seismic Tests

2.4.1 Vibration Response Investigation

The aim of the tests was to define the resonance frequencies of UUT.

For this purpose, MAST (Please see Section 3.1) was vibrated with an excitation of "sinusoidal sweeping" type varying the frequency between 1 Hz to 35 Hz with a speed of 1 octave per minutes, maintaining the acceleration level of 0,1 g.

Damping ratio was calculated by the "Half Power Bandwidth" method, from the transmissibility function of the accelerometer located close to center of gravity of UUT according to EN/IEC 60068-3-3.

$$\beta\ (\%) = (F_2 - F_1) / 2F_r$$

F_r= Resonance frequency
F_1= The first frequency value at intersection of 3dB (√2 = 1,414) band of the amplitude
F_2= The second frequency value at intersection of 3dB (√2 = 1,414) band of the amplitude

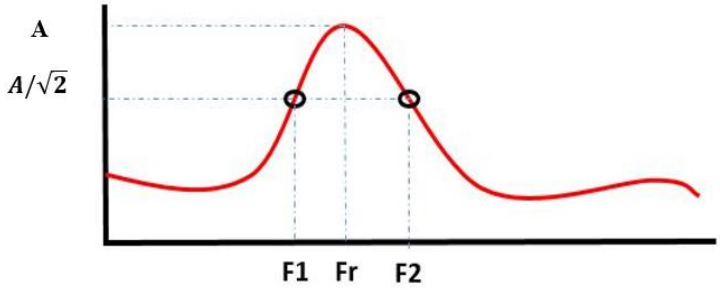

Figure 3. Half Power Bandwidth Method

2.4.2 EN/IEC 60068-3-3

To generate RRS (required response spectrum), criteria below mentioned should be determined by test requester:

1. Zone selection

This selection is needed to determine ground acceleration and zero period acceleration (ZPA) of the spectrum.
Zone is about geographical location and site ground conditions.

Seismic Activity Zone	Zone 0	Zone 1	Zone 2	Zone 3	Zone 4
Ground Acceleration (g)	0	0.1	0.2	0.3	0.5

Table 4. Seismic activity zone

Zone is selected as **Zone 4** by the test requester.

2. Superelevation factor (K) selection

Superelevation factor amplifies (K factor) the ground acceleration. This value is determined according to installation type of UUT in service condition.

K factor is selected as **2** by the test requester.

K factor	Application
1	Mounting of equipment on rigid foundations or on structures of high rigidity
1,5	Installations rigidly connected to buildings
2	Installations on stiff structures connected rigidly to buildings
3	Installations on low rigidity structures connected to buildings

Table 5. K factor

3. Damping Ratio Selection

Damping ratio of the equipment lie generally between %2 to %10 (Section 14).

Damping ratio is selected as **%5** by the test requester as suggested in standard in Section 9.4.

According to these selections, calculations are made and RRS shape below is assigned with numbers.

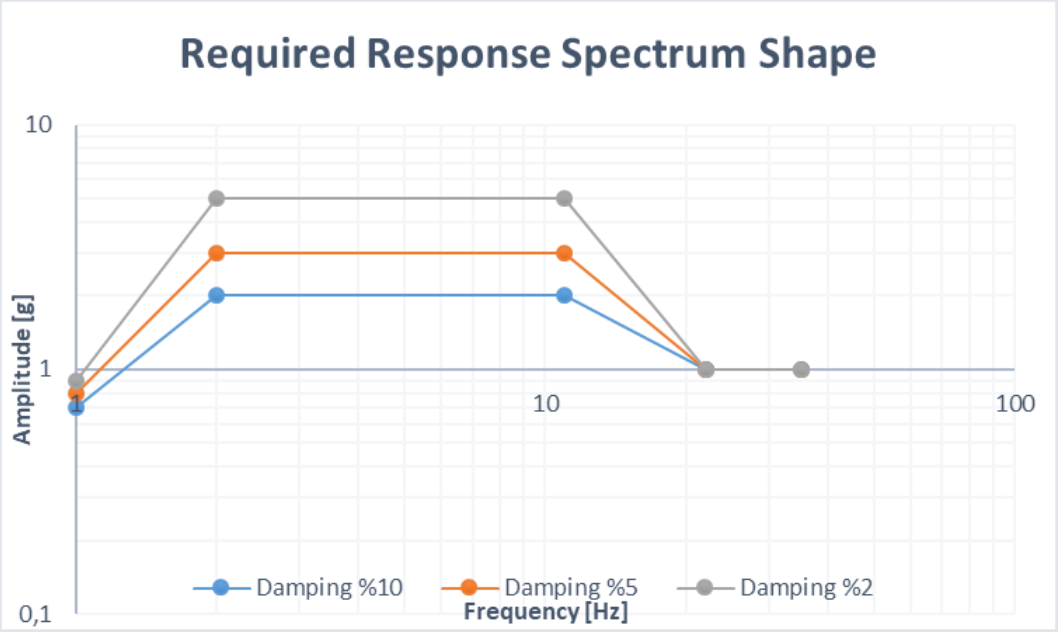

Figure 4. RRS shape

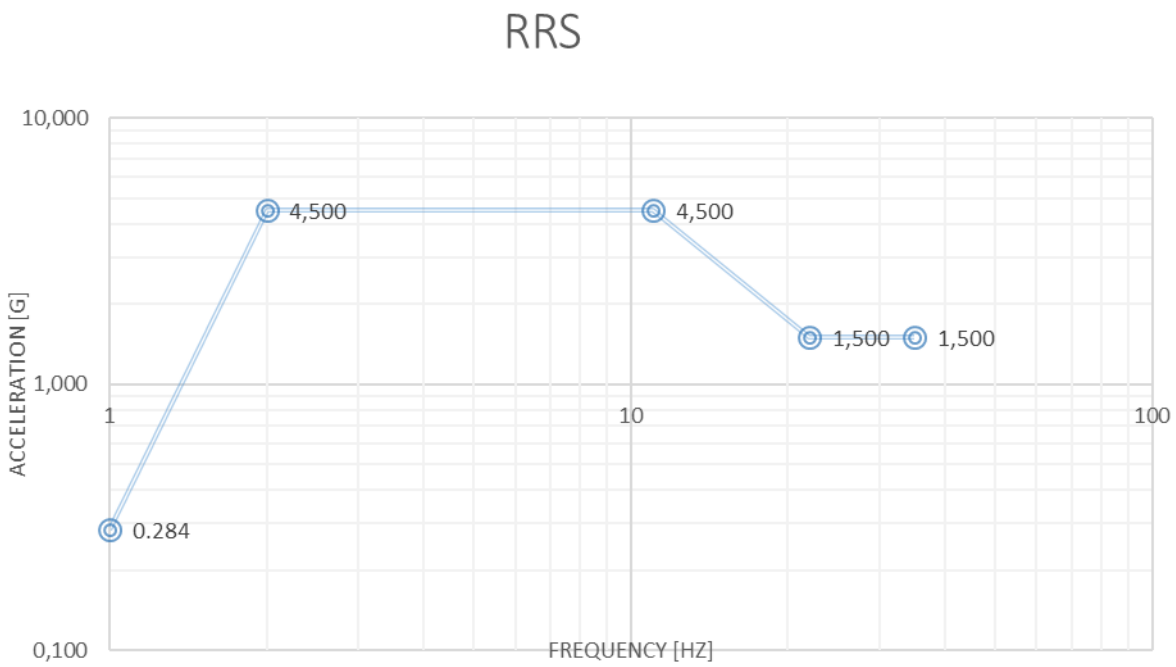

Figure 5. Calculated Required Response Spectrum

In Figure 5, generated (calculated) required response spectrum to be used in tests by assigning values with values selected by test requester.

The three axes (X, Y, and Z) were tested with the RRS in Figure 5.

3. TEST EQUIPMENT

3.1 Multi Axial Simulation Table (MAST)

- The test have been performed on MAST system, which is 6 DOF capability (Figure 6).
- The shaker table powered by six servo hydraulic actuator, all of them mounted the table with 120°.
- Each actuator has a maximum 70,6 kN peak force and maximum displacement of 145mm on Z axis, 115 mm on Y axis and 130 mm on X axis.
- The hydraulic pump has 5 engines with a total power 225 KW. It is capable of pumping a flow up to 600 l/min at a working pressure of 210 bars.

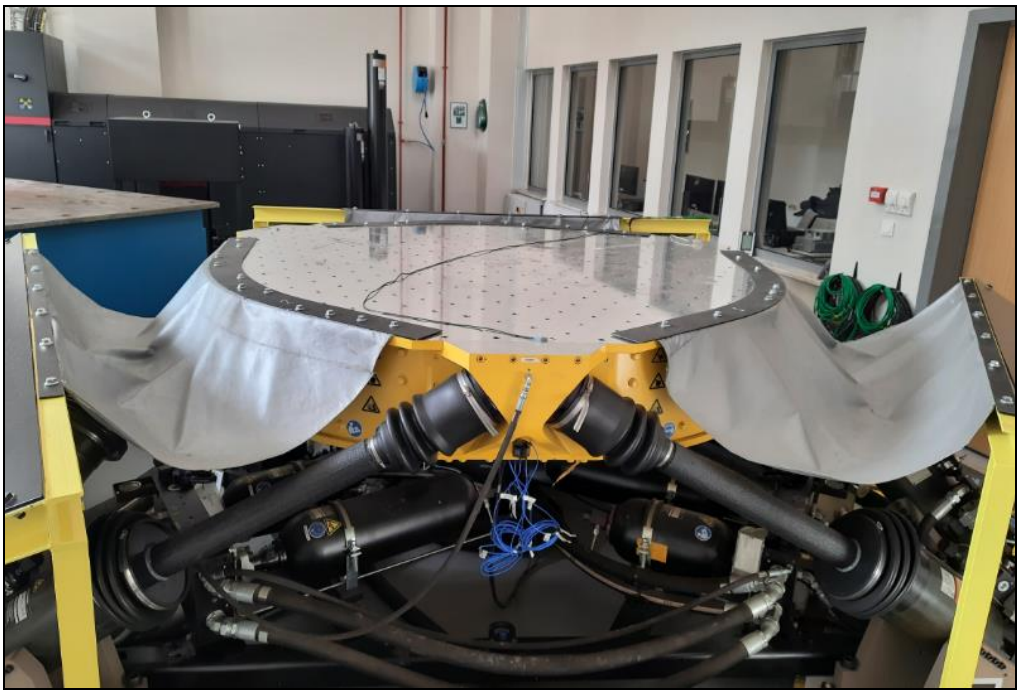

Figure 6. Multi Axial Simulation Table (MAST)

3.2 Sensors

Accelerometers employed during the tests are listed below:

Dytran 7603D4

- Uni axial
- Acceleration Measurement Range ±25 g
- Frequency Response 0-1400 Hz

Dytran 1114

- Uni axial
- Acceleration Measurement Range ±40 g
- Frequency Response 0-1500 Hz

Dytran 1117

- Uni axial
- Acceleration Measurement Range ±40 g
- Frequency Response 0-1500 Hz

PCB 3471M39 model accelerometers integrated to MAST:

- Uni axial
- Acceleration Measurement Range ±30 g
- Frequency Response 0-1500 Hz

3.3 Data Acquisition Equipment

During the tests, the shaker was controlled by a computer-based system, which is MTS RPC Pro and Flex Test controller.

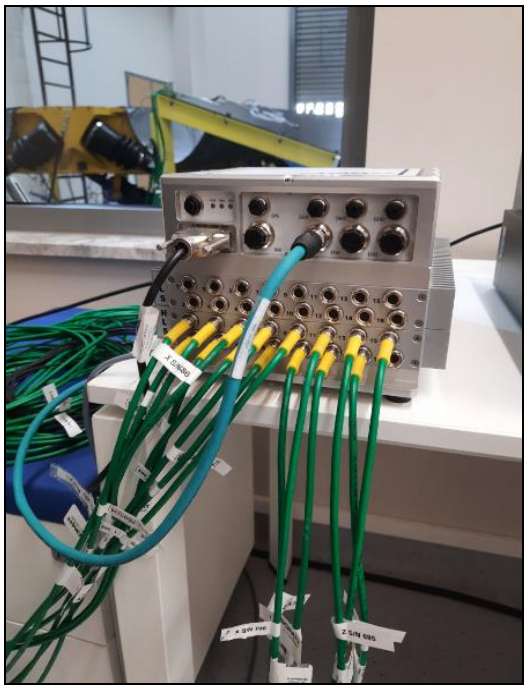

Figure 7. EDAQXR Datalogger

3.4 Measurement Uncertainty

The measurement uncertainty of the test system was calculated according to FR0601 Earthquake Laboratory Measurement Uncertainty Calculations Registration Form.

The combined uncertainty value (U_C) was calculated from the measurement uncertainties of type A (U_A) and type B (U_B). This value was expanded by 2 to find the Extended Measurement Uncertainty (U) value.

The Extended Measurement Uncertainty (U) value of the test system is 2.2% for the X, Y, and Z axes.

4. TEST DATA SPECIFICATIONS

Seismic tests were performed by applying an artificial time history obtained from Required Response Spectrum (EN/IEC 60068-3-3).

Test response spectrum (TRS) should envelope required response spectrum (RRS) throughout the test frequency bandwidth. TRS should not be greater than 50% of the RRS across the spectrum according to EN 60068-2-57 Section 4.4.4. However, above 1/3 f_2 (11 Hz), this ratio can be exceeded. On the other hand, small number of points can be moved outside of this tolerance range below 1/3 f_2, which should not be a problem as long as they do not coincide with the resonant frequency of the UUT. The TRS reached in the test meets these specifications. See. Page 13-14.

Seismic tests were performed in three axes and sequentially referring to EN 60068-3-3 12.2 Testing Conditions.

Tests were applied as 5 times of S1 and 1 time of S2 earthquakes.

S1 earthquake is to demonstrate that low intensity earthquakes, which have the highest possibility of occurring, are not detrimental to functional safety of the performance of the equipment, and that fatigue or ageing condition is not generated.

S2 earthquake is to demonstrate that high intensity earthquakes, which could lead to defective performance.

S2 earthquake should 2 times of S1 in amplitude.

Seismic test data duration should be minimum 30 seconds with 20 seconds of strong part. Strong part starts at the moment which the amplitude of data is observed as %25 of the maximum peak-to-peak value through all data. Strong part lasts when the amplitude of the data decreases less than %25 of the maximum peak-to-peak value through all data.

The transverse motions should be less than 25% of the amplitude of main motions (the axis on which the test is applied) during seismic tests. This has provided. Please see page 20-21.

5. TRS-RRS COMPARISON PLOTS

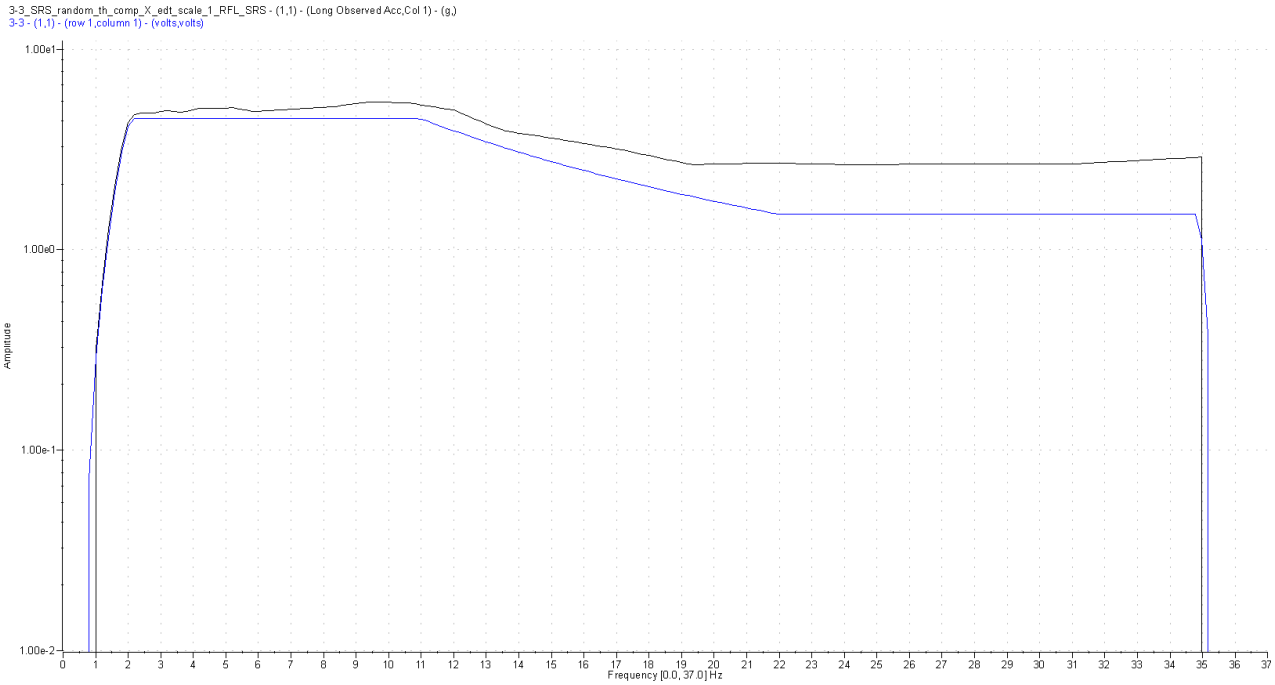

Figure 8. RRS vs TRS Plot in X Axis

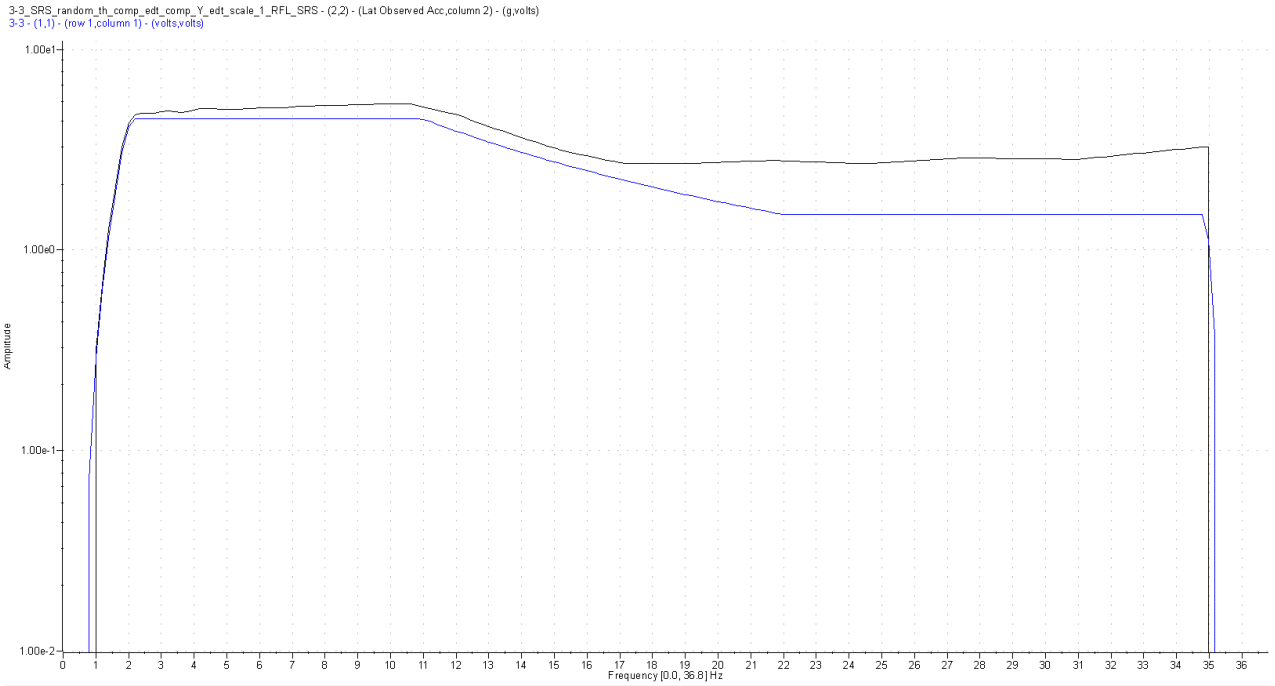

Figure 9. RRS vs TRS Plot in Y Axis

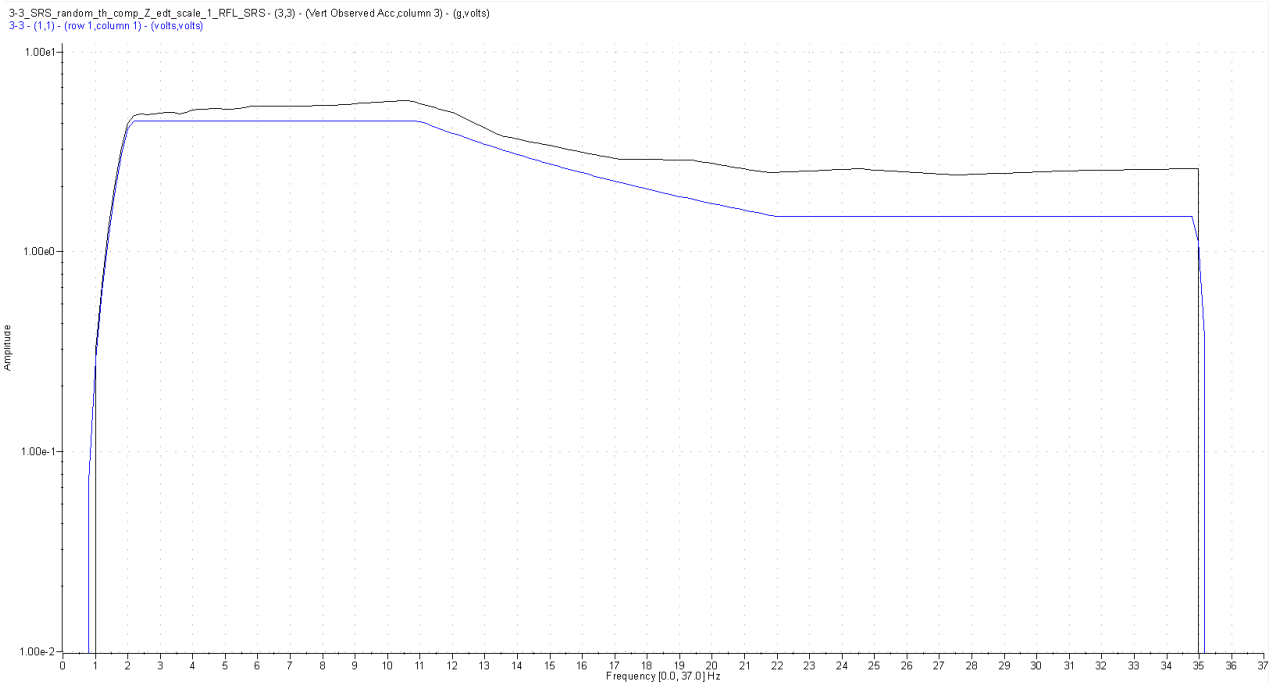

Figure 10. RRS vs TRS Plot in Z Axis

Blue curves in the plots are RRS (required response spectrum)
Black curves in the plots are TRS (test response spectrum)

Test response spectrum (TRS) enveloped required response spectrum (RRS) throughout the test frequency bandwidth during tests. Please see *4.Test Data Specifications* section for details.

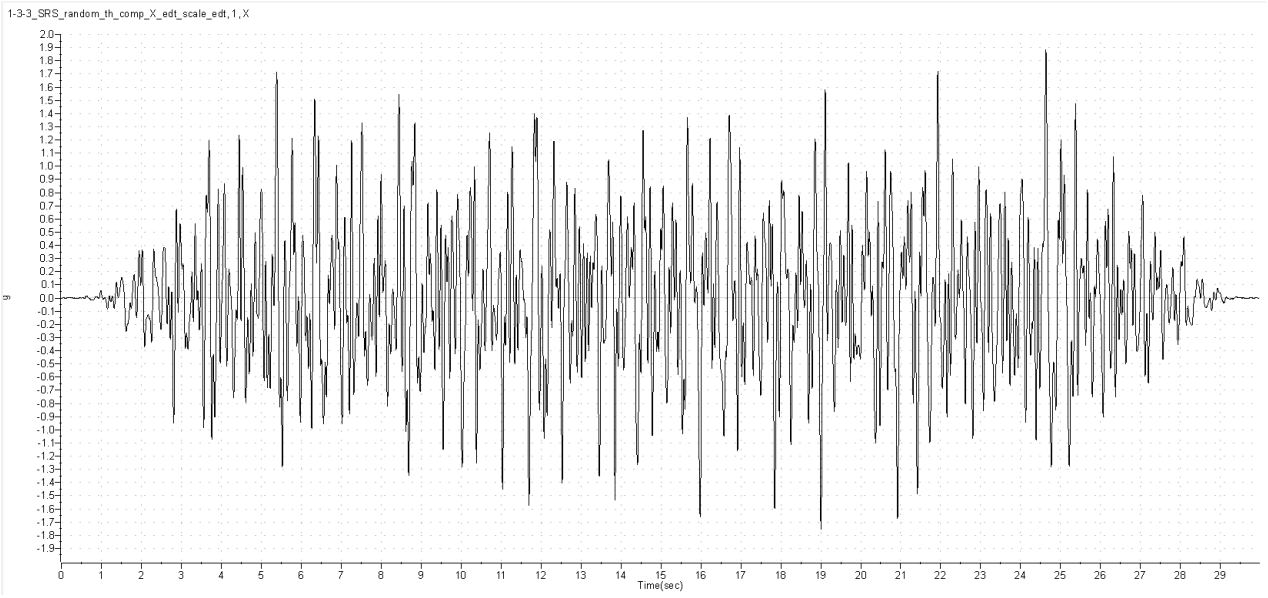

Figure 11. Required Time History Seismic Data in X Axis

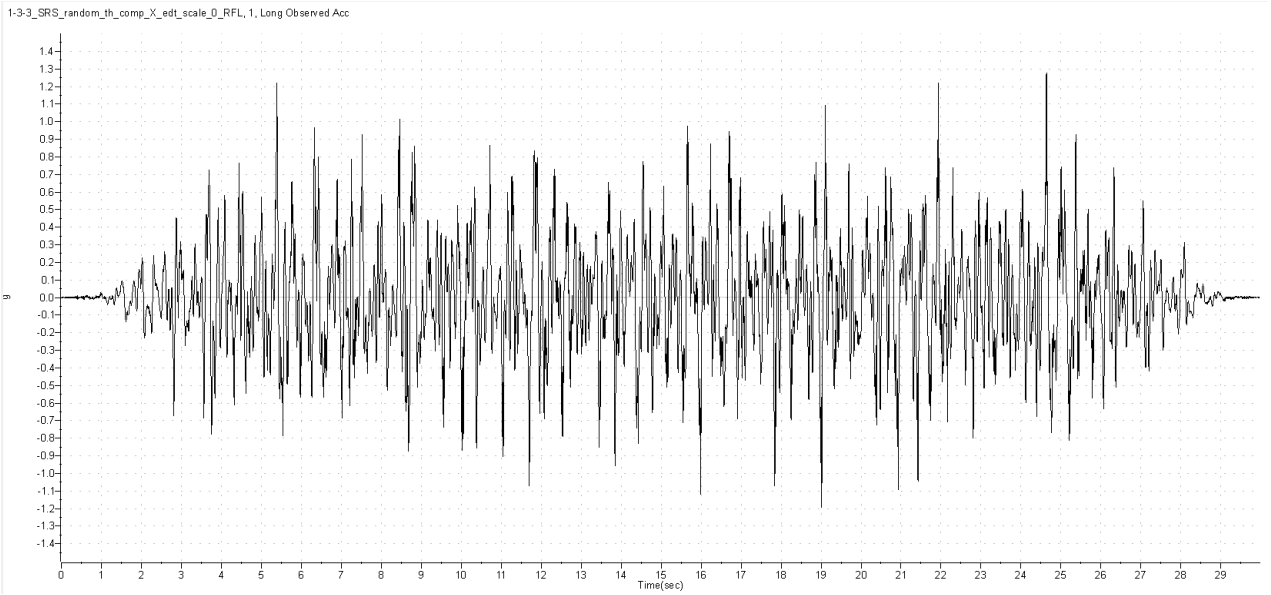

Figure 12. Observed Time History %50 of Seismic Data in X Axis (S1)

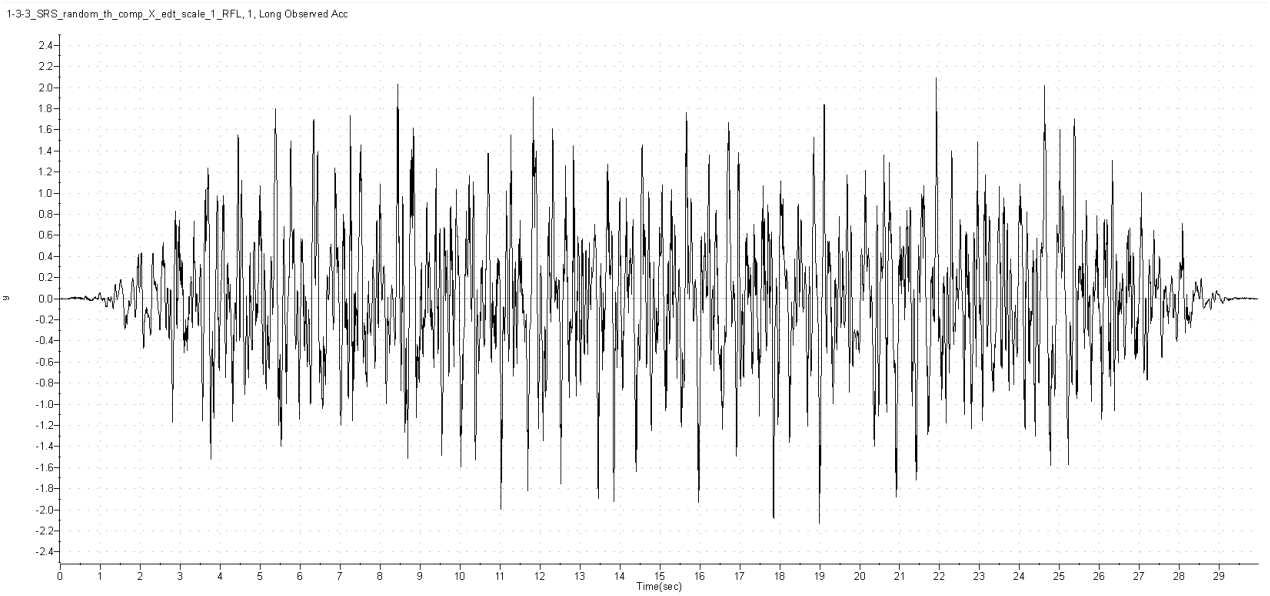

Figure 13. Observed Time History Seismic Data in X Axis (S2)

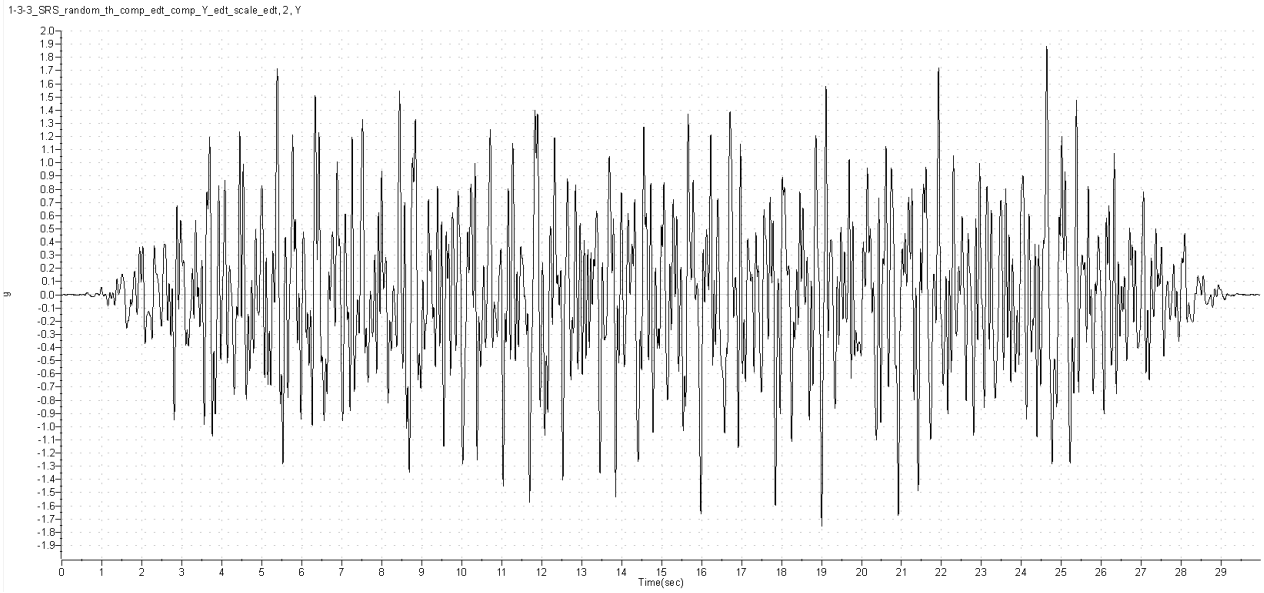

Figure 14. Required Time History Seismic Data in Y Axis

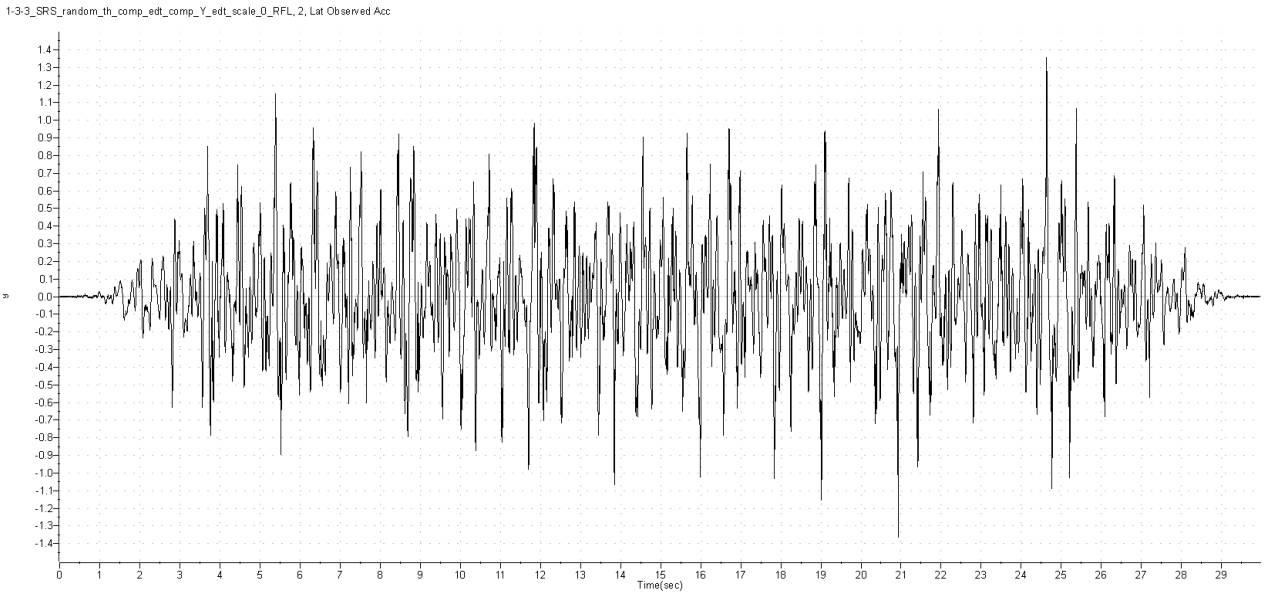

Figure 15. Obtained Time History %50 of Seismic Data in Y Axis (S1)

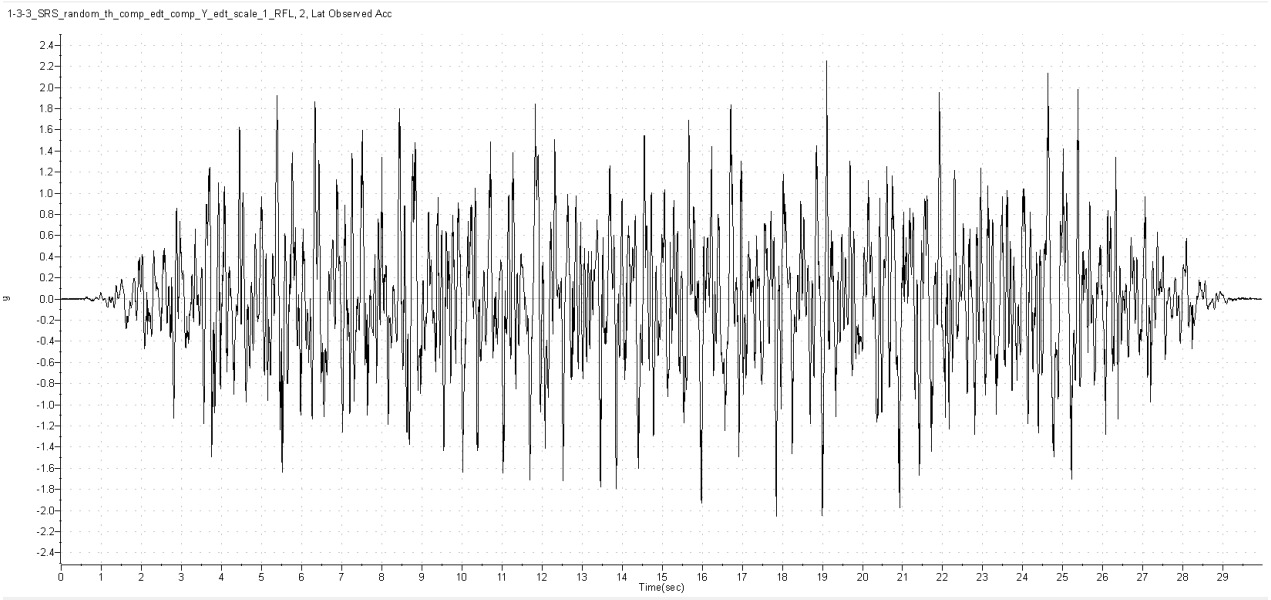

Figure 16. Obtained Time History Seismic Data in Y Axis (S2)

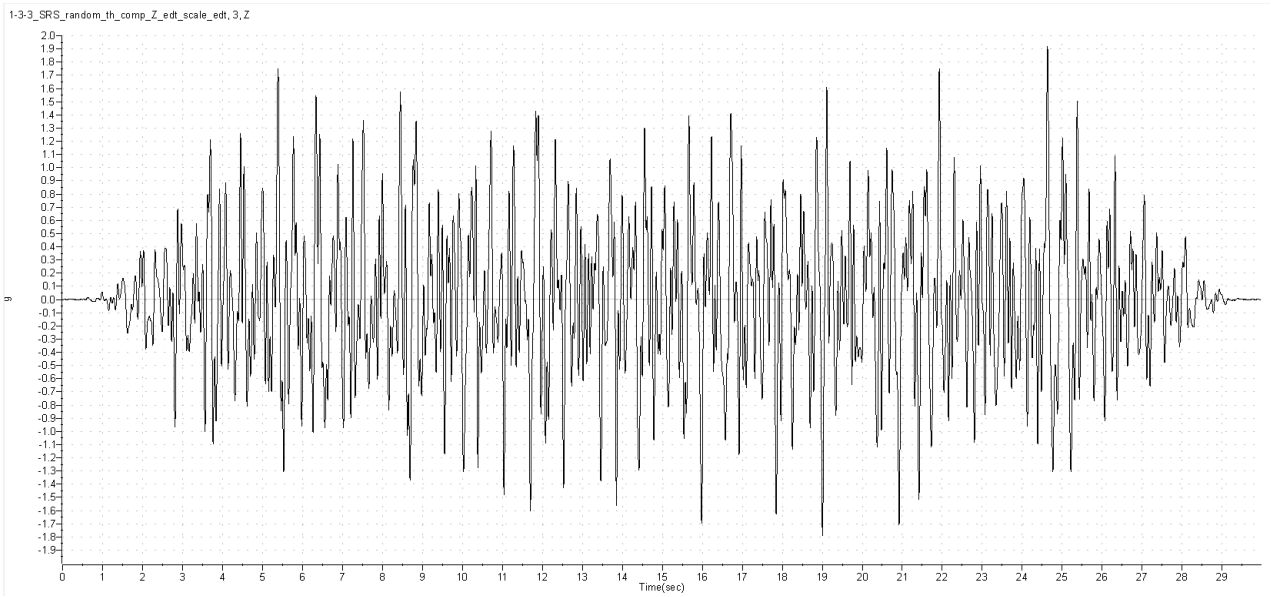

Figure 17. Required Time History Seismic Data in Z Axis

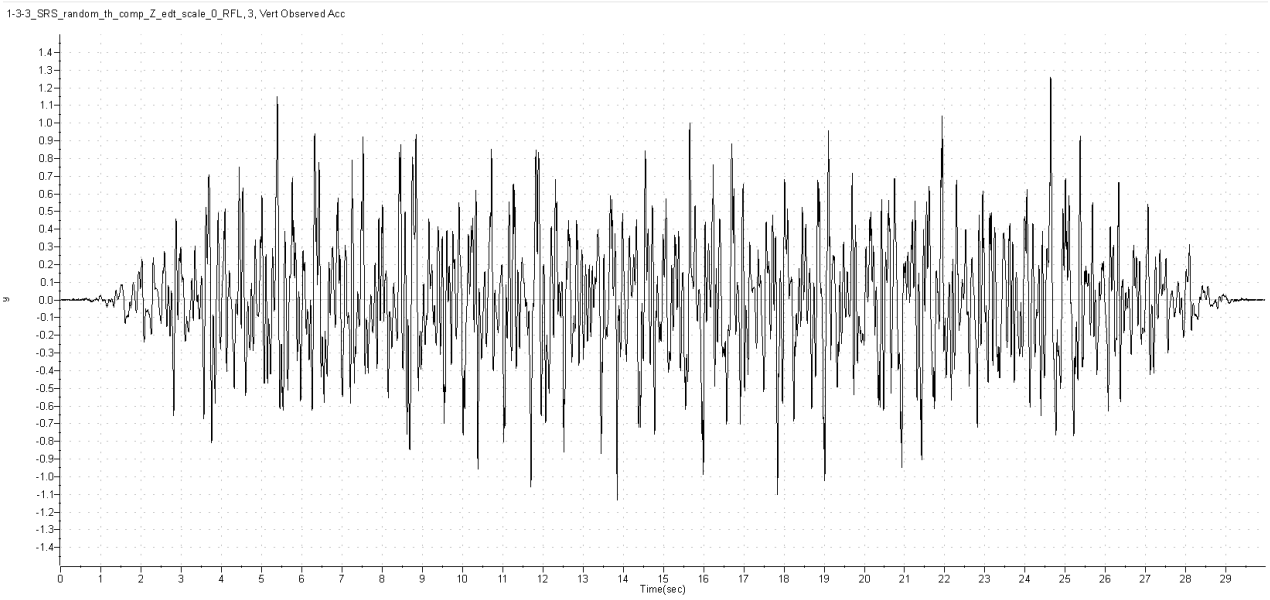

Figure 18. Obtained Time History %50 of Seismic Data in Z Axis (S1)

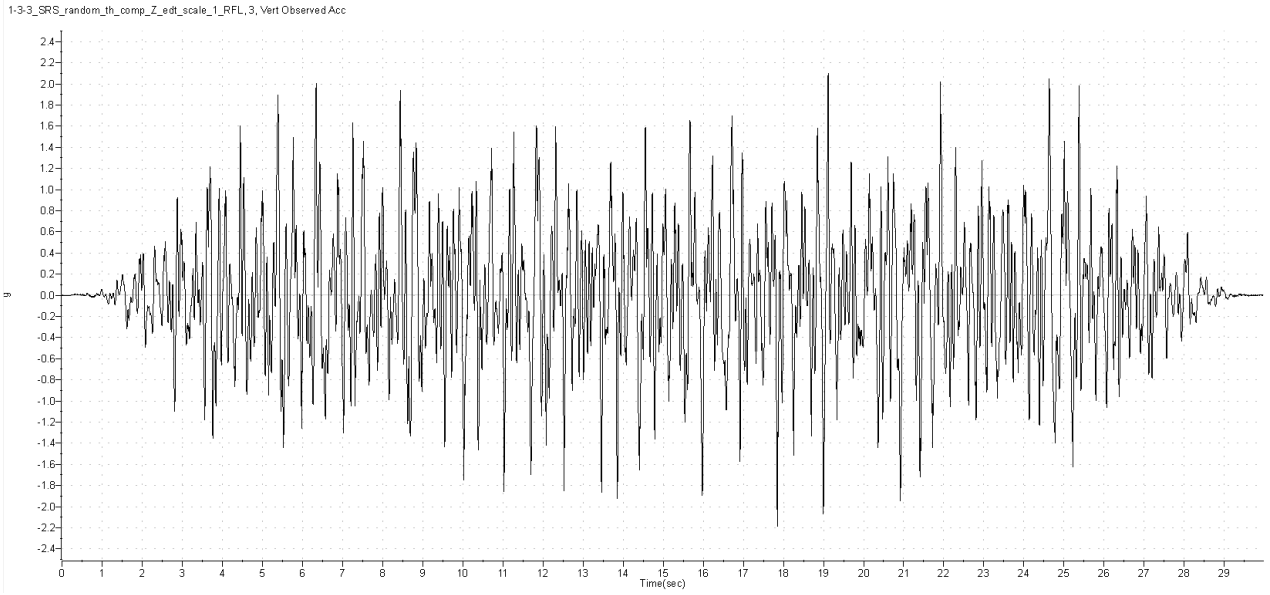

Figure 19. Obtained Time History Seismic Data in Z Axis (S2)

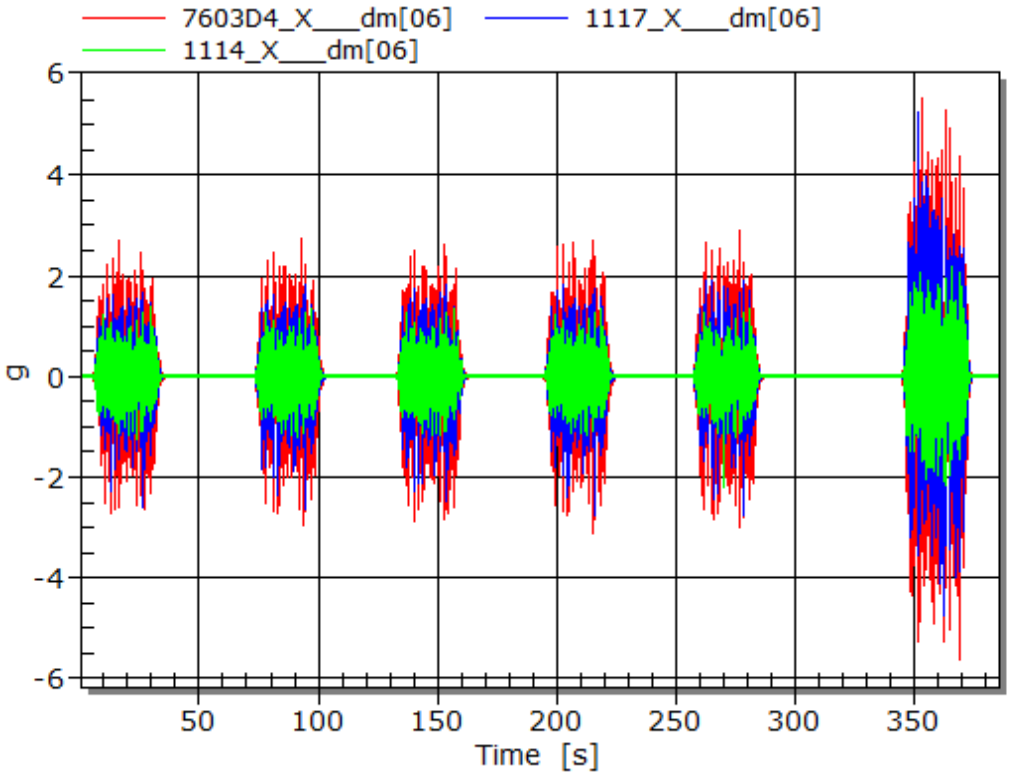

Figure 20. Observed Time History Acceleration Data on UUT during seismic test in X Axis

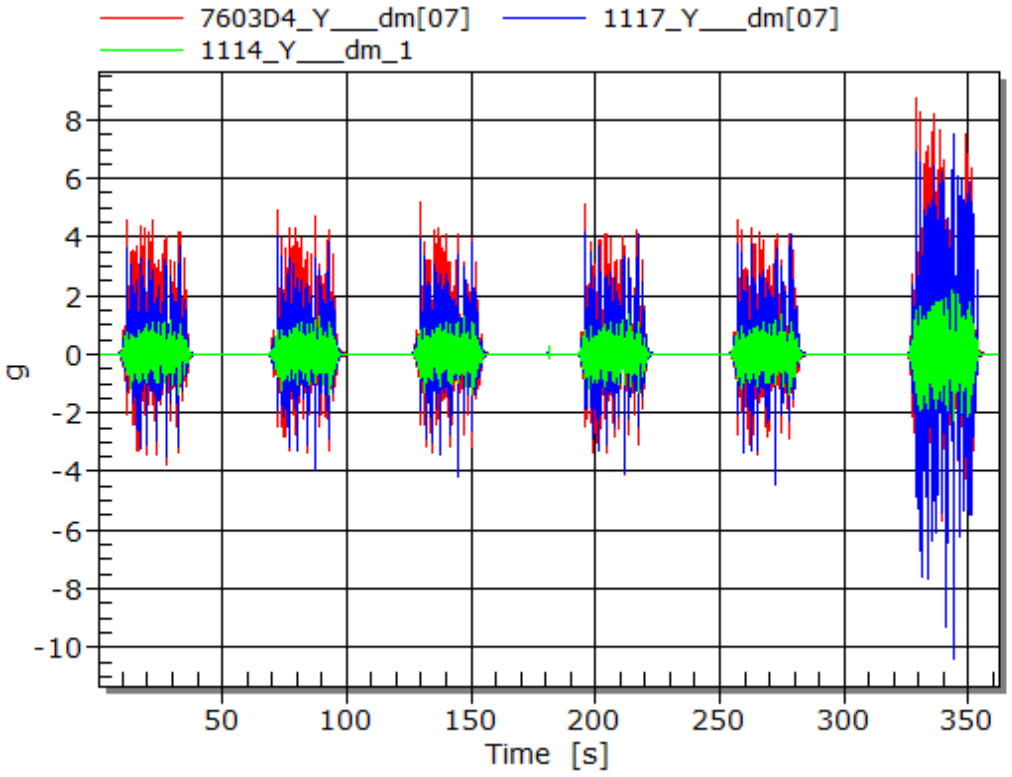

Figure 21. Observed Time History Acceleration Data on UUT during seismic test in Y Axis

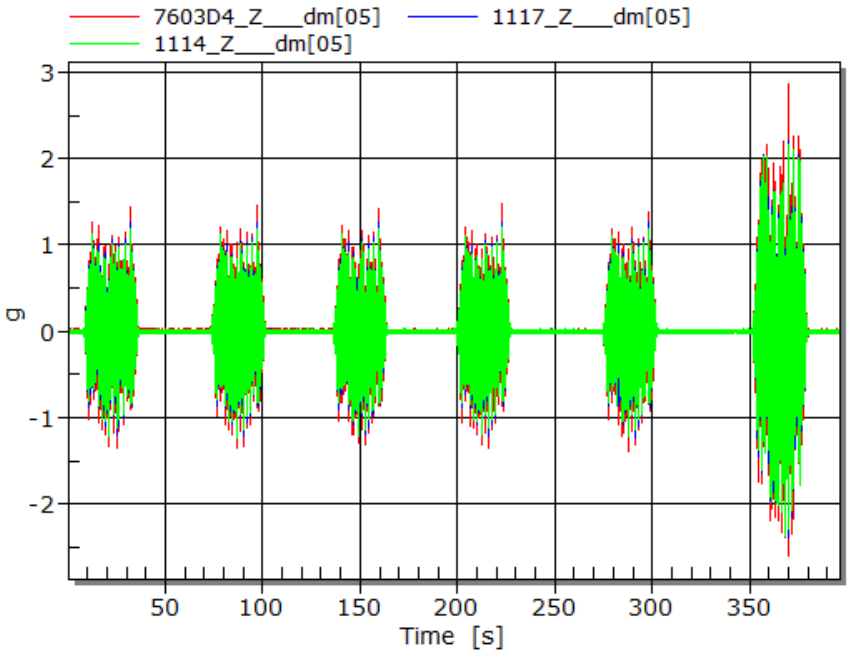

Figure 22. Observed Time History Acceleration Data on UUT during seismic test in Z Axis

Acc No	Location	Description
1114	1	Bottom of UUT
1117	2	COG of UUT
7063D4	3	Top of UUT

Table 6. Accelerometer location descriptions

The transverse movements should be less than 25% of the movement in the main direction (main movement) according to the EN/IEC 60068-2-57 standard. Test recordings can be seen below.

Measurements taken on the X, Y, and Z axes during the X-axis test:

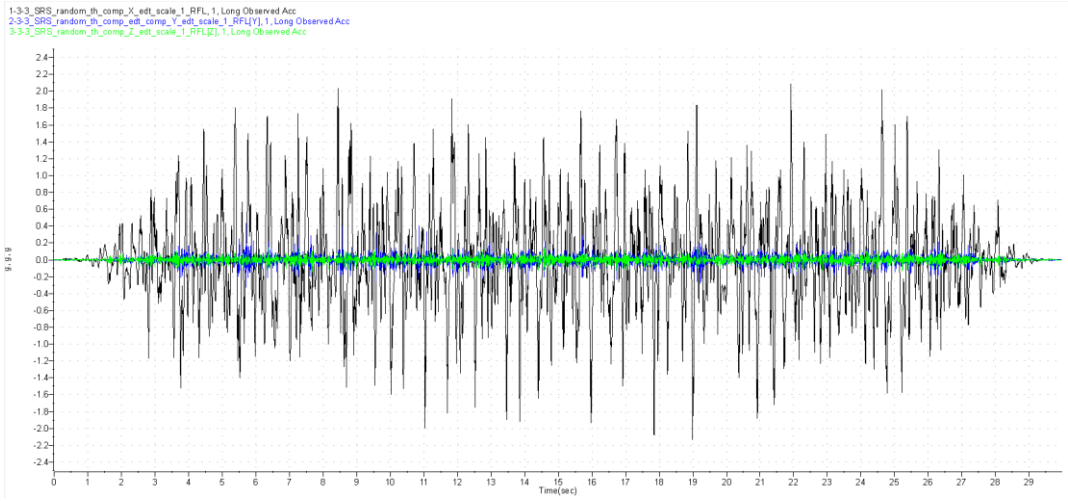

Figure 23. Observed Data in X axis

Measurements taken on the X, Y, and Z axes during the Y-axis test:

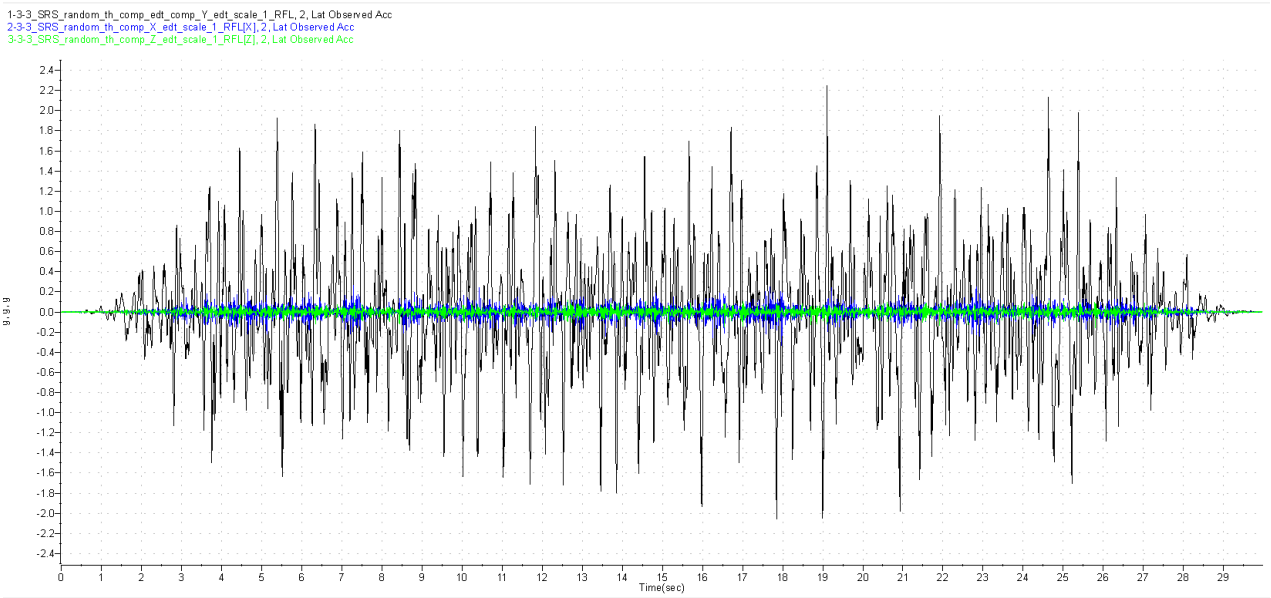

Figure 24. Observed Data in Y axis

Measurements taken on the X, Y, and Z axes during the Z-axis test:

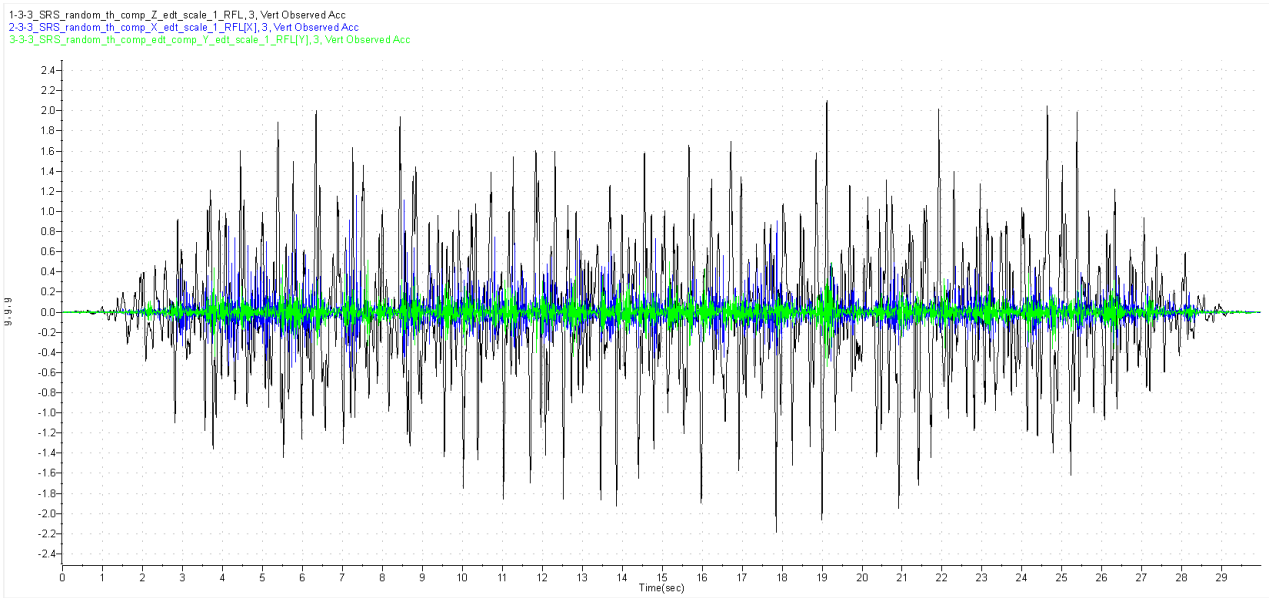

Figure 25. Observed Data in Z axis

6. RESONANCE INVESTIGATION RESULTS

After resonance investigations applied with sine sweeps, result table is below:

UUT Resonance Frequency Table					
Sequence	**Acc No**	**UUT**	**Resonance Frequency [Hz]**		
		Description	**Front-to-Back**	**Side-to-Side**	**Vertical**
Pre Test	1114	Bottom	-	-	-
	1117	COG	7,56	7,32	-
	7063D4	Top	7,56	7,32	-

Table 7. UUT resonance frequencies before test

UUT Resonance Frequency Table					
Sequence	**Acc No**	**UUT**	**Resonance Frequency [Hz]**		
		Description	**Front-to-Back**	**Side-to-Side**	**Vertical**
Post Test	1114	Bottom	-	-	-
	1117	COG	4,51	4,15	-
	7063D4	Top	4,51	4,15	-

Table 8. UUT resonance frequencies after test

Front-to-Back direction of UUT is X axis of test equipment (MAST)
Side-to-Side direction of UUT is Y axis of test equipment.
Vertical direction of UUT is Z axis of test equipment.

The changes of the first natural frequencies between before and after the test are represented:

- 40% decrease was observed on the X axis.
- 43% decrease was observed on the Y axis.
- No change on the Z axis.

These observations do not affect pass/fail criteria of the test standard. Table 9 shows the calculated damping parts of the general natural frequencies of the UUT. In these calculations, the accelerometer data at the top of the UUT is used.

UUT directions	**MAST directions**	**Damping Ratio**	**Damping Ratio**
		Pre Test	**Post Test**
Front-to-Back	X	4%	2%
Side-to-Side	Y	2%	3%
Vertical	Z	-	-

Table 9. Damping ratios calculated with Half Power Bandwidth Method according to EN/IEC 60068-3-3

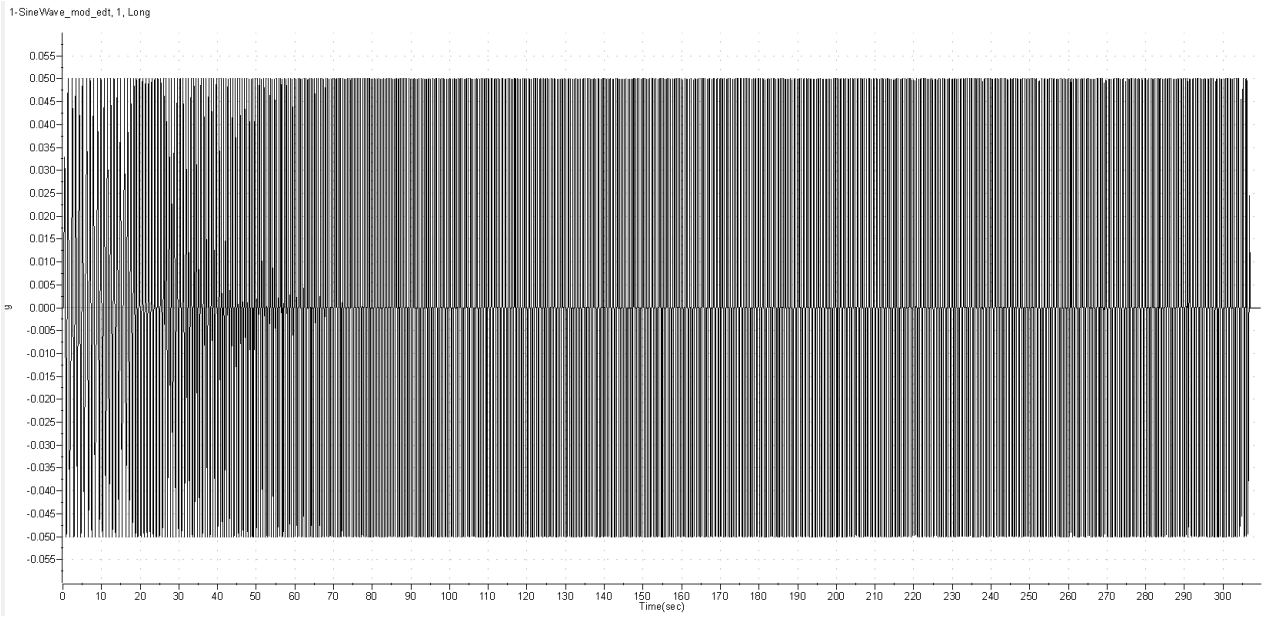

Figure 26. Sine Sweep Resonance Investigation Command Signal in Time Domain

Pre-test resonance investigation plots (sine sweep):

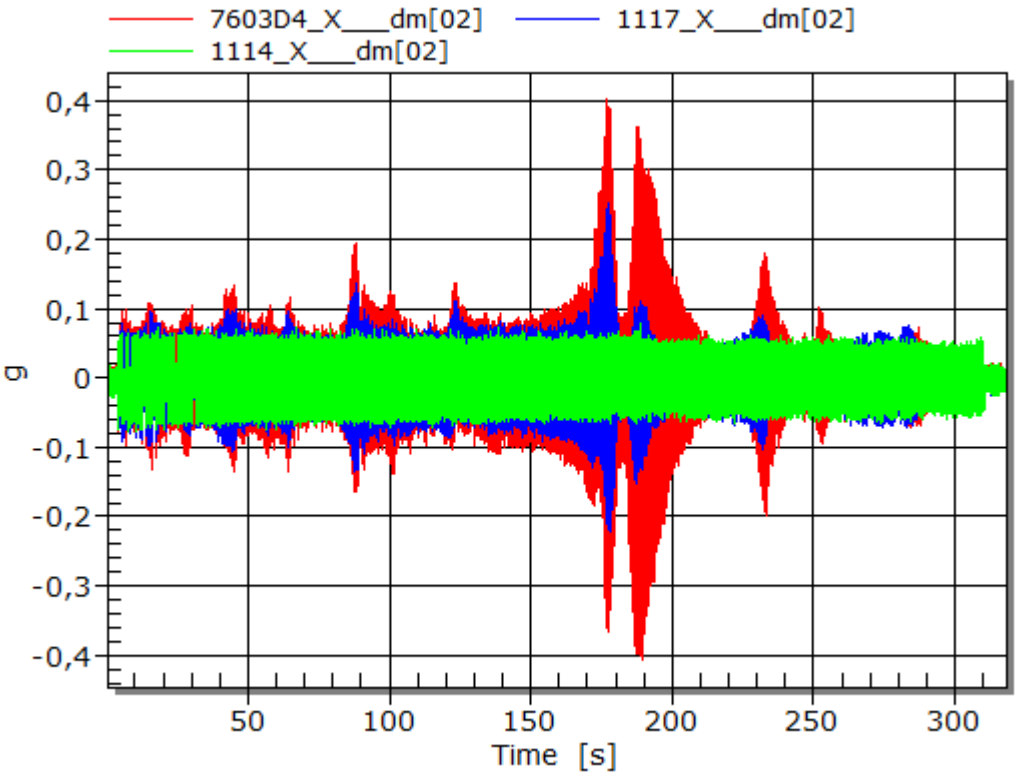

Figure 27. Pre Test Sine Sweep Resonance Investigation in Time Domain in X axis

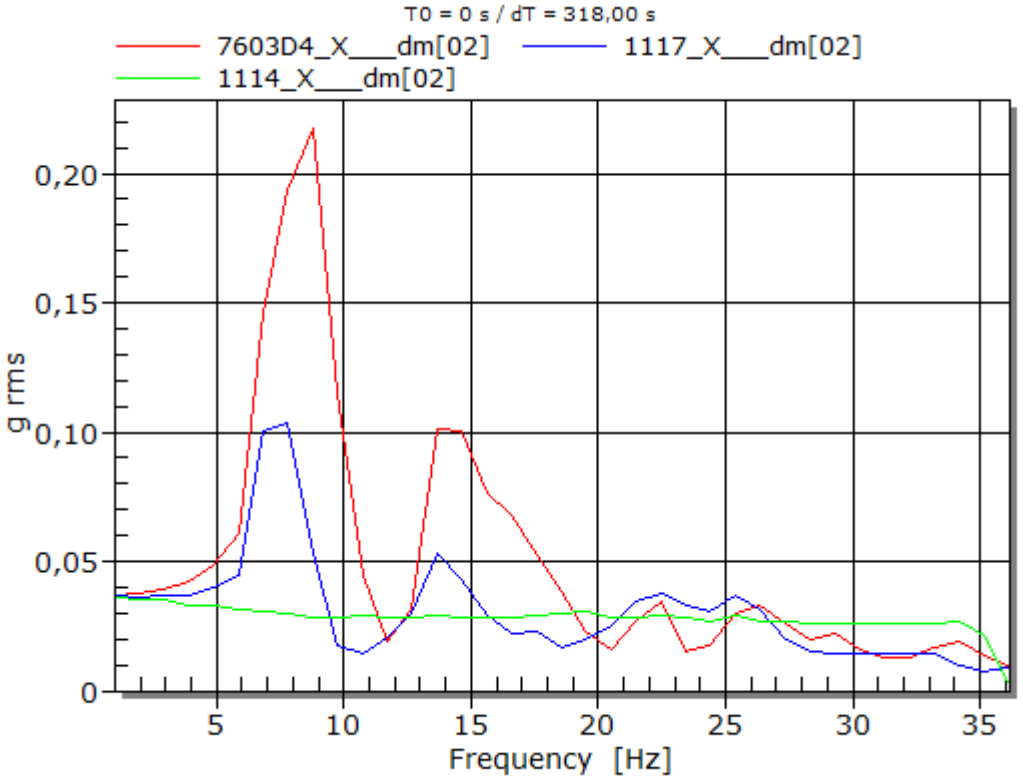

Figure 28. Pre Test Sine Sweep Resonance Investigation in Frequency Domain in X axis

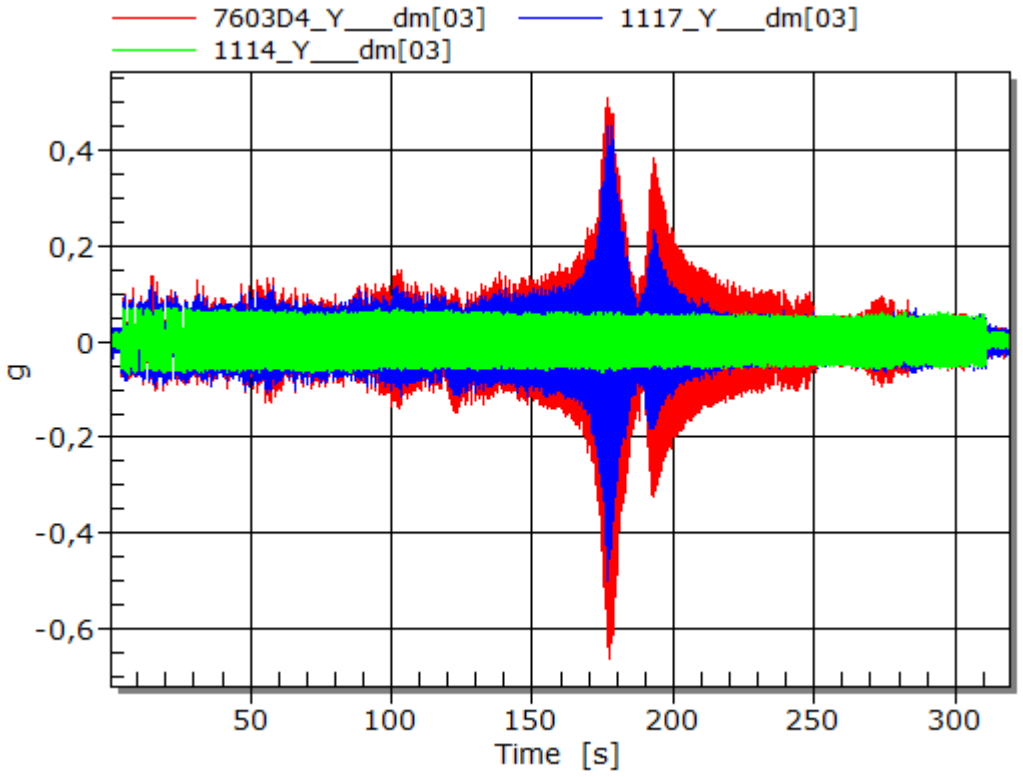

Figure 29. Pre Test Sine Sweep Resonance Investigation in Time Domain in Y axis

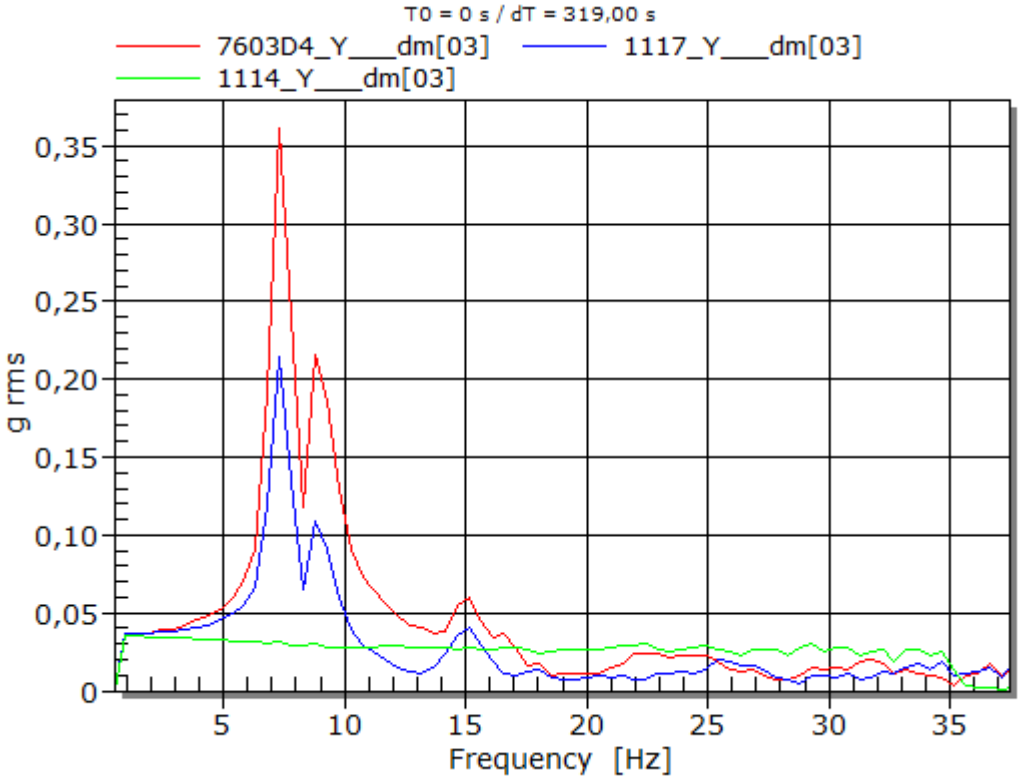

Figure 30. Pre Test Sine Sweep Resonance Investigation in Frequency Domain in Y axis

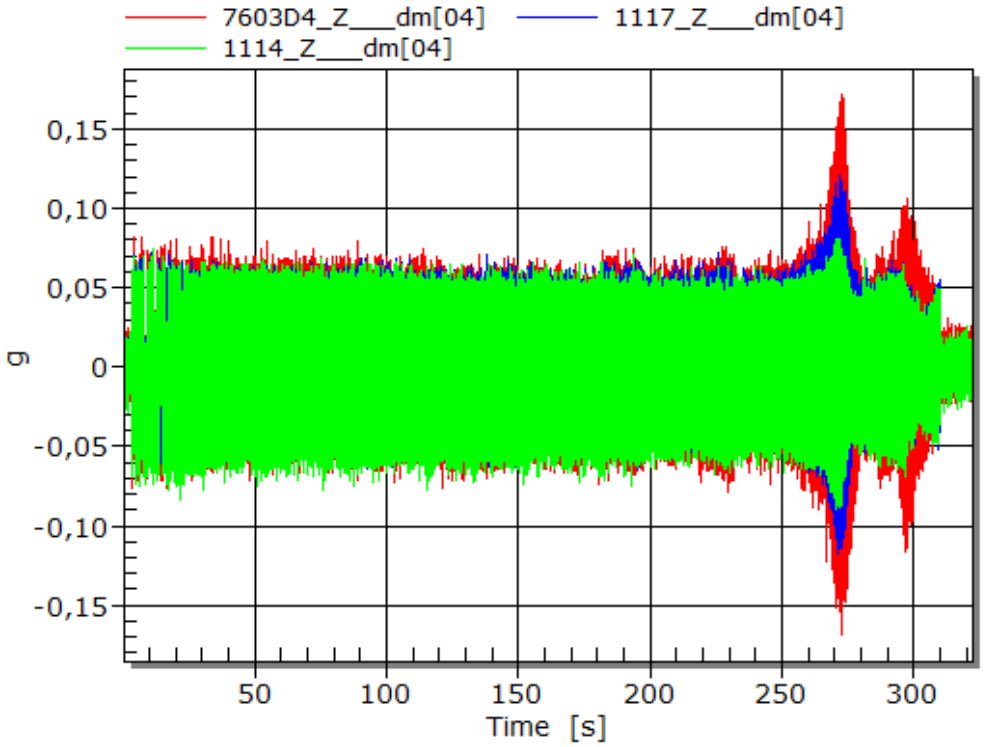

Figure 31. Pre Test Sine Sweep Resonance Investigation in Time Domain in Z axis

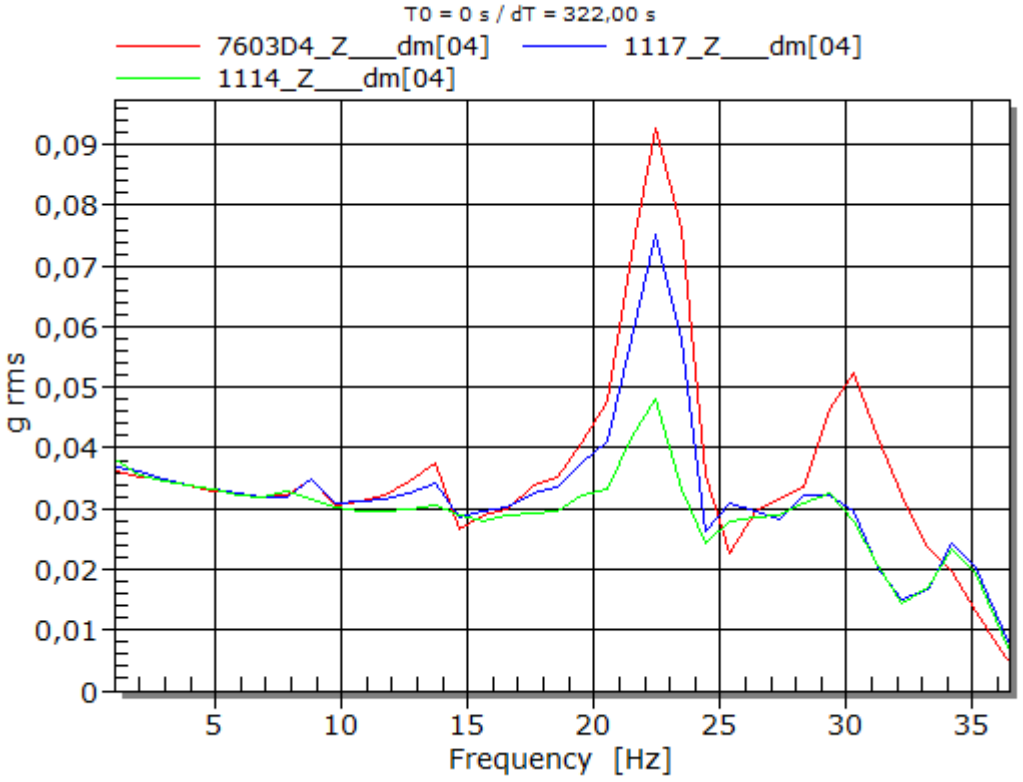

Figure 32. Pre Test Sine Sweep Resonance Investigation in Frequency Domain in Z axis

Post-test resonance investigation plots (sine sweep):

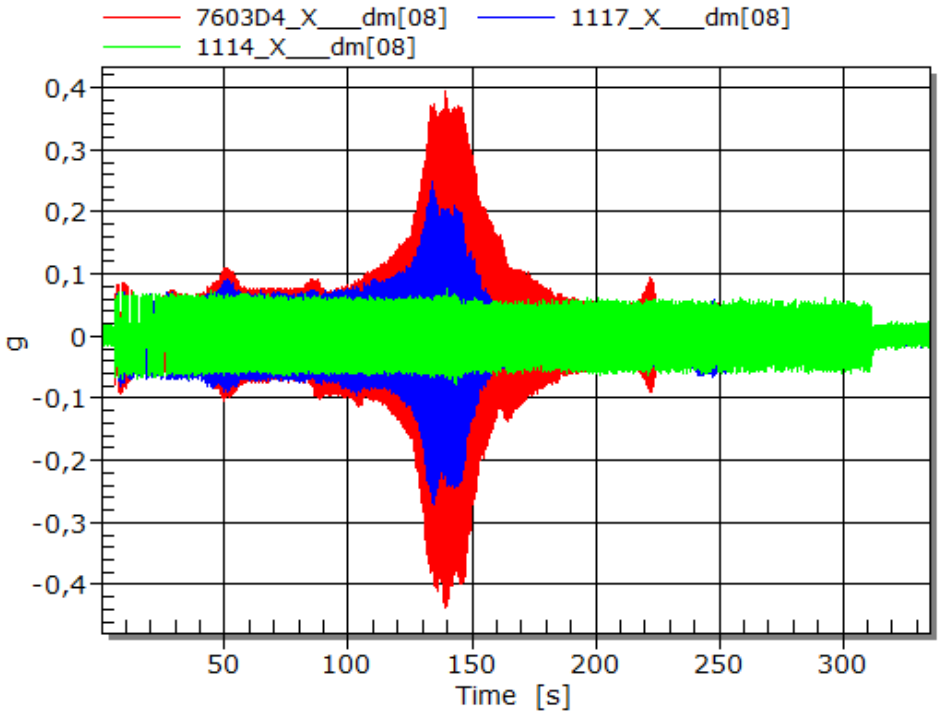

Figure 33. Post Test Sine Sweep Resonance Investigation in Time Domain in X axis

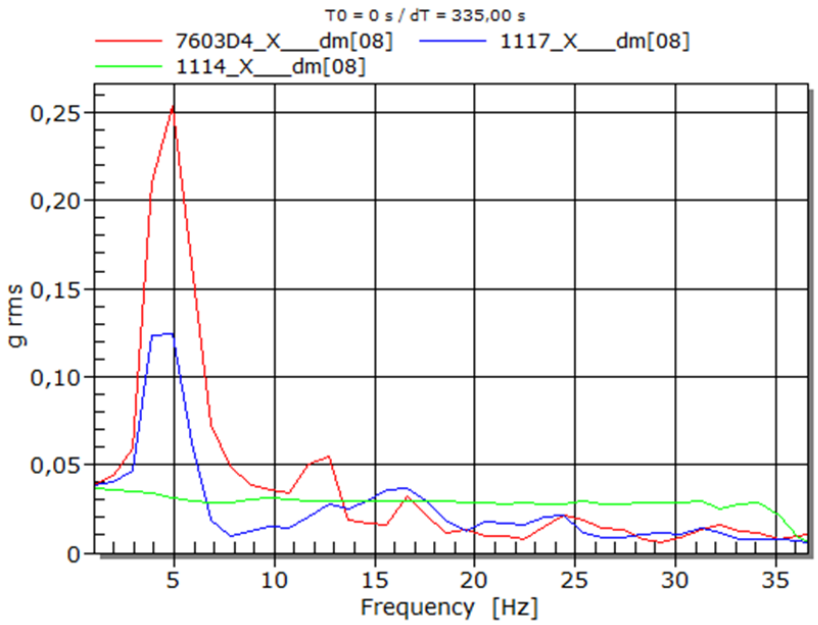

Figure 34. Post Test Sine Sweep Resonance Investigation in Frequency Domain in X axis

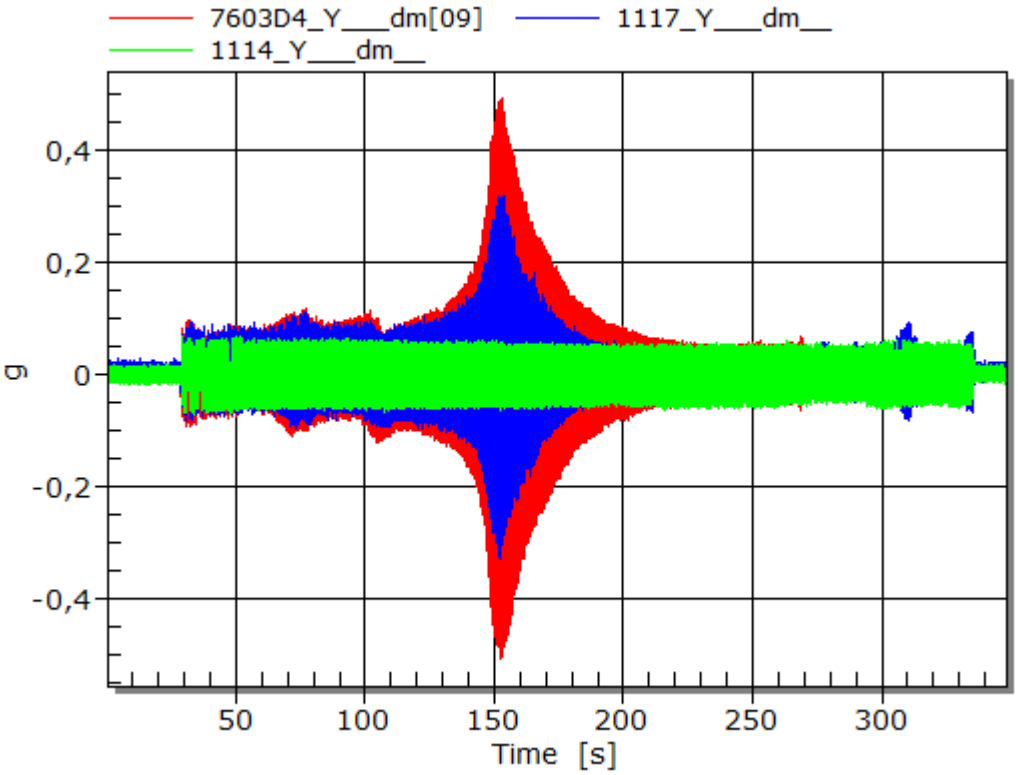

Figure 35. Post Test Sine Sweep Resonance Investigation in Time Domain in Y axis

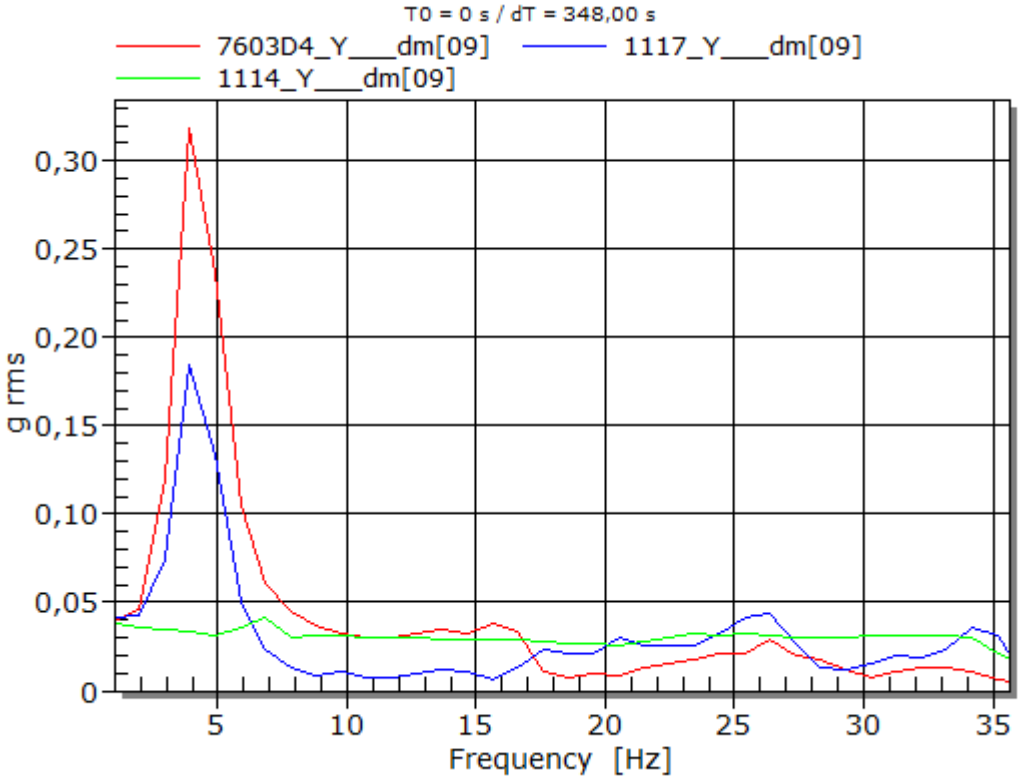

Figure 36. Post Test Sine Sweep Resonance Investigation in Frequency Domain in Y axis

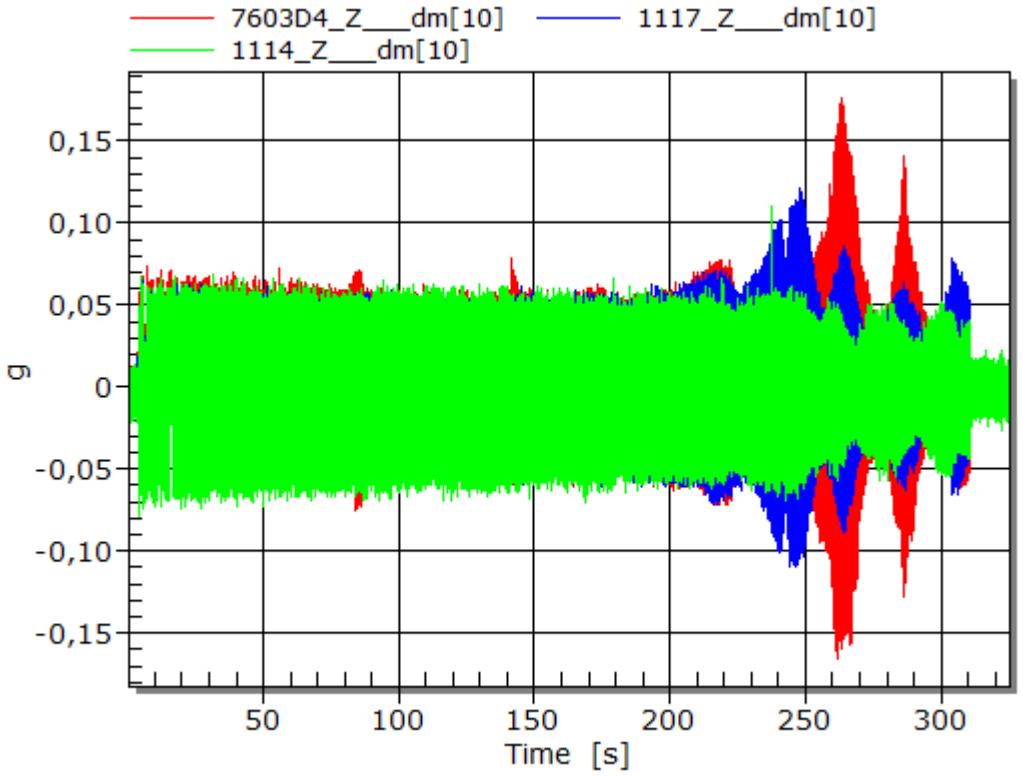

Figure 37. Post Test Sine Sweep Resonance Investigation in Time Domain in Z axis

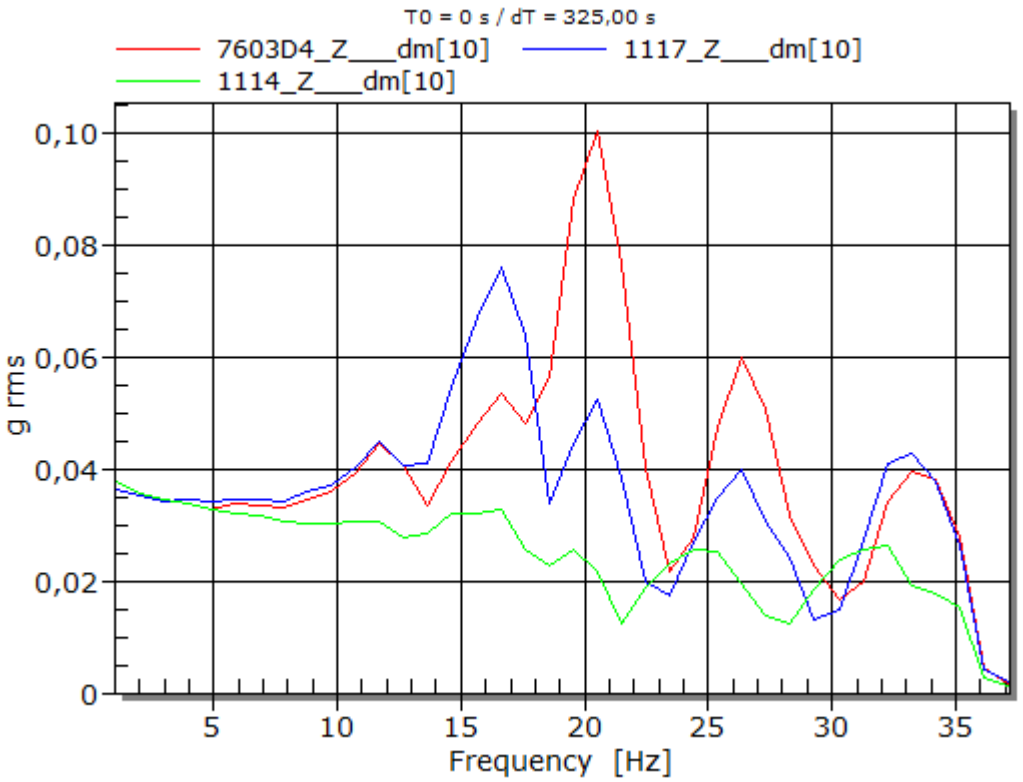

Figure 38. Post Test Sine Sweep Resonance Investigation in Frequency Domain in Z axis

7. PICTURES

7.1. Before the test

Picture 1. General View

Picture 2. General View

Picture 3. Front View – Doors Open

Picture 4. Shelf Details

Picture 5. Door Connection Details

Picture 6. Inner Fastening Details

Picture 7. Inner Fastening Details

Picture 8. Fastening Details

7.2. After the test

Picture 9. General View

Picture 10. General View

Picture 11. General View

Picture 12. Front View – Doors Open

Picture 13. Shelf Details

Picture 14. Door Connection Details

Picture 15. Inner Fastening Details

Picture 16. Fastening Details

8. TECHNICAL DRAWINGS

DATASHEET

yespan

ISO9001-2015
TS EN 60439
TS EN 62208

CE
GOST-R

H SERIES

Free Standing Type Modular Enclosure

DIMENSIONS: W(1200) x H(2200+200) x D(800)

PLACE OF USE - PROTECTION CLASS: INDOOR IP 65

SHEET STEEL:

	Thickness	Material	Coating
Enclosure frame	2,50 mm	Galvanized CRS	7035 / 7035
Door	2,50 mm	Galvanized CRS	7035 / 7035
Side/Back wall	2,50 mm	Galvanized CRS	7035 / 7035
Side mounting plate	2,50 mm	Galvanized CRS	Unpainted
Back mounting plate	2,50 mm	Galvanized CRS	Unpainted
19" Swing Frame	2,50 mm	Galvanized CRS	Unpainted
Swing Frame Front Mounting Plate	2,00 mm	Galvanized CRS	Unpainted
Cover Plates	2,00 mm	Galvanized CRS	7035 / 7035
Bottom Plate	2,50 mm	Galvanized CRS	Unpainted
Plinth Corner	3,00 mm	Galvanized CRS	Unpainted
Plinth Cover	2,50 mm	Galvanized CRS	Black
Canopy	2,50 mm	Galvanized CRS	7035 / 7035

SURFACE TREATMENT:

Nanoceramic coating (when coating applied).

COATING:

Ral 7035 wrinkle UV resistive polyester powder coating (Inside)
Ral 7035 wrinkle UV resistive polyester powder coating (Outside)
Ral 9005 Black Powder Coating (Plinth Cover)

LOCK:

Door - Polyamide Handle with Euro Cylinder Insert (1325-U2 Emka)
SF- Polyamide Handle with Push Button Insert (1325-U1 Emka)

HINGES:

Hidden hinges, zinc
130° Door opening angle

INSETS:

Door earthing cable (1 piece for each door)
Canopy
SF stopper
Back Mounting Plate
Side Mounting Plate (2 pcs per panel)
Brackets for Cable Ducts on SF (5 pcs per panel)
Front Mounting Plate

MISCELLANEOUS:

Galvanized steel: 275 gr/m² Zinc
Glazed Door with 16 mm tempered glass with UV protection

YESPAN ELEKTRİK SAN. ve TİC. LTD. ŞTİ.
Umurlu Mah. Aydın Organize Sanayi Bölgesi 2.Cad. No: 41
09830 EFELER - AYDIN / TÜRKİYE
PHONE: 00 90 256 211 58 58 (pbx) FAX: 00 90 256 211 38 89
http://www.yespan.com e-mail: info@yespan.com

9. CONCLUSION

After the test,

- Plastic deformation was not observed on UUT.
- Side and back covers of UUT were still engaged.
- Doors of UUT were still engaged and could operate as intended.
- Connections and fasteners inside UUT completed the test in the assembled condition without any loss of torque.
- No torque loss was observed on fasteners between MAST and UUT.

UUT provides the seismic criteria of TS EN/IEC 60068-3-3 standard. However, since there are no circuit breakers and busbars on the test sample, functional continuity checks as specified in the EN 60068-3-3 standard could not be performed and a criterion assignment to the test sample could not be performed.

According to Section 4.4 – Qualification Criteria, UUT is assigned as following classes:

1. Criterion 0: Equipment (UUT) subjected to seismic testing which experienced no malfunction either during or after the test.
2. Criterion 1: Equipment subjected to seismic testing which suffered a malfunction during the test but reverted to its correct state after the test.
3. Criterion 2: Equipment subjected to seismic testing which experienced a malfunction during the test and required resetting or adjustment on completion of the test but required no replacement or repair.