

## SKÝRSLA

### ÞYKKTARMÆLING OG SEGULSVIÐSSKÖNNUM

### Á OLÍUGEYMI 4 Á ESKIFIRÐI

ULTRASONIC THICKNESS & MAGNETIC FLUX LEAKAGE MEASUREMENT



UTM SKÝRSLA NR: TM-MFL-240932-ESKIFJ-B204-2024

**DAGSETNING: MARS 2024**

**FASTANÚMER: 217-0616 040101**

**EIGANDANÚMER: 740-B204**

**MÆLINGAR FRAMKVÆMDAR , STAÐUR: ESKIFJÖRÐUR**

### **Framkvæmd mælinga**

Þykktarmælingu og segulsviðsskönnun framkvæmdi Gísli A. Guðmundsson hjá HD ehf í Kópavogi. Upplýsingar varðandi aðstæður, notkun geyma o.fl. veitti Andri Vífilsson hjá Gallon ehf.

Framkvæmd þykktarmælinga, segulsviðsskönnunar og sjónskoðunar á geyminum fóru fram í Mars mánuði 2024. Geymirinn er standandi stálgeymir og var botn hans mældur ásamt neðsta umfari.

### **Þykktarmælingar**

Varðandi staðsetningu mælistaða og niðurstöður þykktarmælinga á geyminum er hér vísað á meðfylgjandi teikningar (1 stk.). Allar gólfplötur eru mældar á svipaðan hátt þ.e.a.s. miðast er við að hafa mælinguna í miðri plötu, aðeins var tekin einn punktur í plötu. Sökum tæringar var bætt við mælingum.

### **Segulsviðsmælingar**

Gólfskanninn er kvarðaður á 6mm plötu, 8, 10, 14 og 18mm göt eru boruð í plötuna þar til 3mm efnisþykkt er eftir. Hugbúnaðurinn er stilltur þar til götin gefa rautt/appelsínugult merki á skjá. Gólfskannanum er rennt yfir alla fleti sem hann kemst yfir. Svelgir, rör eða ójafn botn geta gert gólfskannanum ókleift til mælingar.

### **Sjónskoðun**

Farið er um allan geyminn með sterkt ljós og því haldið rétt við yfirborðið svo pyttir og misfellur sjáist betur. Kverksuða geymis er skoðuð sérstaklega vel ásamt öðrum suðum innanvert í geymi. Þá eru svelgir einnig skoðaðir mjög vel ásamt þeim stöðum þar sem gólfskanni kemst ekki.

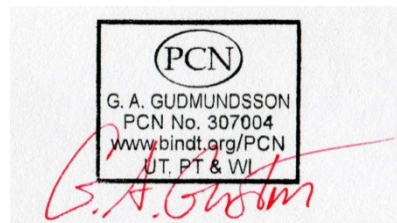
### **Niðurstöður**

Geymir er málaður að hluta að innan eða þ.e.a.s. botn og neðsta umfarið. Geymir er í góðu ásigkomulagi að innanverðu, gólf er ótært að innanverðu. Gólfskanni gaf ekki tilkynna um tæringu neðanfrá. Neðsta umfar lítur vel út

Sjá teikningar og ljósmyndir. Eigandi geymis var látin vita. Sjá meðf. niðurstöður mælingar. Öll uppgefin mál á teikningum eru í mm.

Akureyri, 28 mars 2024

Virðingarfyllst.



Gísli Arnar Guðmundsson

## STAÐFESTING ÞYKKTARMÆLINGA

**SKÝRSLA NR.:** TM-MFL-240932-ESKIFJ-B204-2024  
**DAGS. SKÝRSLU:** 28 mars 2024  
**DAGS. FRAMKV.:** 12 mars 2024  
**EIGANDI GEYMIS:** Gallon ehf  
**REKSTRARAÐILI:** Gallon ehf  
**STAÐUR** Eskifjörður  
**HVAÐ MÆLT:** Geymir B204  
**FASTANÚMER:** 217-0616 040101  
**EIGENDANÚMER:** 740-B204  
**SMÍÐAÁR:** 2002  
**MÆLIBÚNAÐUR:** MFE MK IV Tank Floor Scanner. Serial No.MK4-0016-A-TFS  
Olympus 45MG. 5 Mhz Serial nr: 130177407, skoðað og vottað þann 07.09.2023  
Stilliklossar (Calibration blocks): 3mm, 6mm 9mm 12mm og 18mm.  
Meðf. er vottorð mælibúnaðar (Statement of Calibration).

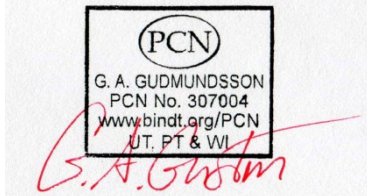
**FRAMKV. MÆLINGA:** Gísli Arnar Guðmundsson

**SKÍRTEINI (CERTIFICATE):** Ultrasonic Inspection – Level II  
PCN 307004. E021S6242877  
01/04/2022 - 31/03/2027

Hér staðfestist að framkvæmdar hafa verið þykktarmælingar á ofangreindum geymi, í eigu og rekstri Gallon ehf, að ósk rekstraraðila. Niðurstöður mælinga eru skráðar á meðfylgjandi blaðsíður ( teikningar ) og eru öll mál í mm. Alls eru þar skráðar 64 niðurstöður. Þykktarmælir og nemar tengdir búnaðinum voru sannreyndir og prófaðir með mælingum á stilliklossum fyrir, á meðan og að loknum mælingum.

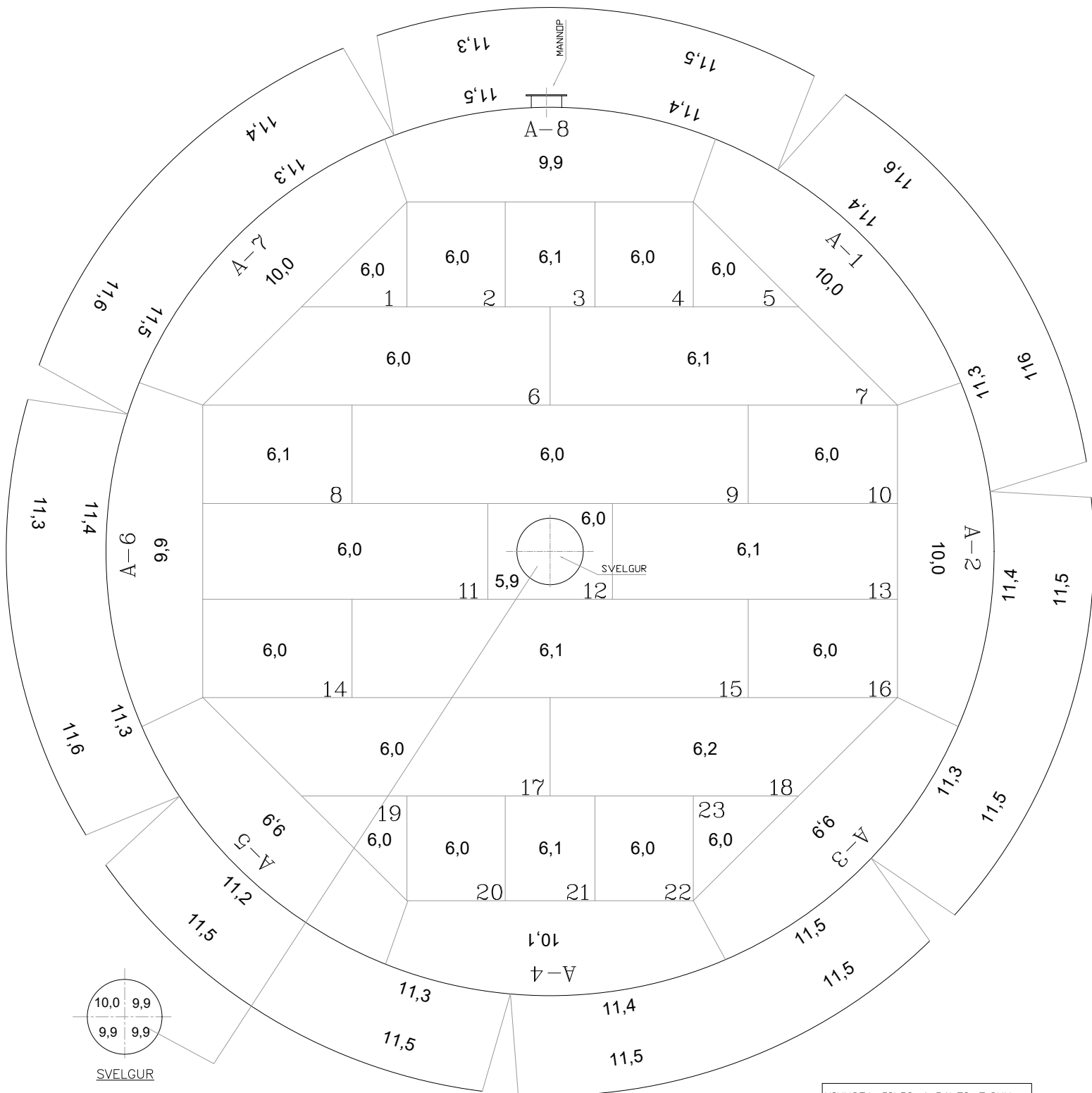
**Skoðað/dags./af:** 28/03/2024

**Samþykkt/dags./af:**



# ÞYKKTARMÆLING OG SEGULSVIÐSSKÖNNUN

GEYMIK - GÓLF - FYRSTA PLÖTURÖÐ



ENGIR TÆRINGARPYTTIR EDA SÝNILEGAR  
ÞYNNINGAR FUNDUST Í GÓLFPLÖTUM

MINNSTA GILDI á GÓLFI: 5,9MM  
MINNSTA GILDI á UMFARI: 11,2MM



ÞYKKTARMÆLINGAR (UTM)  
REKSTRARADILI: GALLON EHF  
TILVÍSUN OKKAR: 240932  
MÆLINGAR FRAMKV: 12/03-2024  
STAÐUR: ESKIFJÖRÐUR  
HLUTUR MÆLDUR: OLÍUGEYMIK 4  
FASTANÚMER: 217-0616 040101

TEIKNING ER EKKI Í MÆLIKVARÐA

## Myndir frá geymi B204



Mynd 1. Neðsta umfarið lítur vel út.



Mynd 2. Gólf geymis er málað og lítur vel út.



Mynd 3. Gólf geymis er málað og lítur vel út.



Mynd 4. Málning laus frá á lófastórum bletti.



Mynd 5. Gólf geymis er málað og lítur vel út.



Mynd 6. Þak geymis.



Mynd 7. Geymir lítur vel út að utan.



Mynd 8. Á nokkrum stöðum er gróður farin að myndast.





**ENTERPRISES  
INCORPORATED**

# MFE Scan Survey Report



**SKÝRSLA NR: TM-MFL-240932-B204-ESKIFJ-2024**

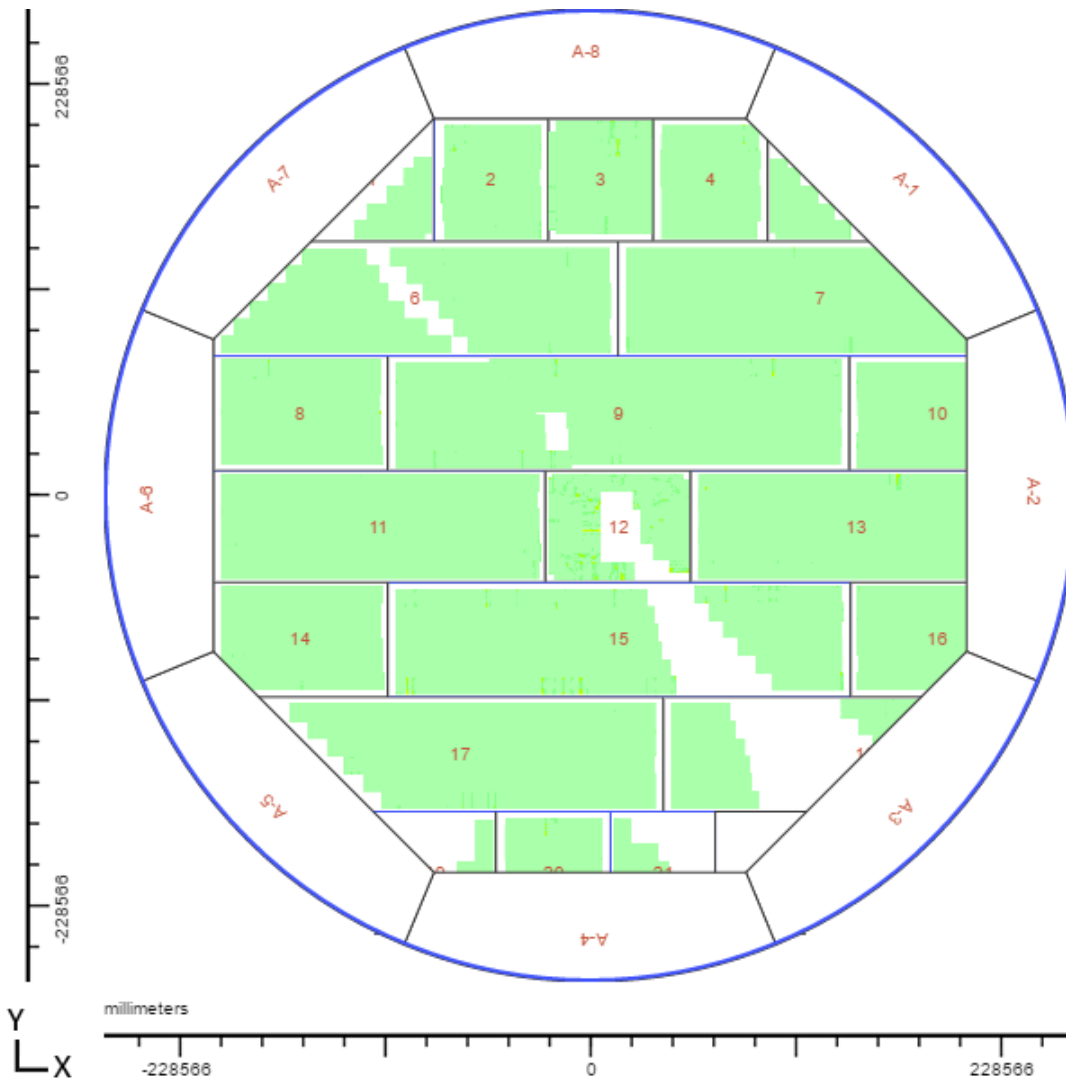
**Umsjónaraðili:** Gallon ehf  
**Unnið af:** Gísli Arnar Guðmundsson  
**Fyrirtæki:** HD ehf

**Dags.skoðanna:** 12 mars 2024  
**Dags.skýrslu:** 28 mars 2024  
**Umbeðið af:** Andri Vífilsson



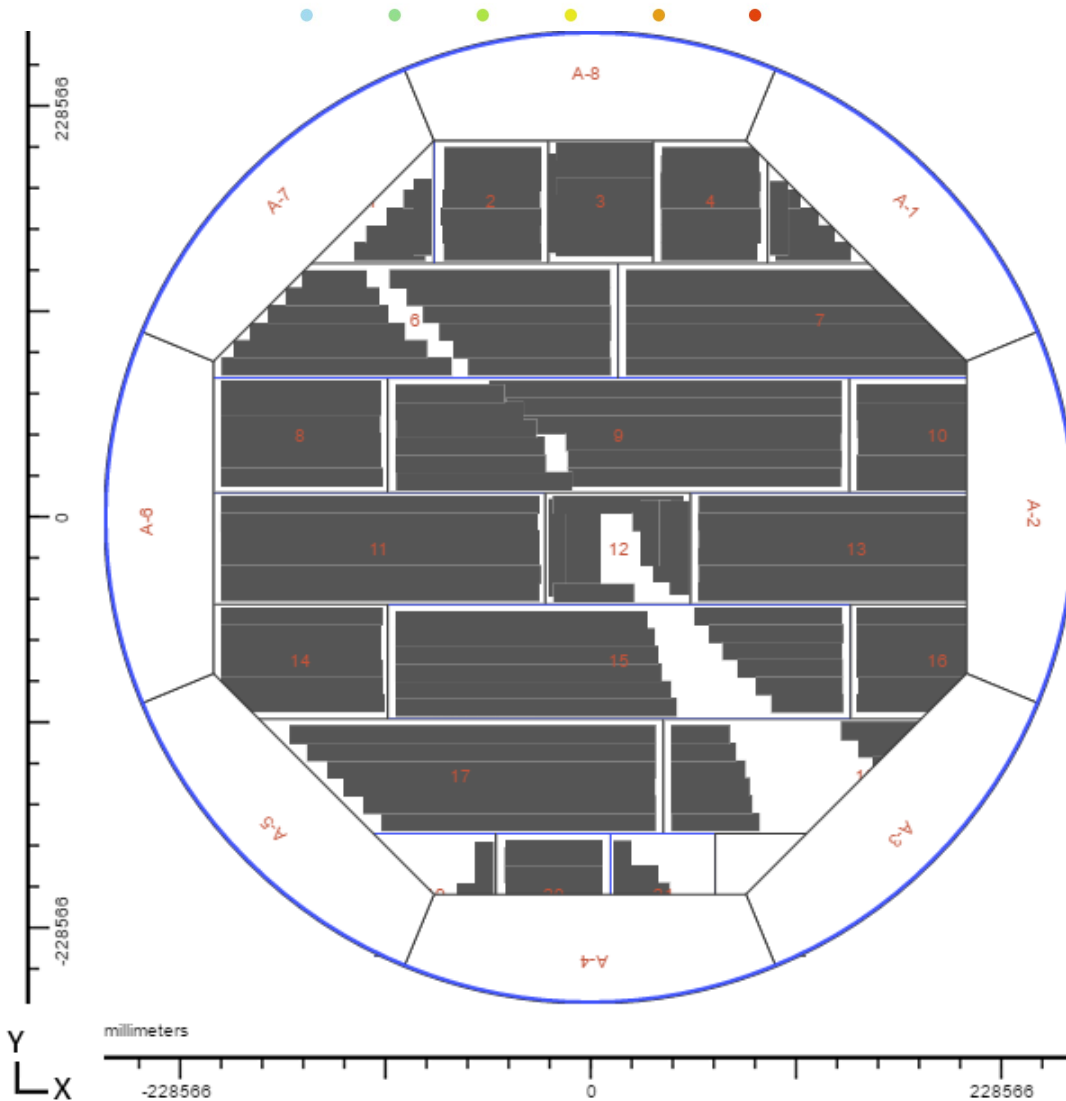


# Tank Overview





# Track Coverage Overview





# ENTERPRISES INCORPORATED

## Plate Number 1



Max Signal: 13.3%

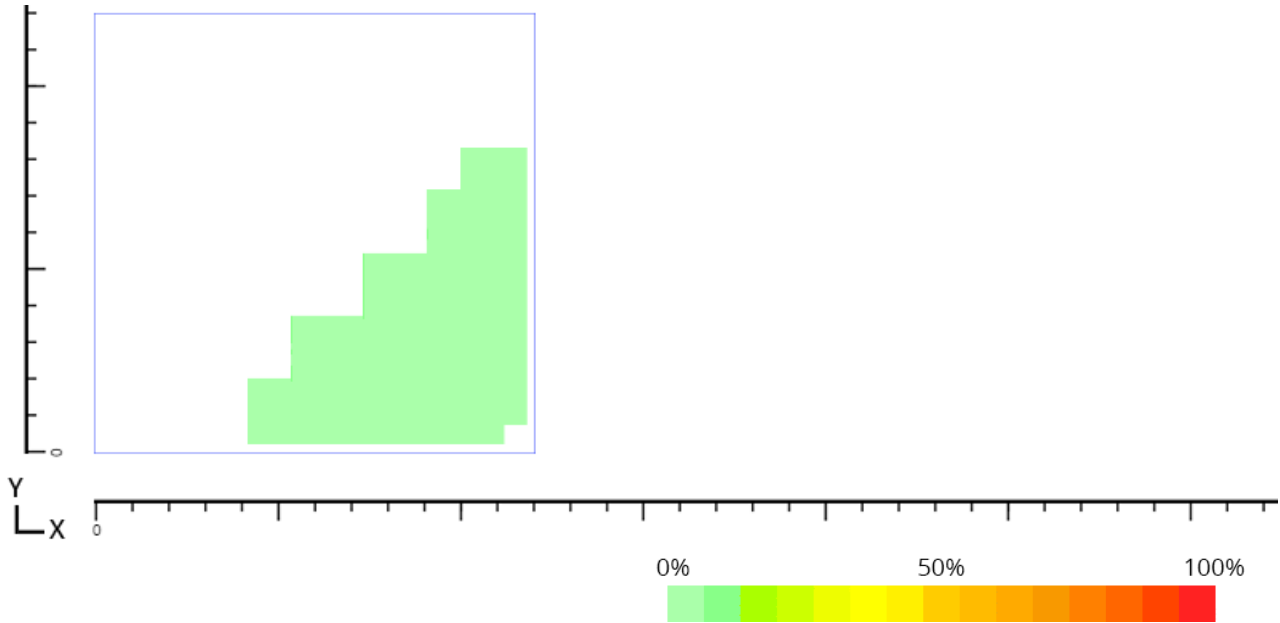
Length (X): 211cm

Width (Y):  
210.01cm

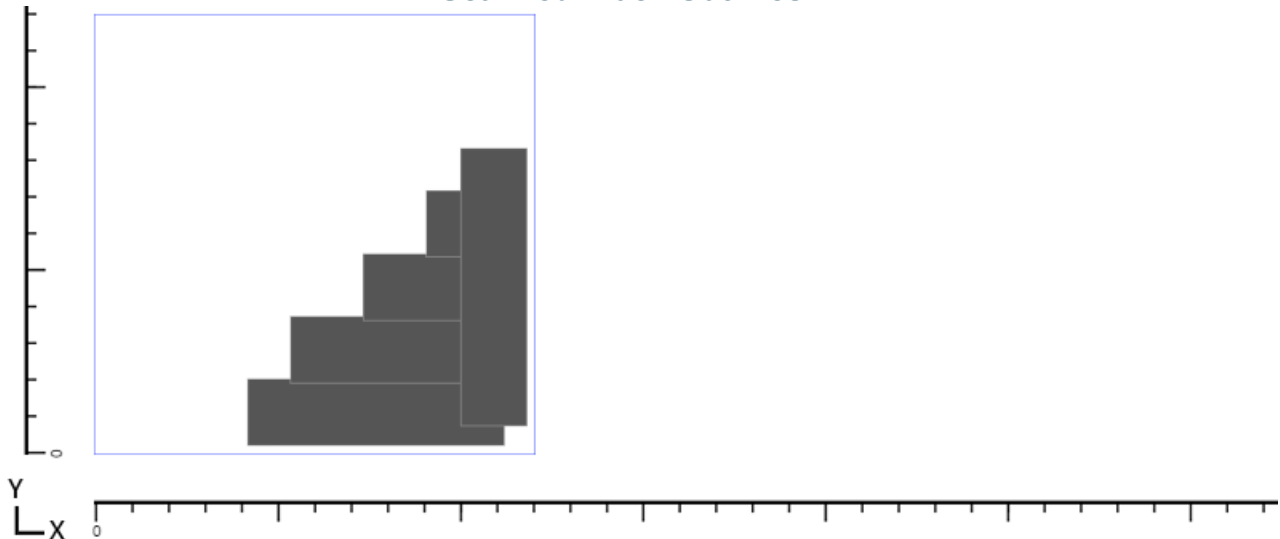
Thickness: 6,35  
mm

Selected Signal Range: 3 – 450 mV

### Recorded Measurements



### Scanned Track Outlines





# ENTERPRISES INCORPORATED

## Plate Number 2



Max Signal: 20%

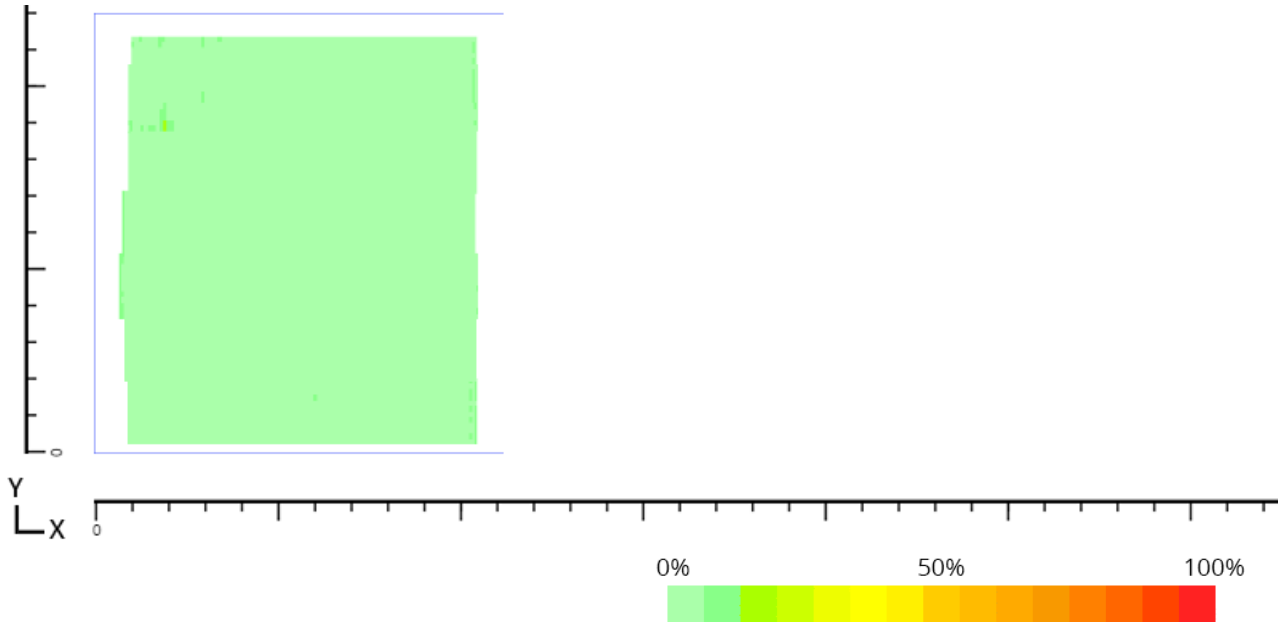
Length (X): 197cm

Width (Y): 211cm

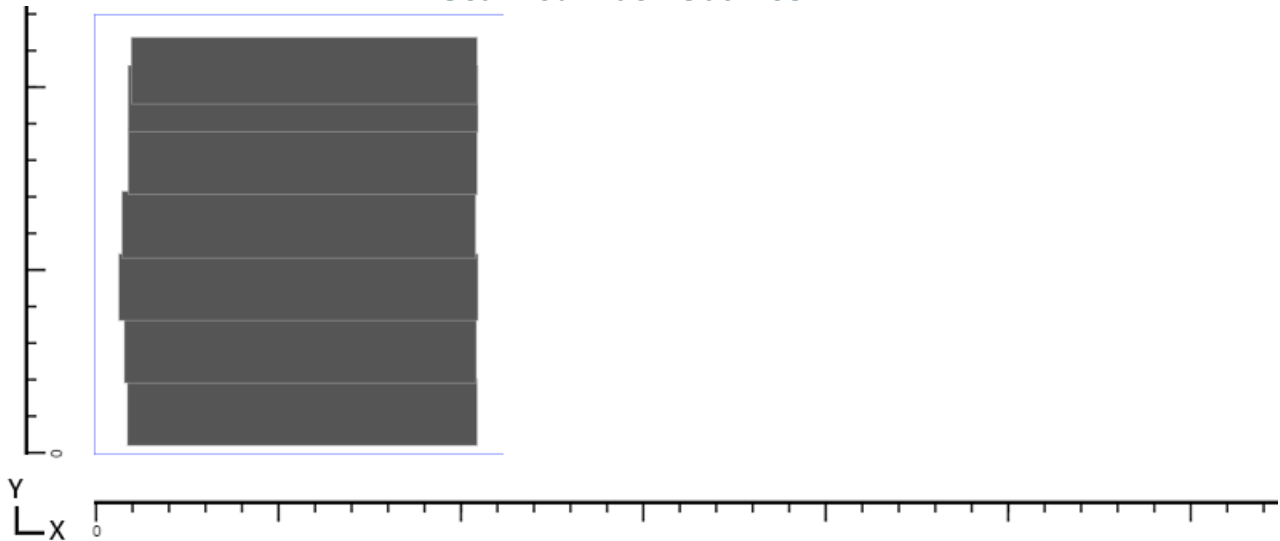
Thickness: 6,35  
mm

Selected Signal Range: 3 – 450 mV

### Recorded Measurements



### Scanned Track Outlines





# ENTERPRISES INCORPORATED

## Plate Number 3



**Max Signal:** 33.3%

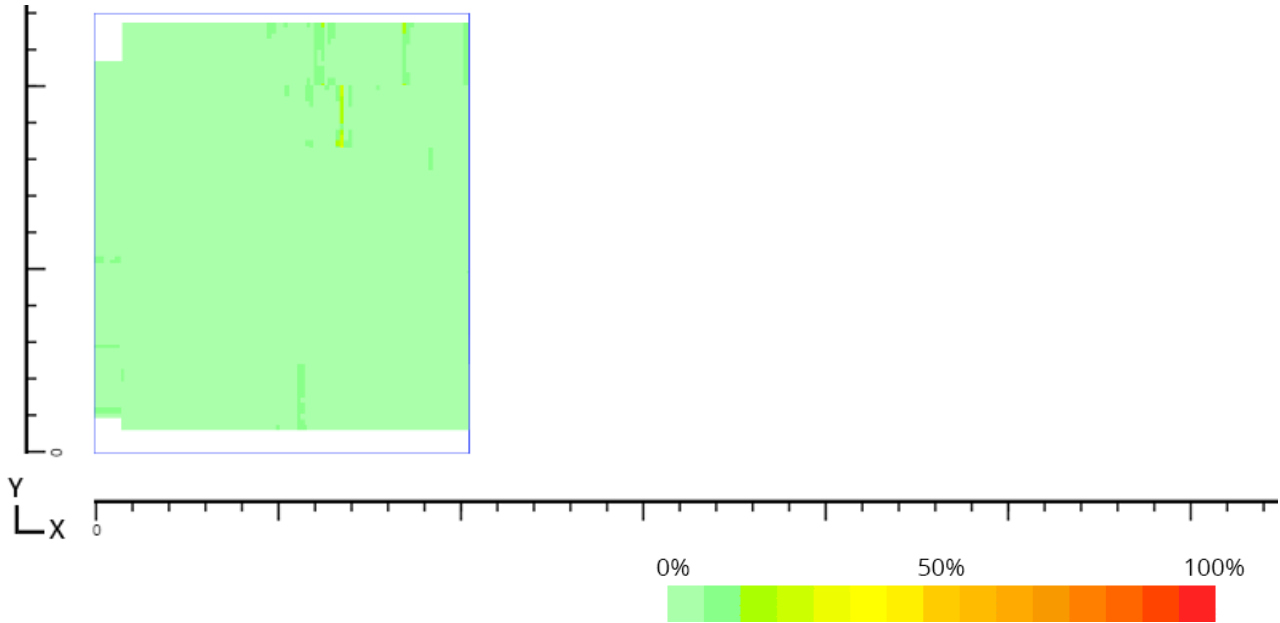
**Length (X):**  
180.01cm

**Width (Y):** 211cm

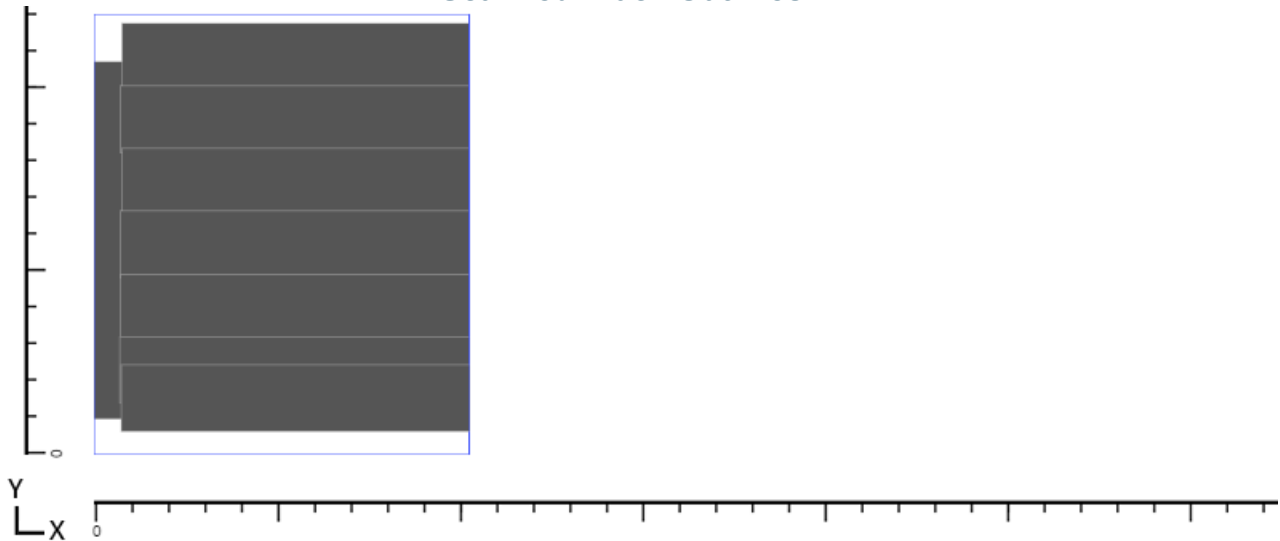
**Thickness:** 6,35  
mm

**Selected Signal Range:** 3 – 450 mV

### Recorded Measurements



### Scanned Track Outlines





**Plate Number 4**



**Max Signal: 20%**

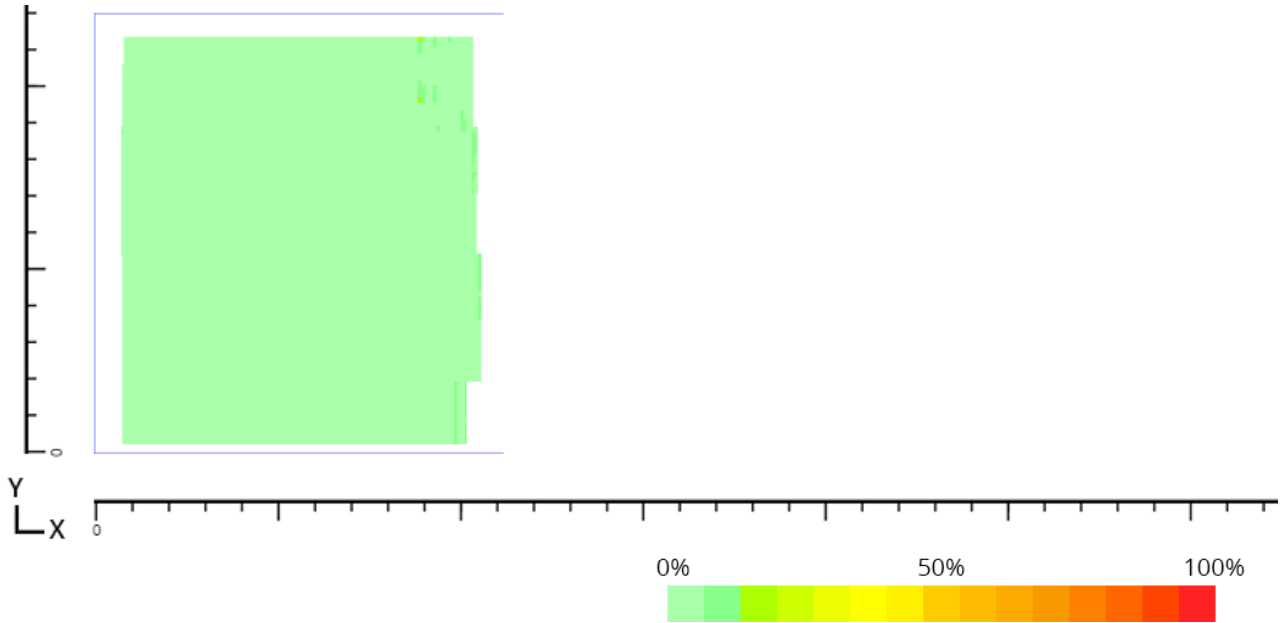
**Length (X): 197cm**

**Width (Y): 211cm**

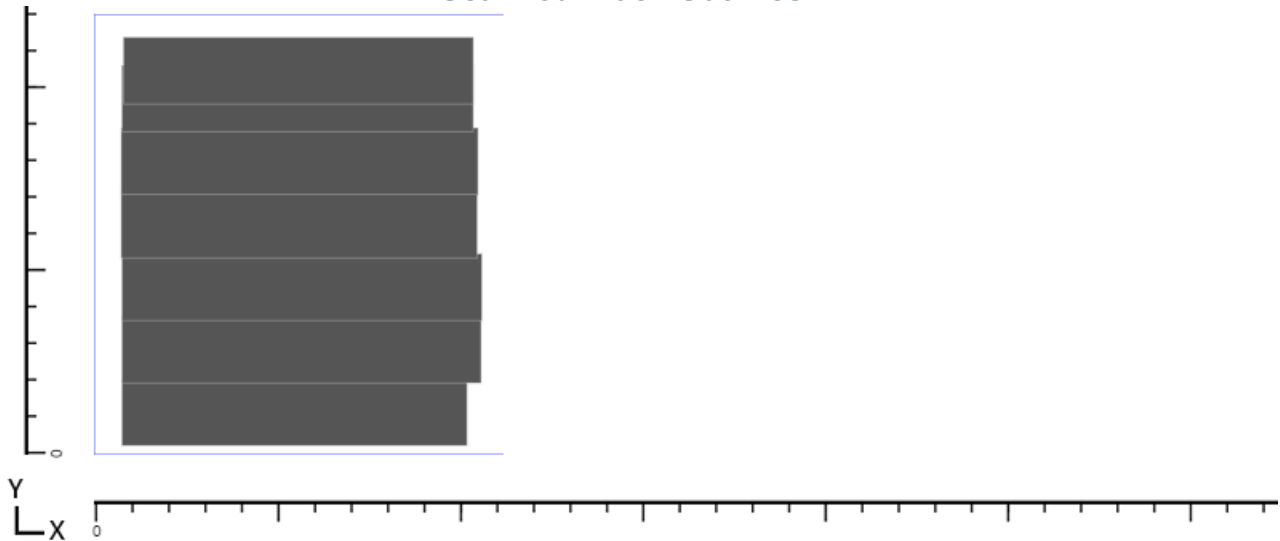
**Thickness: 6,35  
mm**

**Selected Signal Range: 3 – 450 mV**

**Recorded Measurements**



**Scanned Track Outlines**





**Plate Number 5**



**Max Signal:** 13.3%

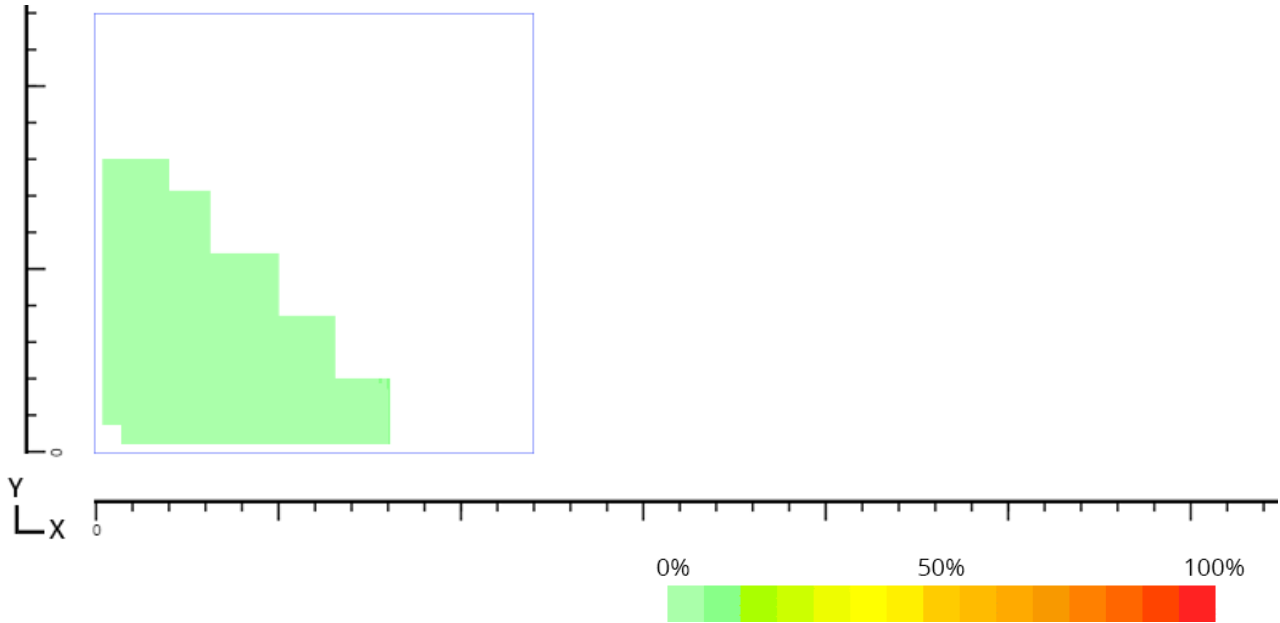
**Length (X):** 211cm

**Width (Y):** 211cm

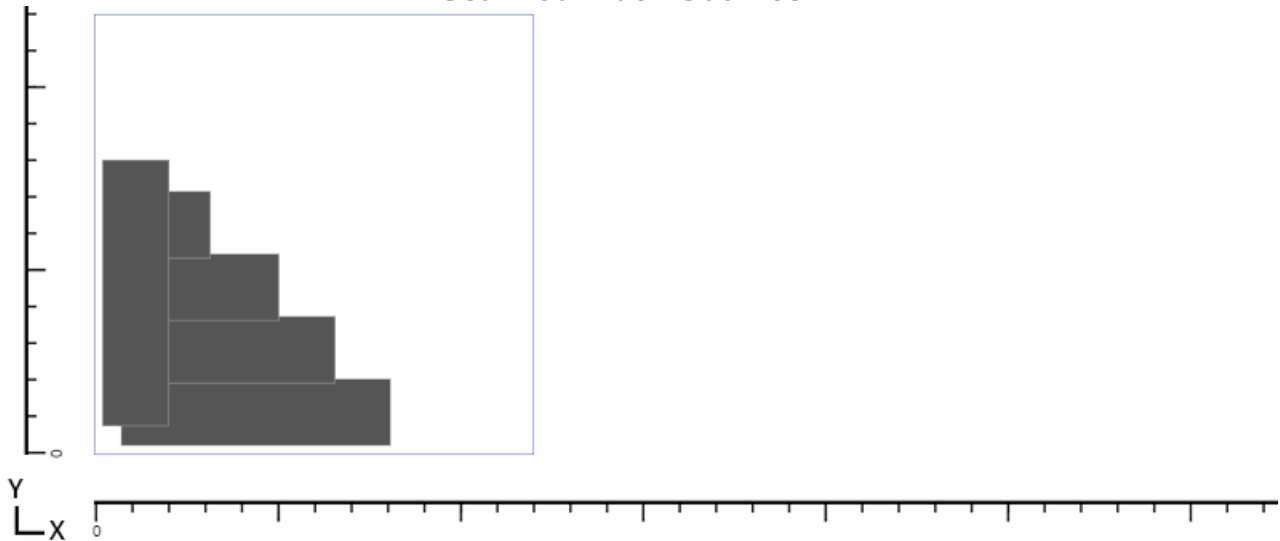
**Thickness:** 6,35  
mm

**Selected Signal Range:** 3 – 450 mV

**Recorded Measurements**



**Scanned Track Outlines**







**Plate Number 6**



**Max Signal: 20%**

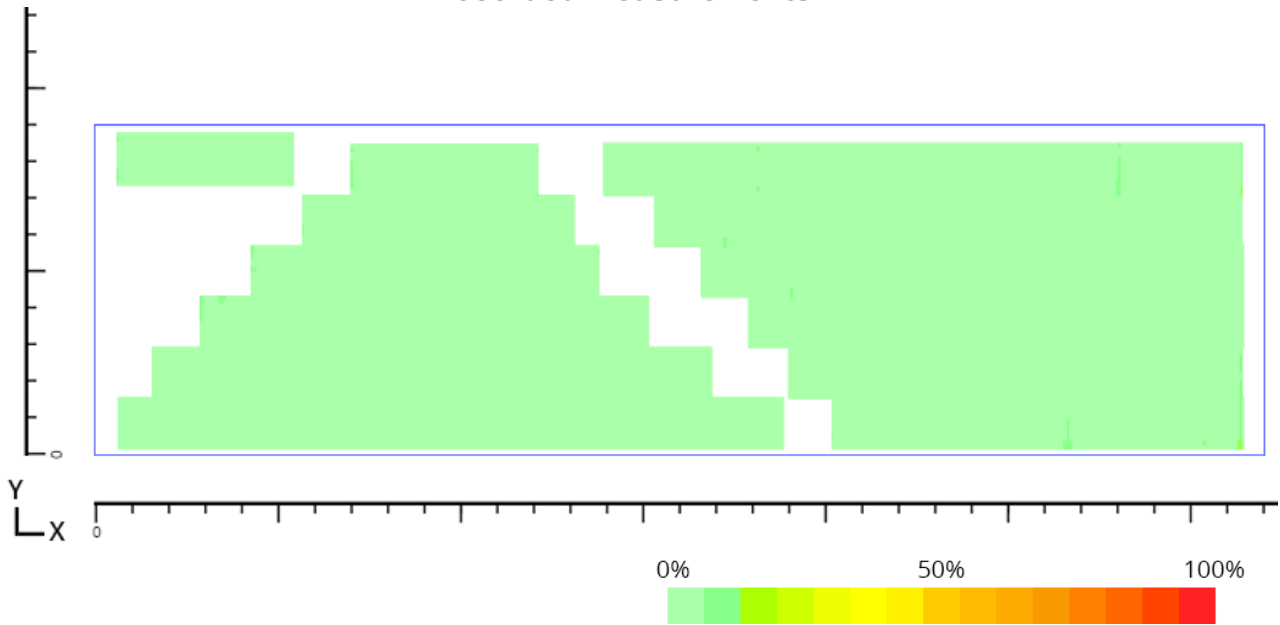
**Length (X):**  
696.01cm

**Width (Y): 197cm**

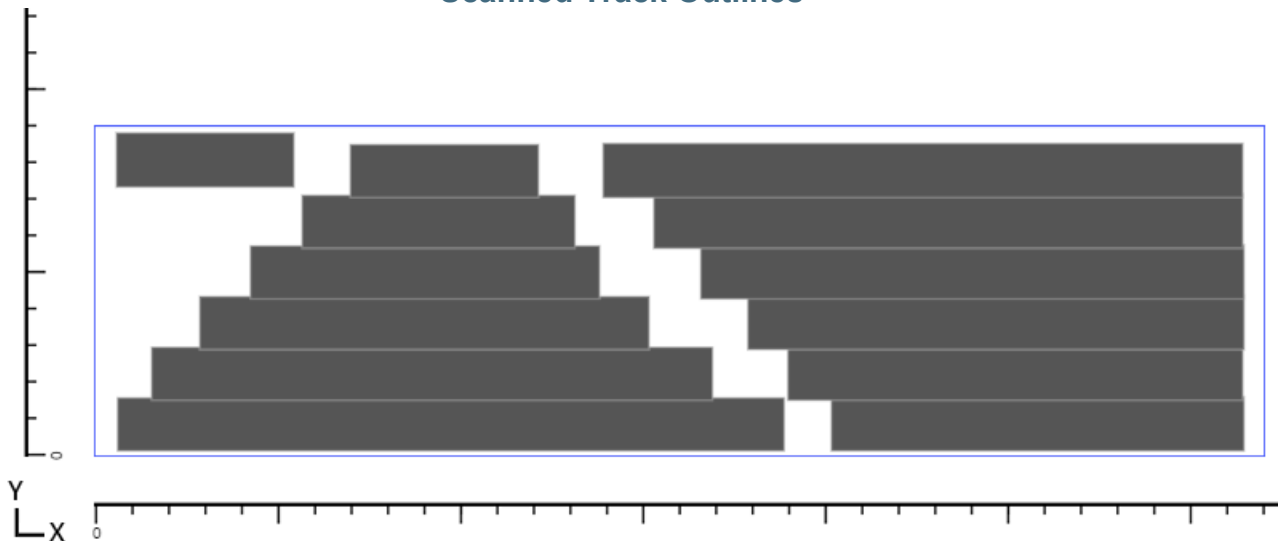
**Thickness: 6,35  
mm**

**Selected Signal Range: 3 – 450 mV**

**Recorded Measurements**



**Scanned Track Outlines**





# ENTERPRISES INCORPORATED

## Plate Number 7



Max Signal: 20%

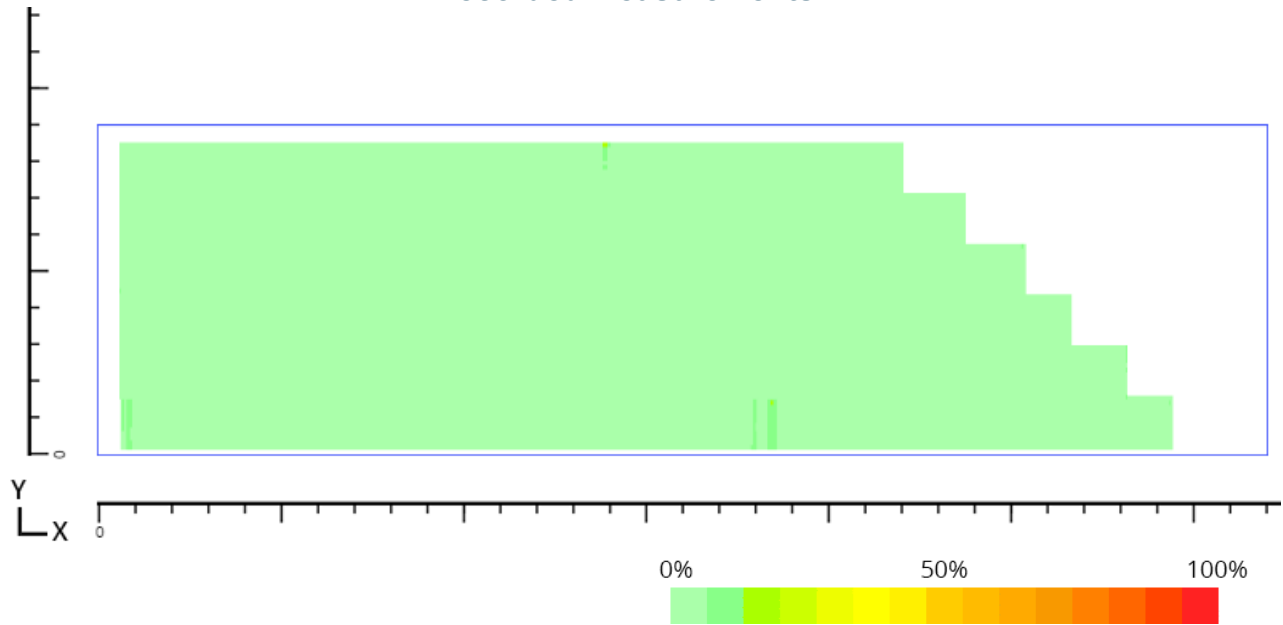
Length (X):  
696.01cm

Width (Y): 197cm

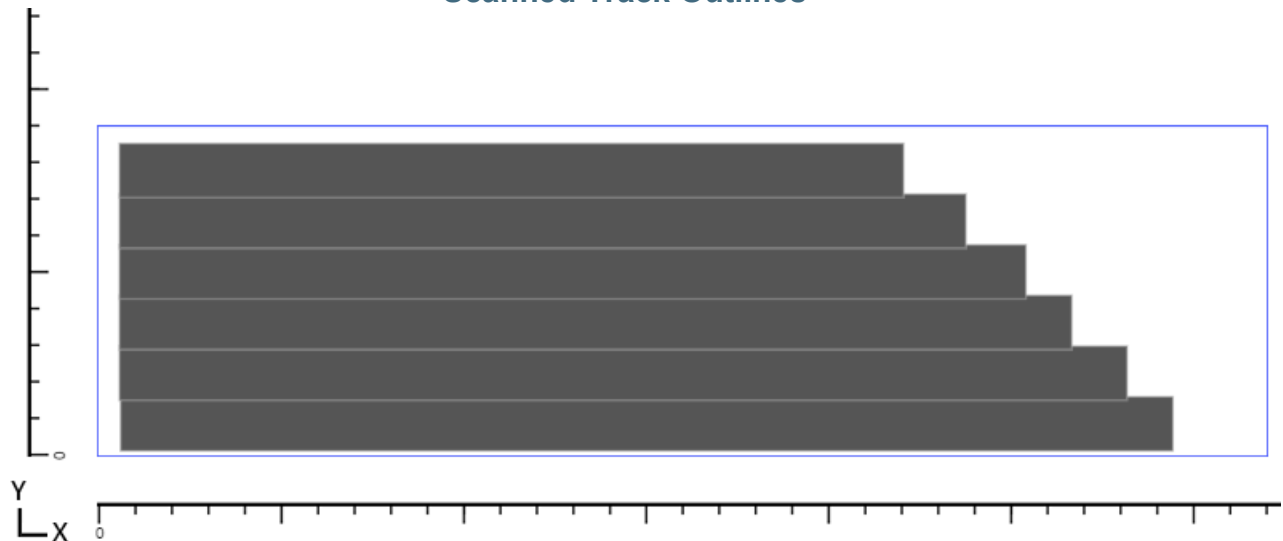
Thickness: 6,35  
mm

Selected Signal Range: 3 – 450 mV

### Recorded Measurements



### Scanned Track Outlines





**Plate Number 8**



**Max Signal: 20%**

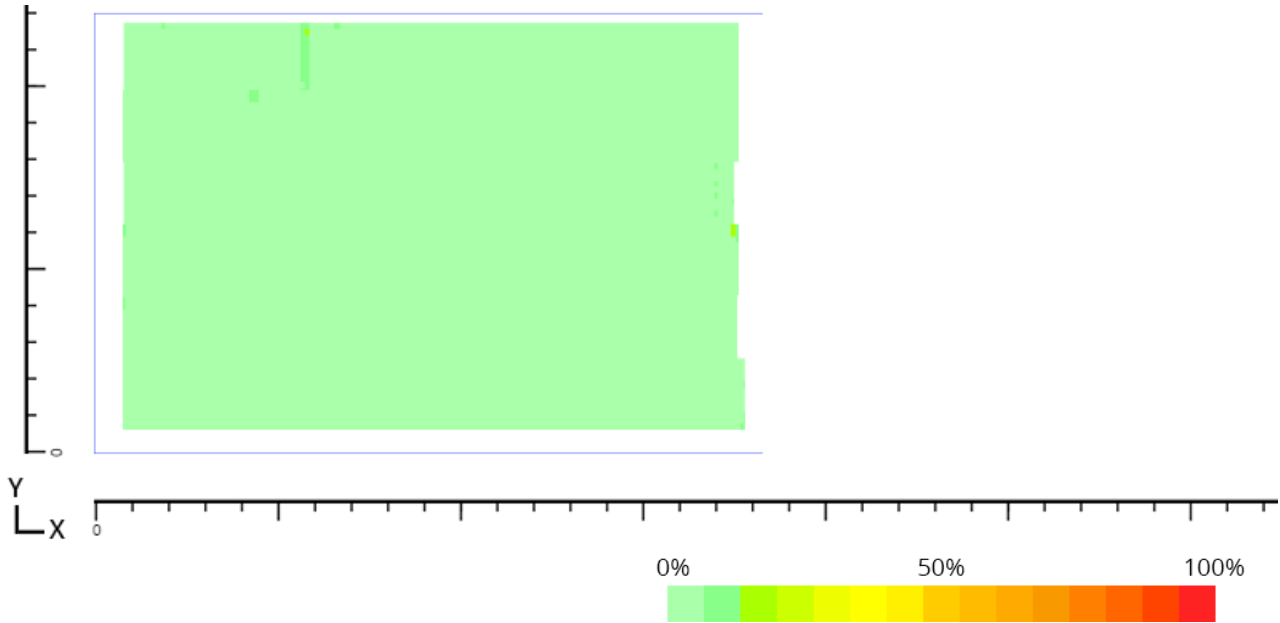
**Length (X): 300cm**

**Width (Y): 197cm**

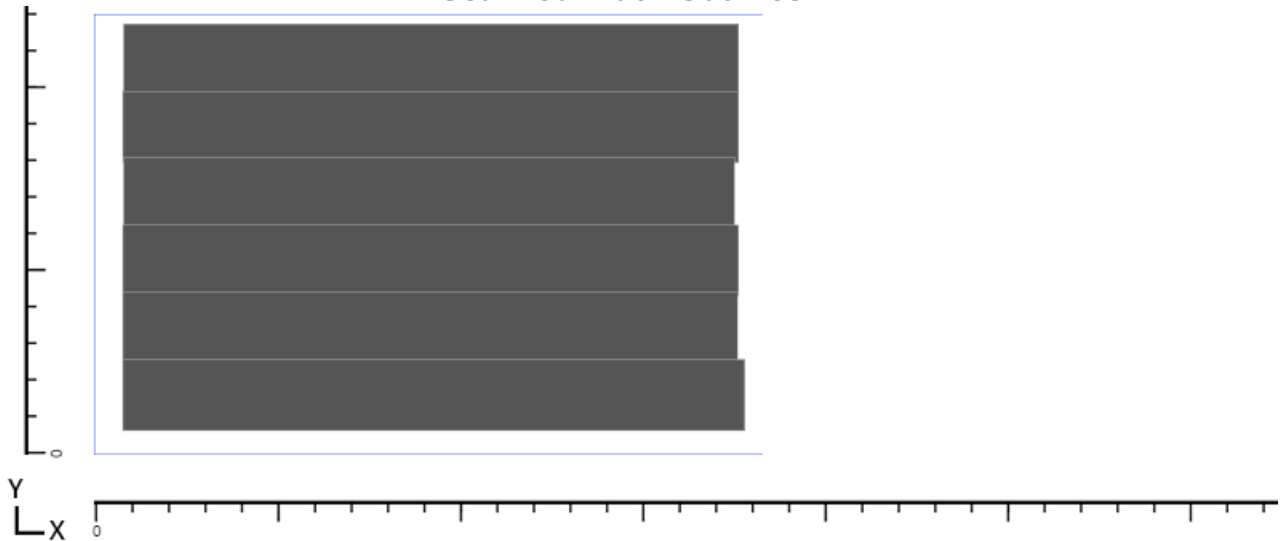
**Thickness: 6,35  
mm**

**Selected Signal Range: 3 – 450 mV**

**Recorded Measurements**



**Scanned Track Outlines**





**Plate Number 9**



**Max Signal: 26.7%**

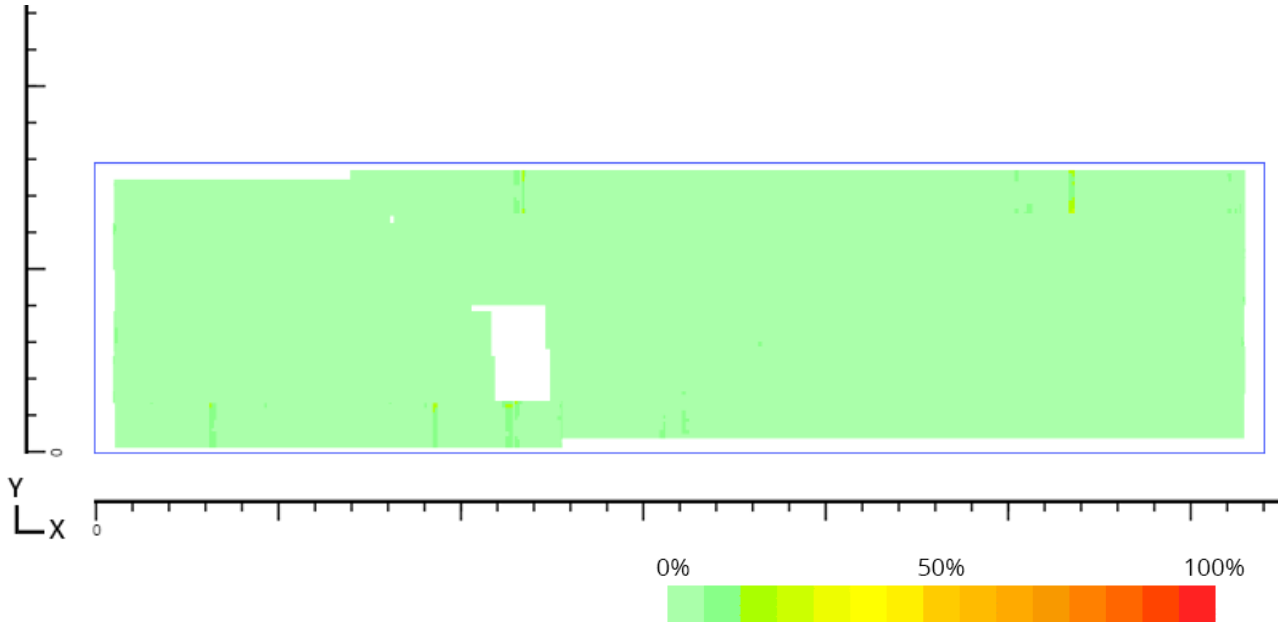
**Length (X): 794cm**

**Width (Y): 197cm**

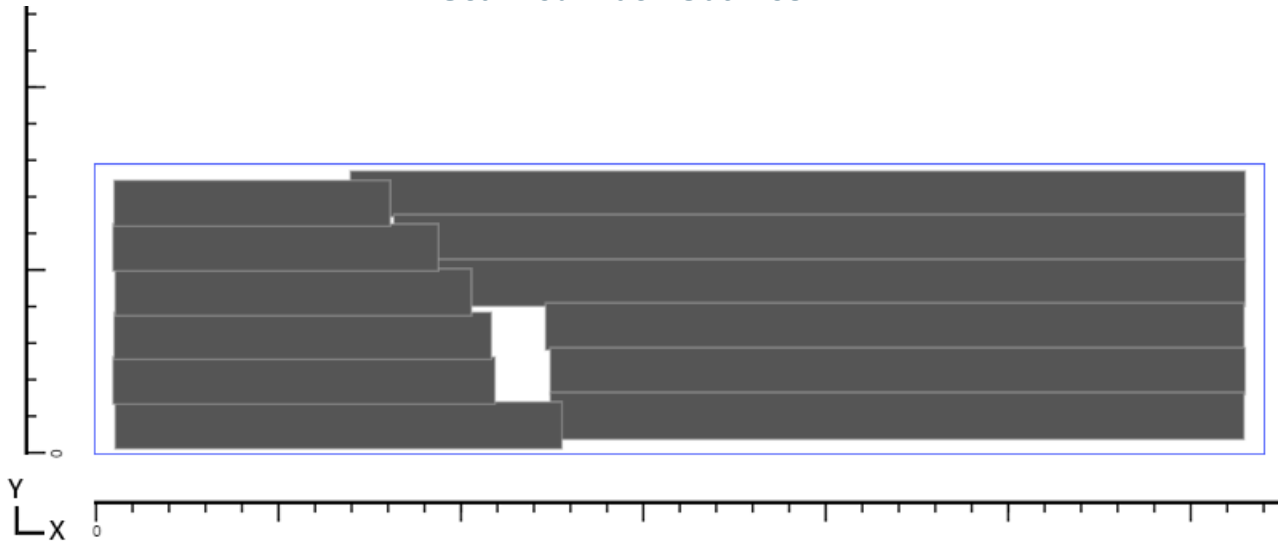
**Thickness: 6,35  
mm**

**Selected Signal Range: 3 – 450 mV**

**Recorded Measurements**



**Scanned Track Outlines**





**Plate Number 10**



**Max Signal: 20%**

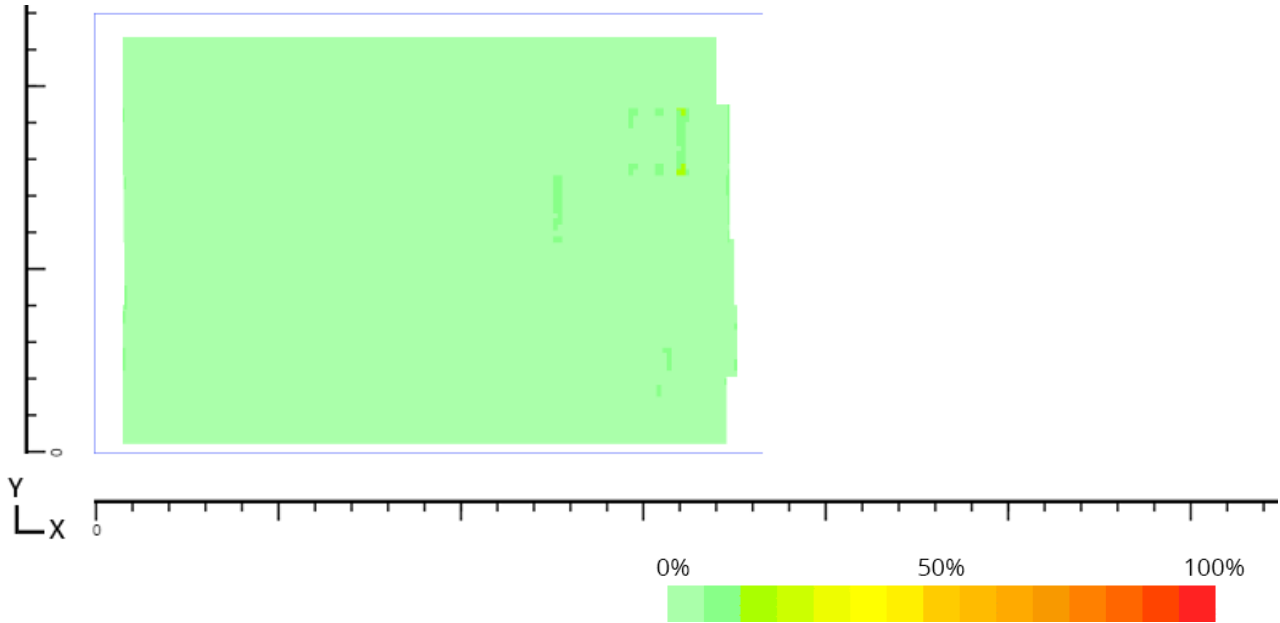
**Length (X): 300cm**

**Width (Y): 197cm**

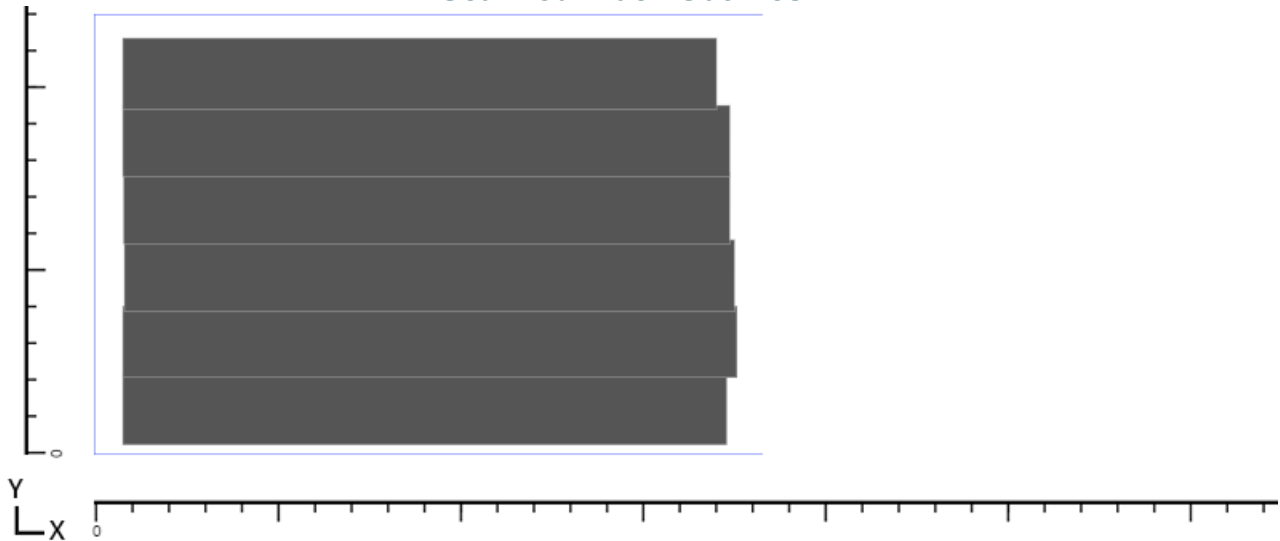
**Thickness: 6,35  
mm**

**Selected Signal Range: 3 – 450 mV**

**Recorded Measurements**



**Scanned Track Outlines**





# ENTERPRISES INCORPORATED

Plate Number 11



Max Signal: 13.3%

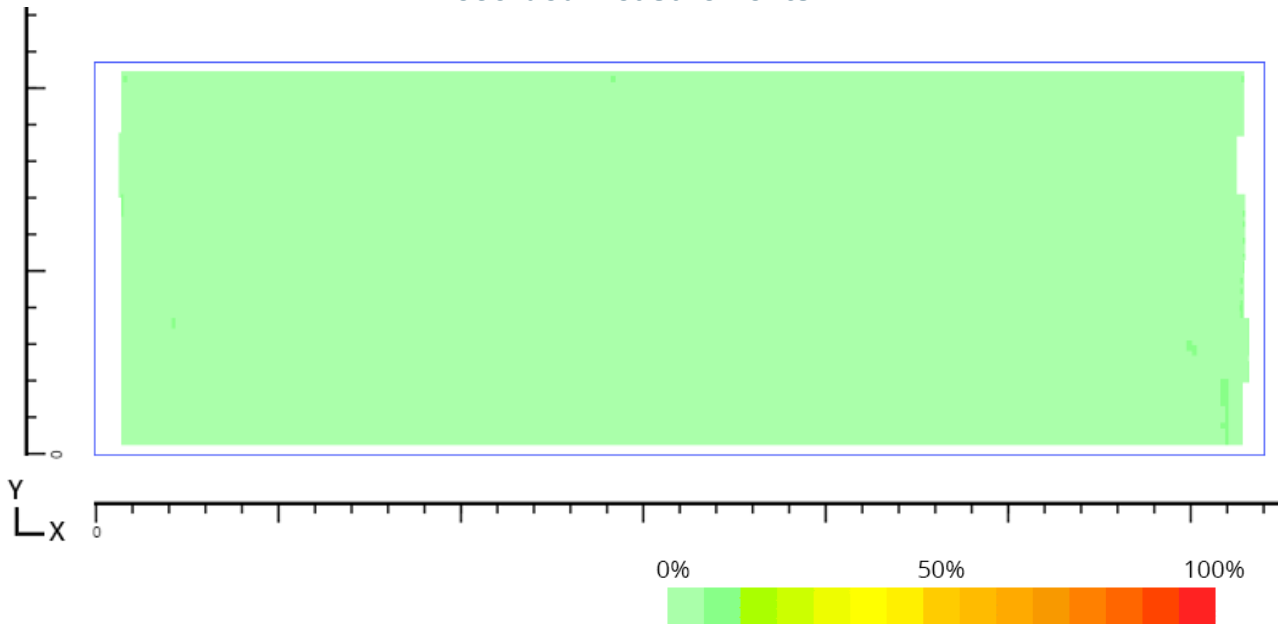
Length (X):  
570.99cm

Width (Y): 192cm

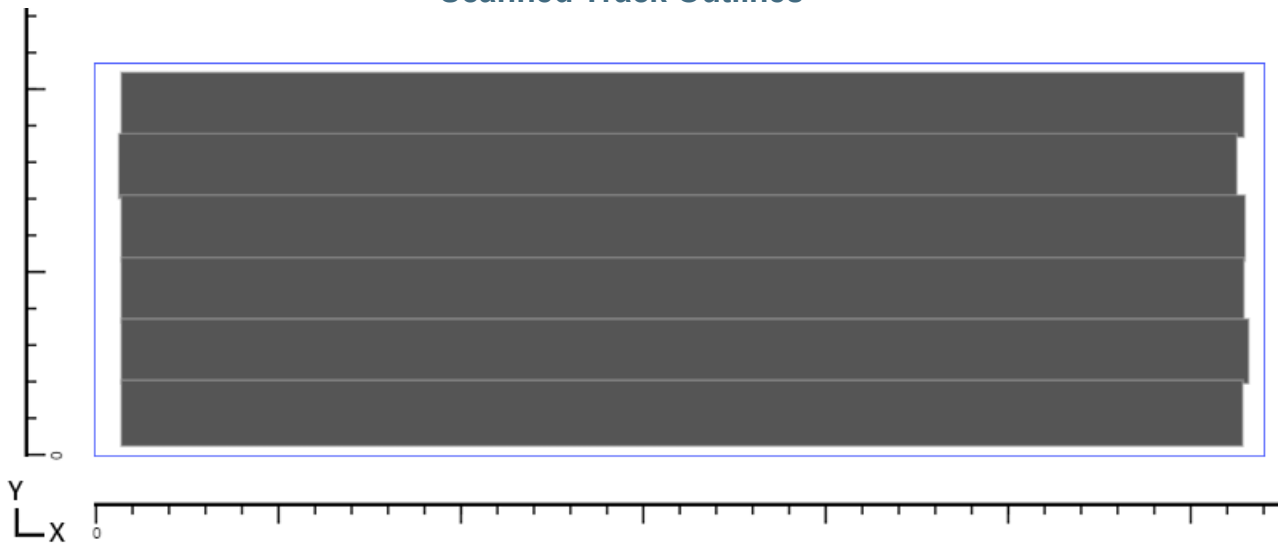
Thickness: 6,35  
mm

Selected Signal Range: 3 – 450 mV

## Recorded Measurements



## Scanned Track Outlines





# ENTERPRISES INCORPORATED

Plate Number 12



Max Signal: 40%

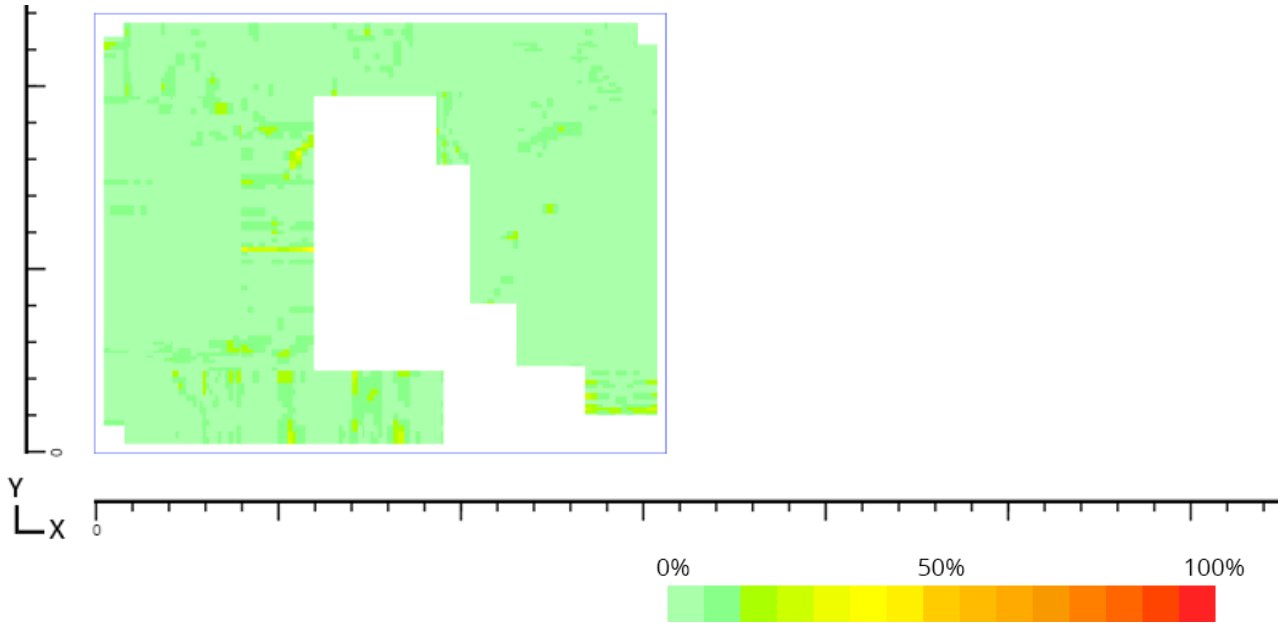
Length (X):  
250.01cm

Width (Y): 192cm

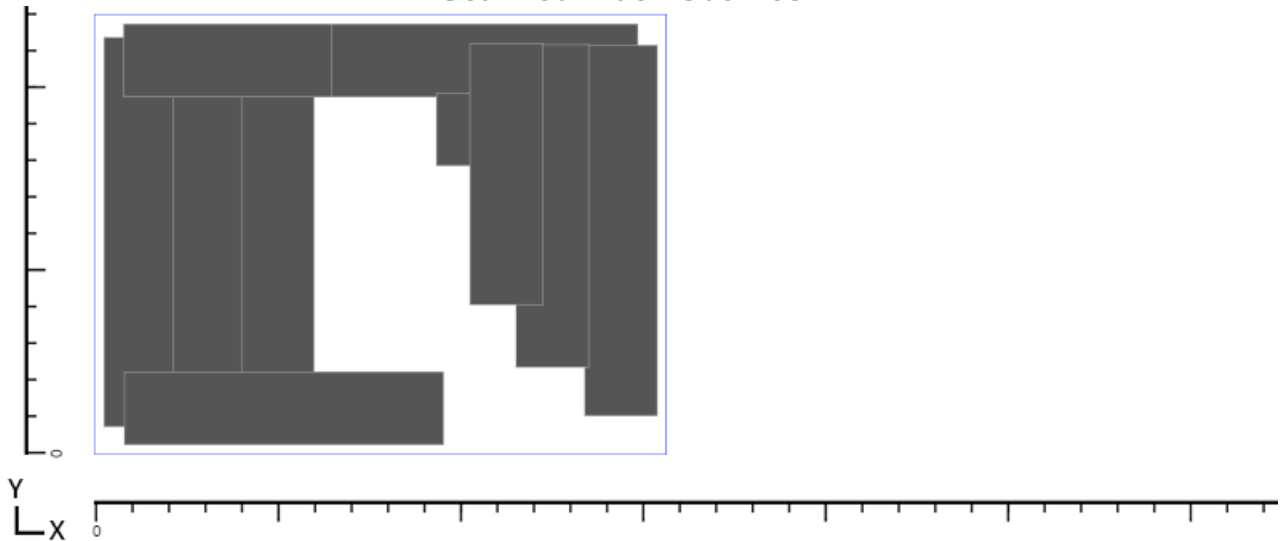
Thickness: 6,35  
mm

Selected Signal Range: 3 – 450 mV

## Recorded Measurements



## Scanned Track Outlines





# ENTERPRISES INCORPORATED

Plate Number 13



Max Signal: 26.7%

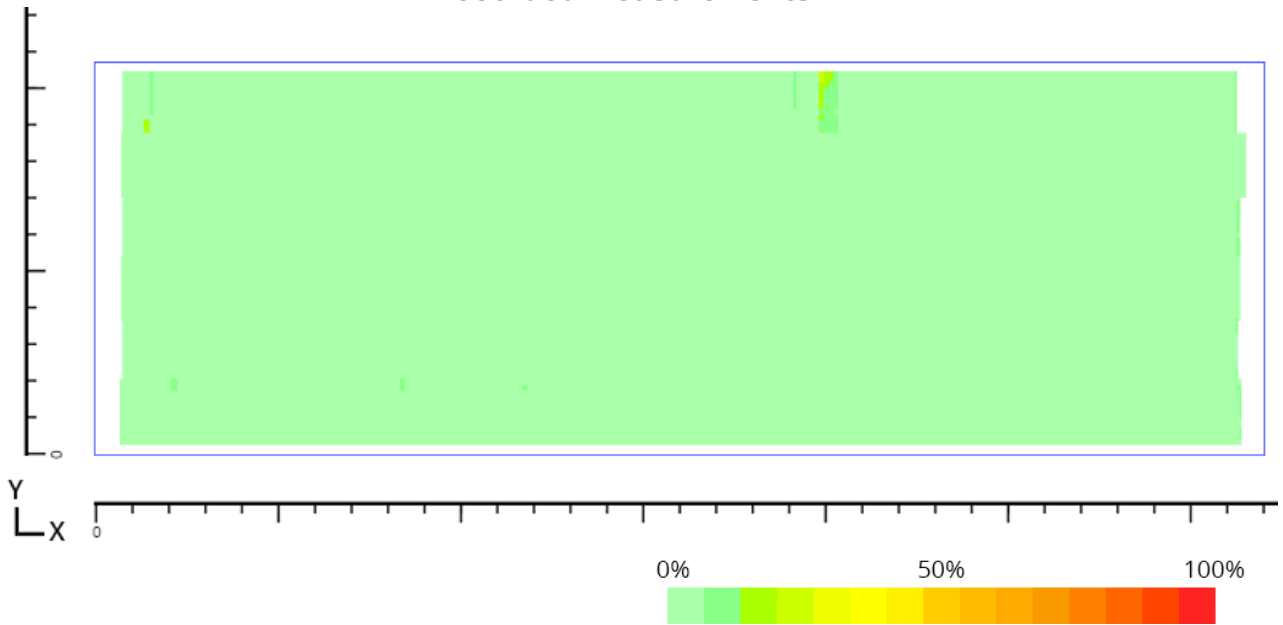
Length (X):  
570.99cm

Width (Y): 192cm

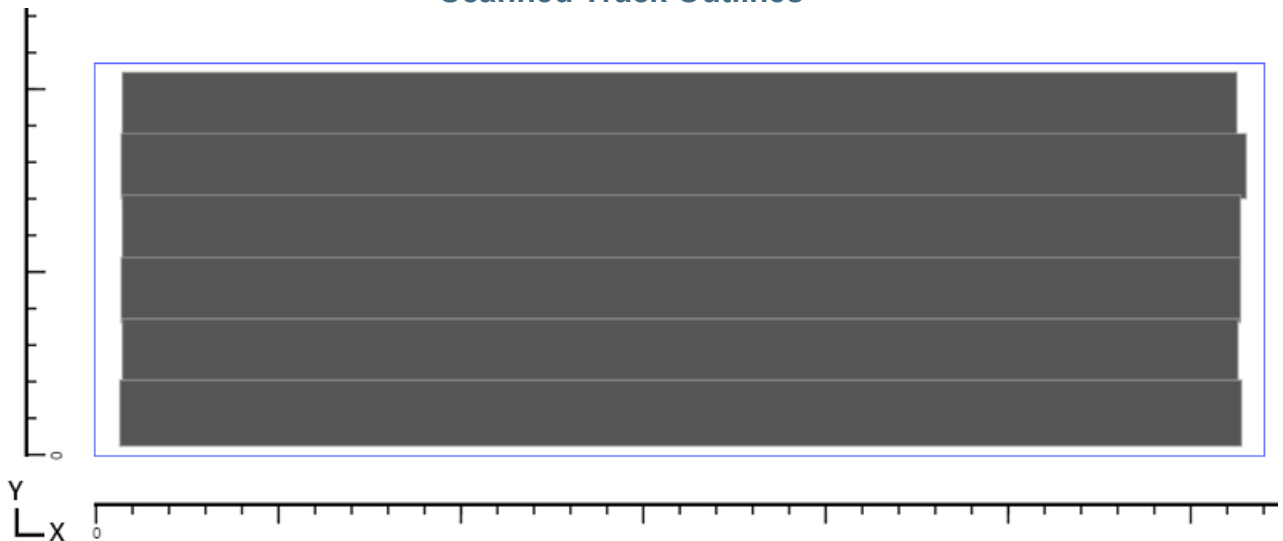
Thickness: 6,35  
mm

Selected Signal Range: 3 – 450 mV

## Recorded Measurements



## Scanned Track Outlines







# ENTERPRISES INCORPORATED

Plate Number 14



Max Signal: 20%

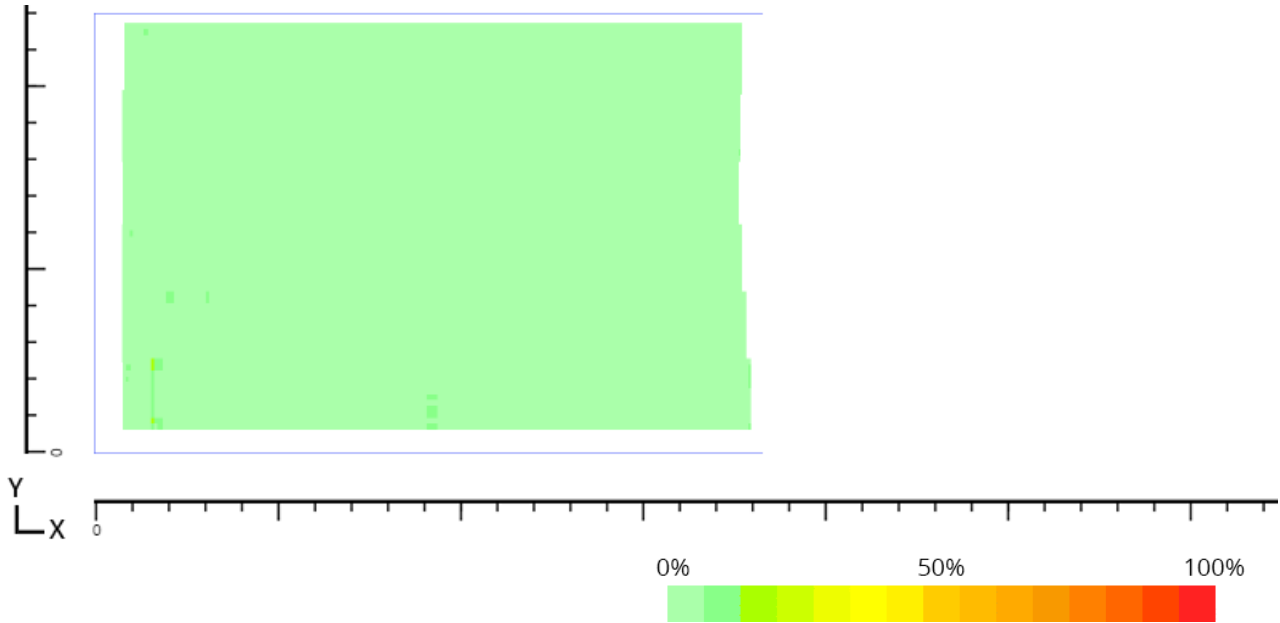
Length (X): 300cm

Width (Y): 197cm

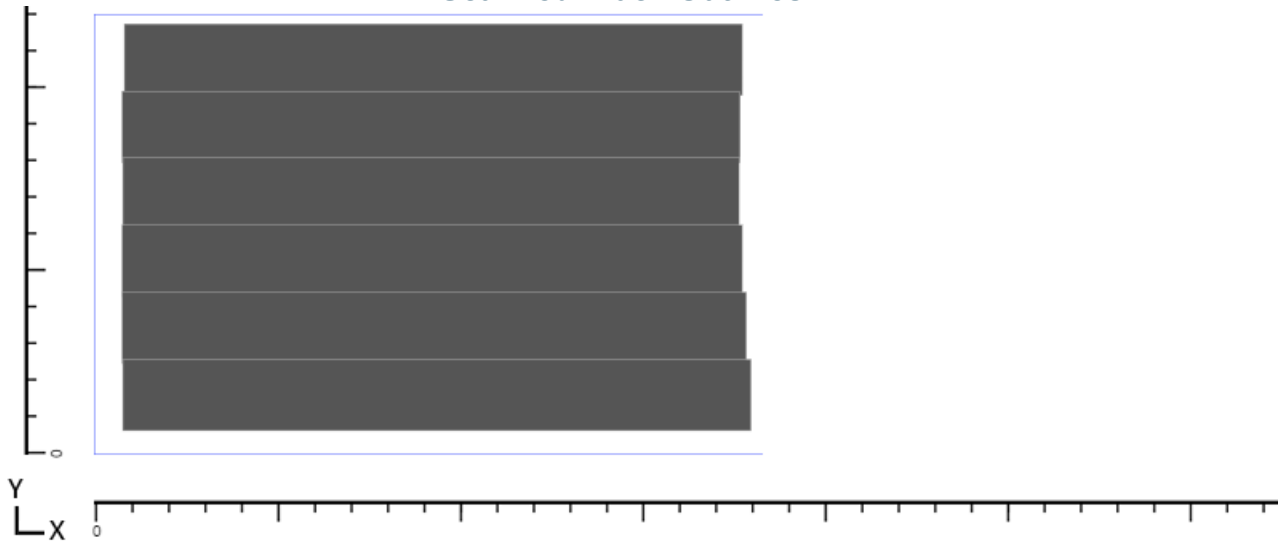
Thickness: 6,35  
mm

Selected Signal Range: 3 – 450 mV

## Recorded Measurements



## Scanned Track Outlines





# ENTERPRISES INCORPORATED

Plate Number 15



Max Signal: 53.3%

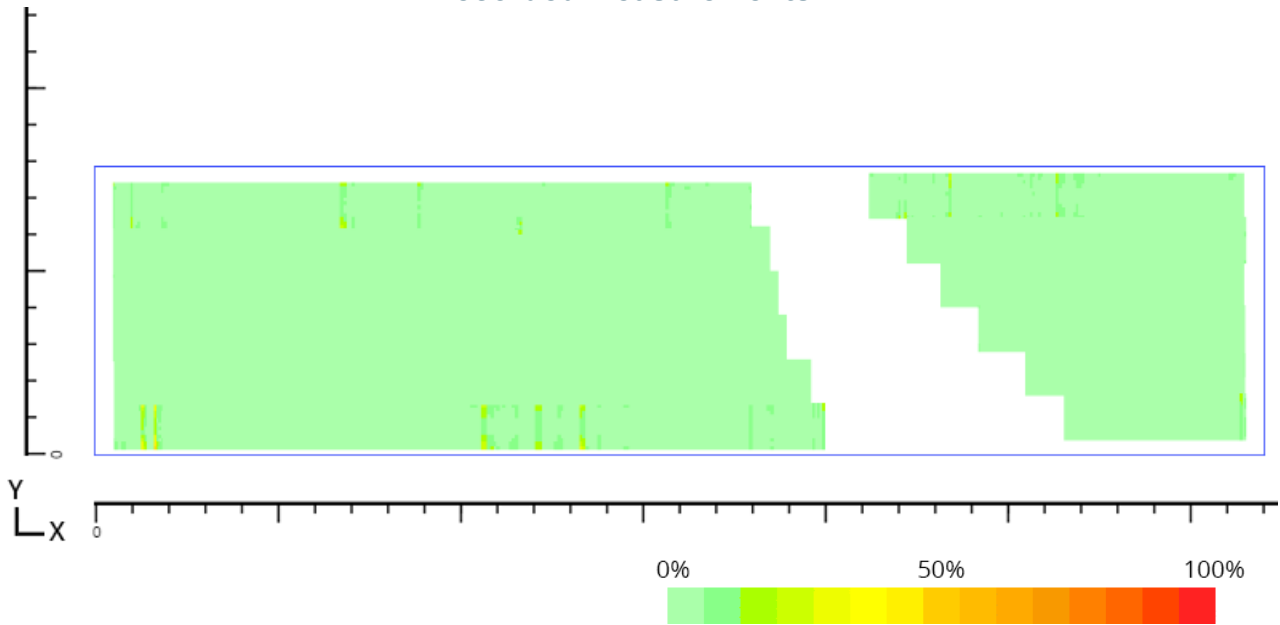
Length (X): 796.01cm

Width (Y): 197cm

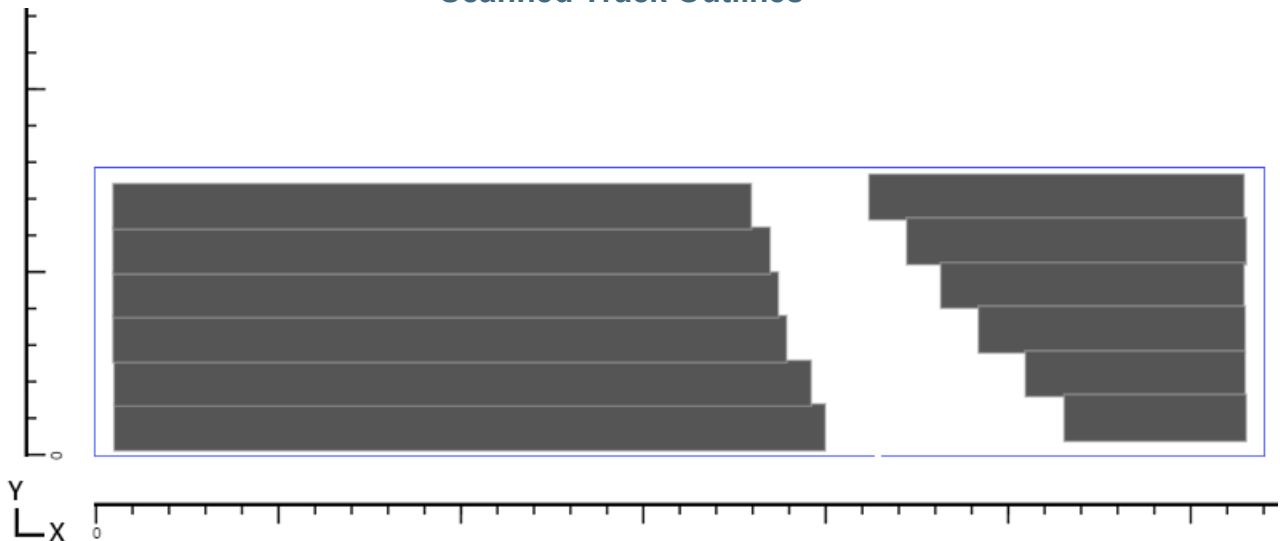
Thickness: 6,35 mm

Selected Signal Range: 3 – 450 mV

## Recorded Measurements



## Scanned Track Outlines





**Plate Number 16**



**Max Signal: 20%**

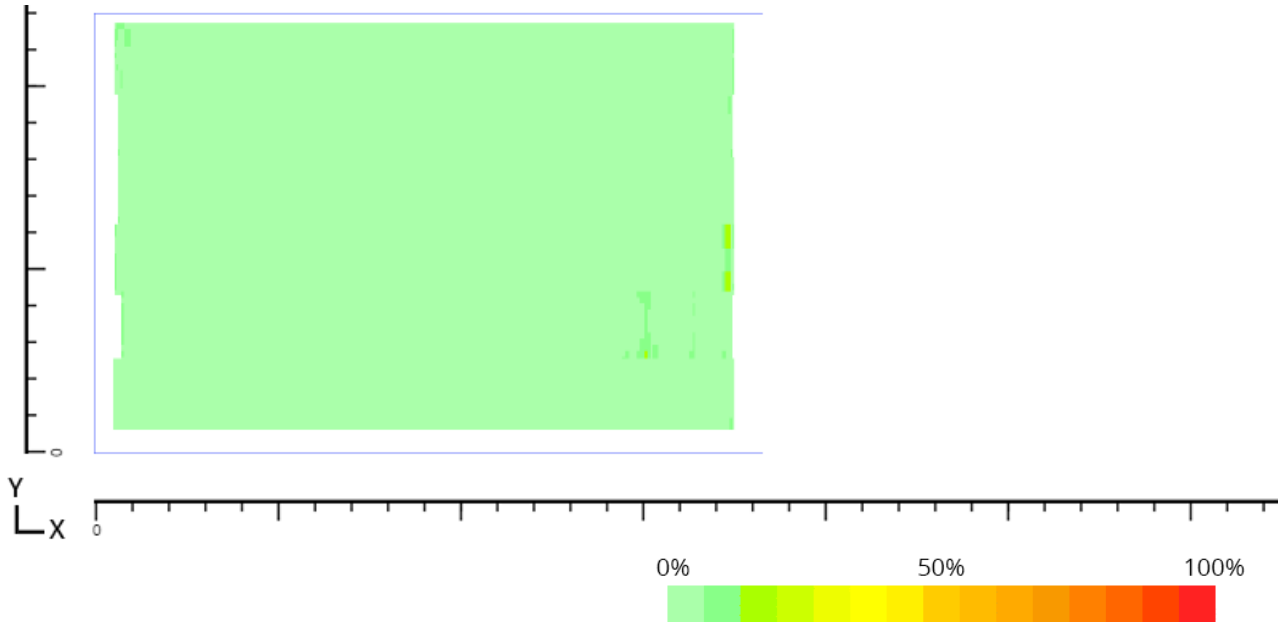
**Length (X): 300cm**

**Width (Y): 197cm**

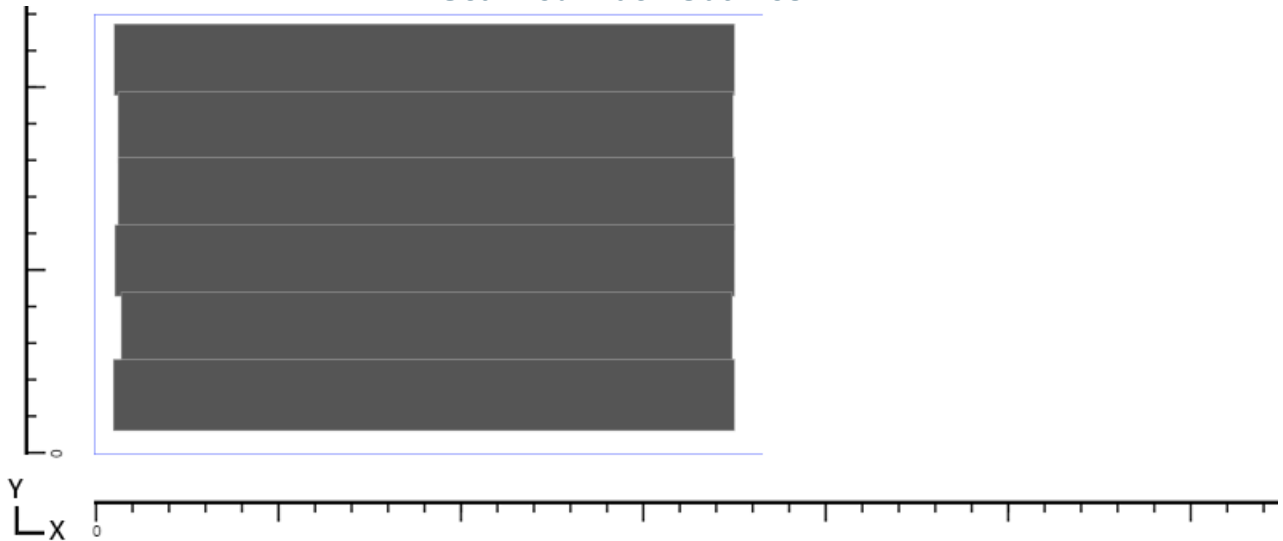
**Thickness: 6,35  
mm**

**Selected Signal Range: 3 – 450 mV**

**Recorded Measurements**



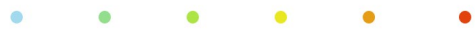
**Scanned Track Outlines**





# ENTERPRISES INCORPORATED

Plate Number 17



Max Signal: 20%

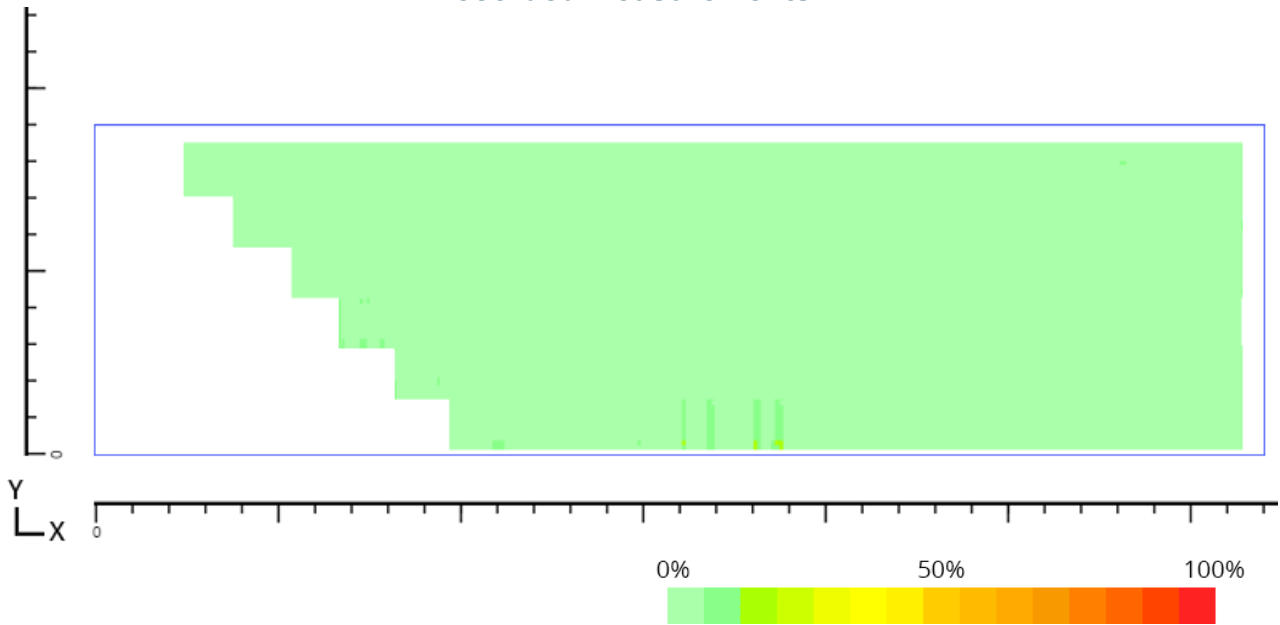
Length (X):  
696.01cm

Width (Y): 197cm

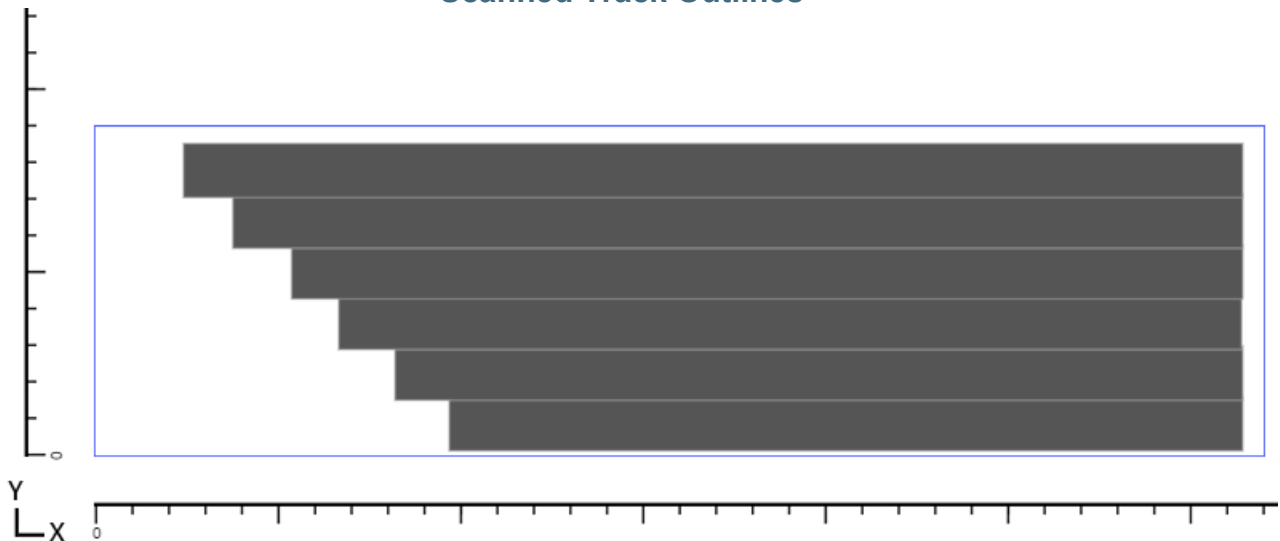
Thickness: 6,35  
mm

Selected Signal Range: 3 – 450 mV

## Recorded Measurements



## Scanned Track Outlines





# ENTERPRISES INCORPORATED

Plate Number 18



Max Signal: 13.3%

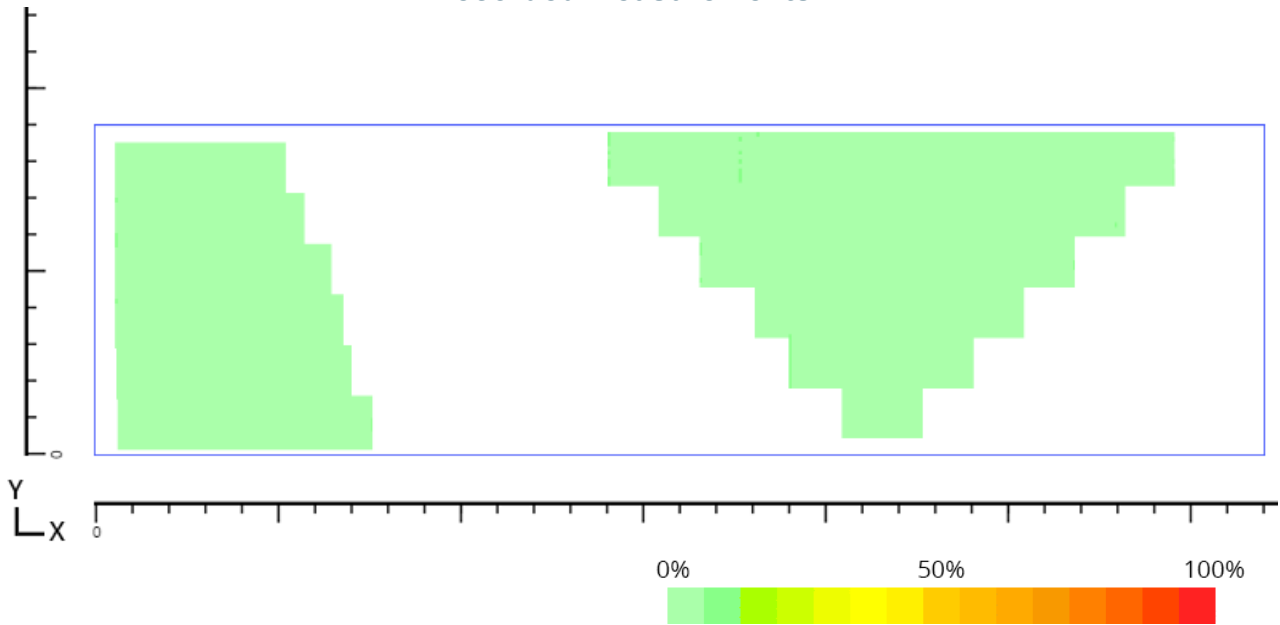
Length (X):  
696.01cm

Width (Y): 197cm

Thickness: 6,35  
mm

Selected Signal Range: 3 – 450 mV

## Recorded Measurements



## Scanned Track Outlines

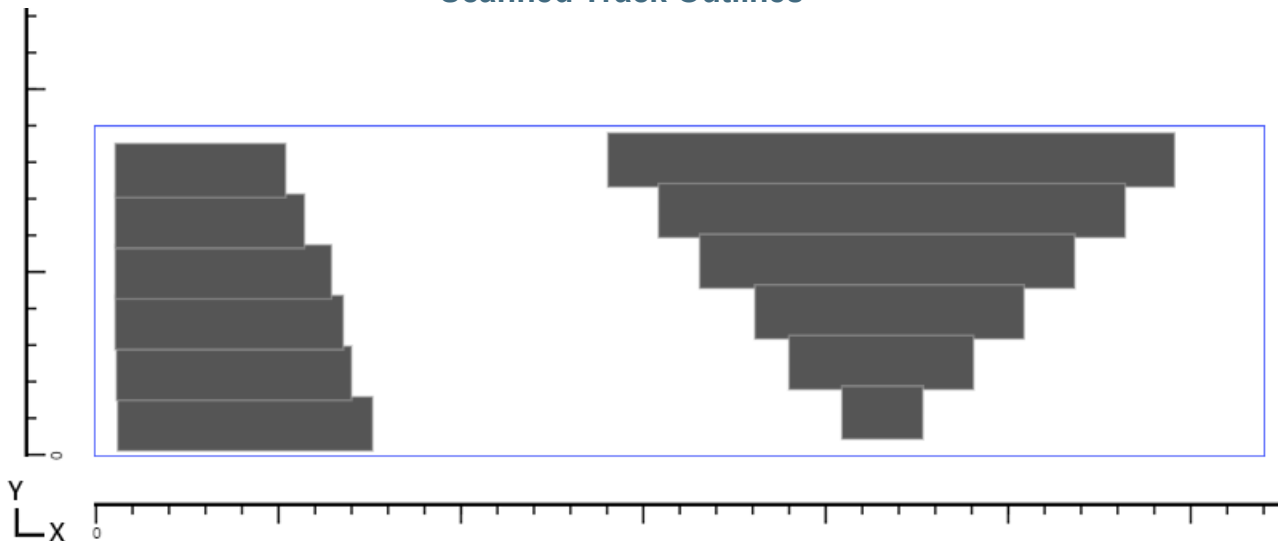




Plate Number 19



Max Signal: 33.3%

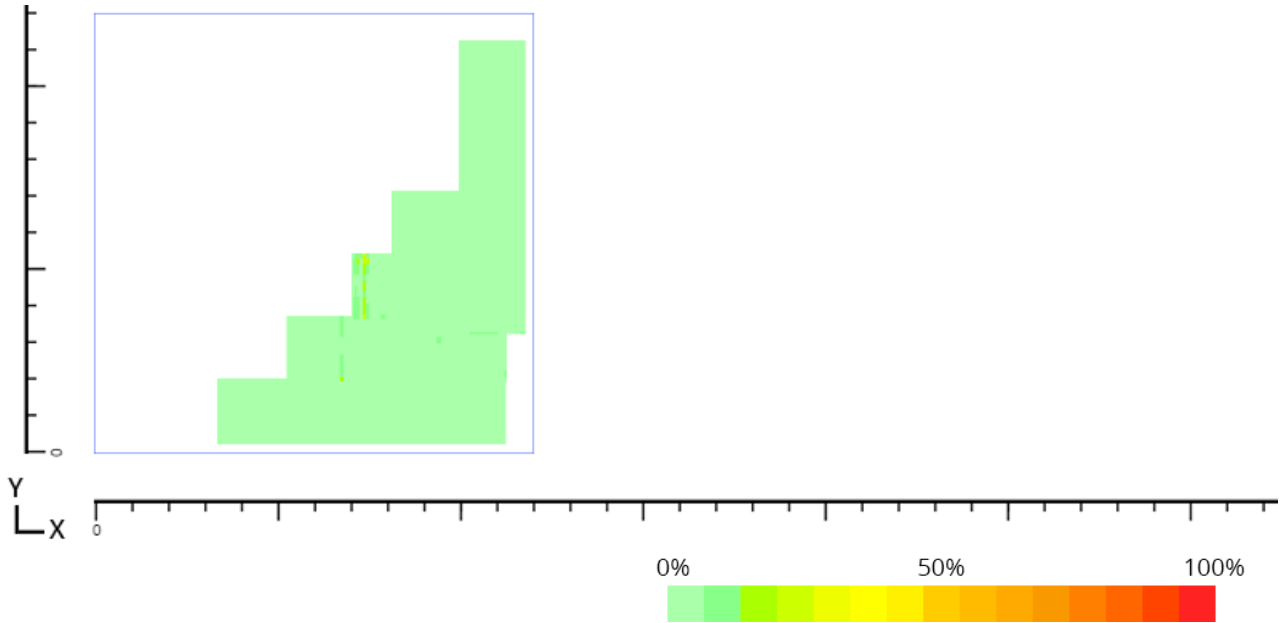
Length (X): 211cm

Width (Y): 211cm

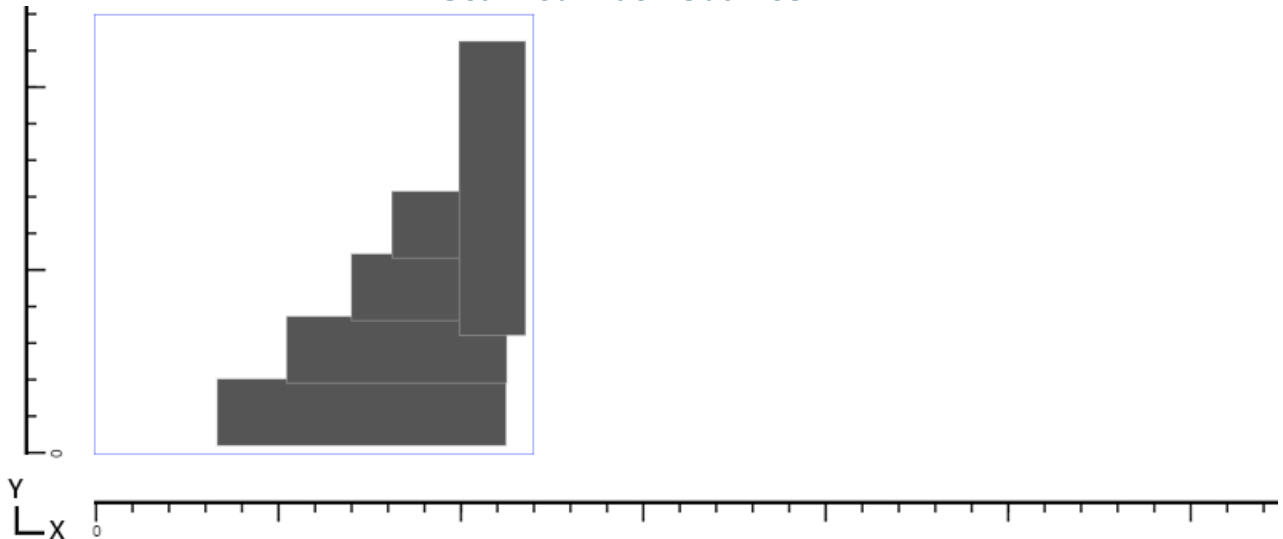
Thickness: 6,35  
mm

Selected Signal Range: 3 – 450 mV

**Recorded Measurements**



**Scanned Track Outlines**





# ENTERPRISES INCORPORATED

Plate Number 20



Max Signal: 33.3%

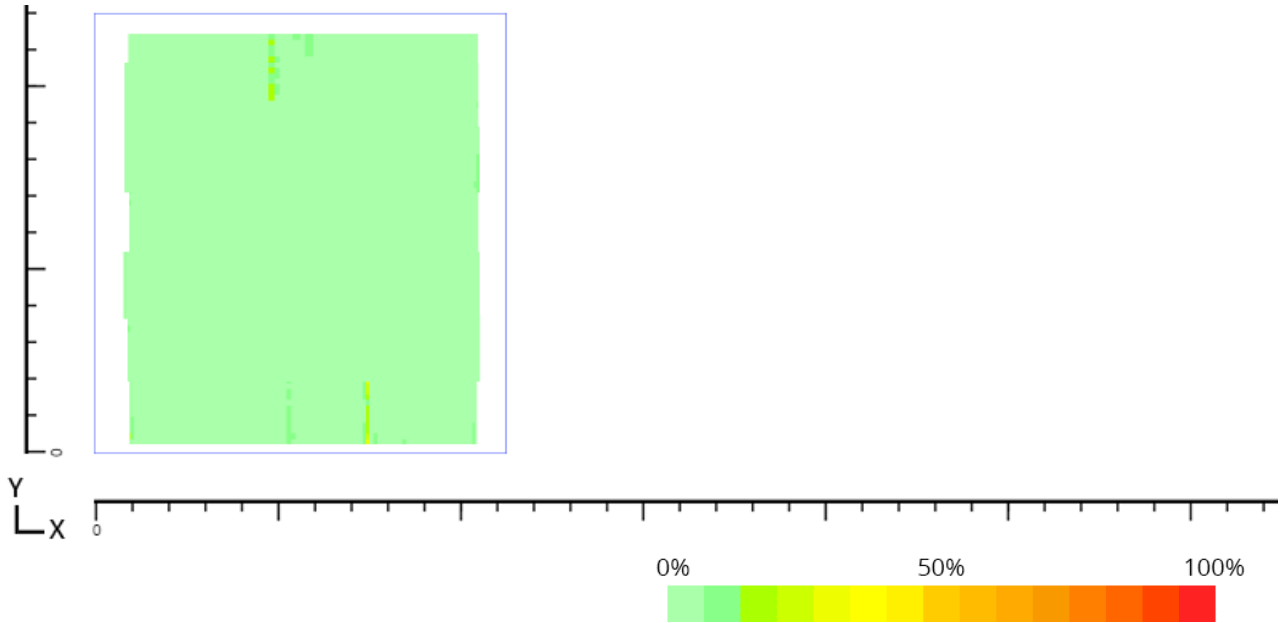
Length (X): 197cm

Width (Y): 210.01cm

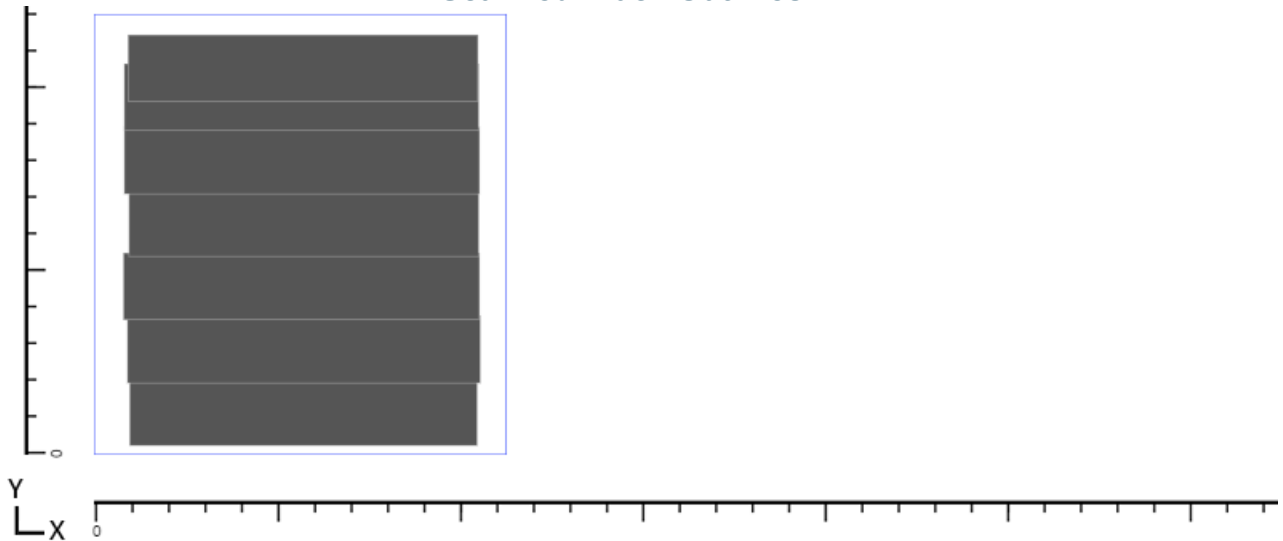
Thickness: 6,35 mm

Selected Signal Range: 3 – 450 mV

## Recorded Measurements



## Scanned Track Outlines





# ENTERPRISES INCORPORATED

Plate Number 21



Max Signal: 33.3%

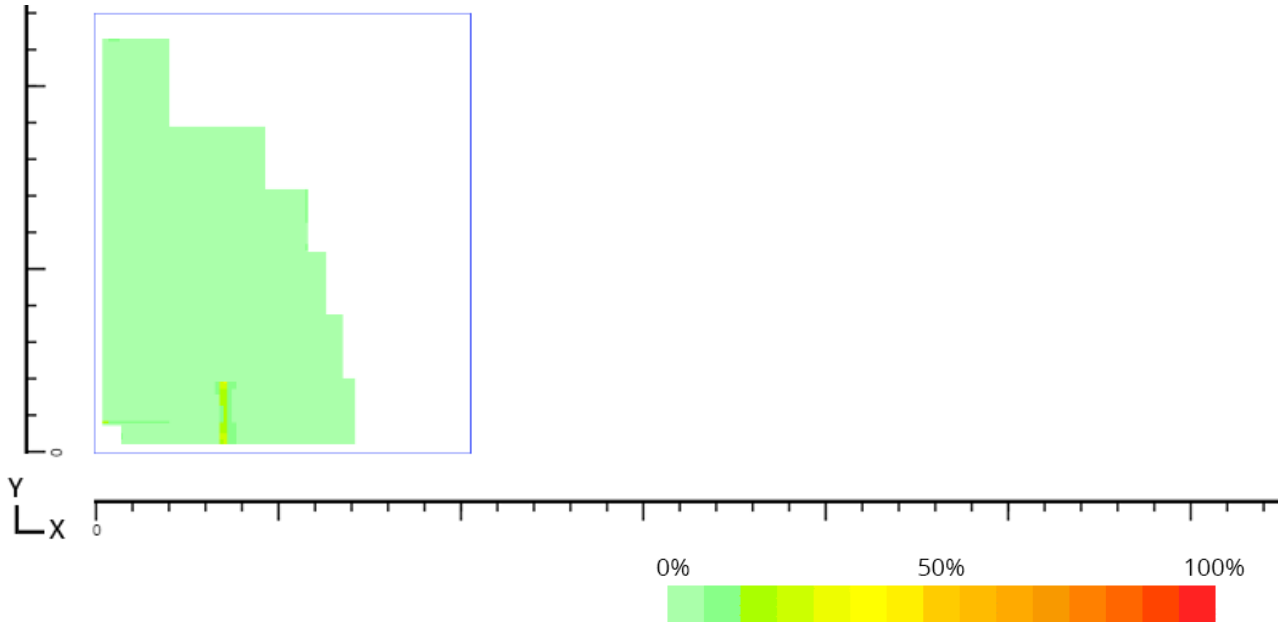
Length (X):  
180.01cm

Width (Y):  
210.01cm

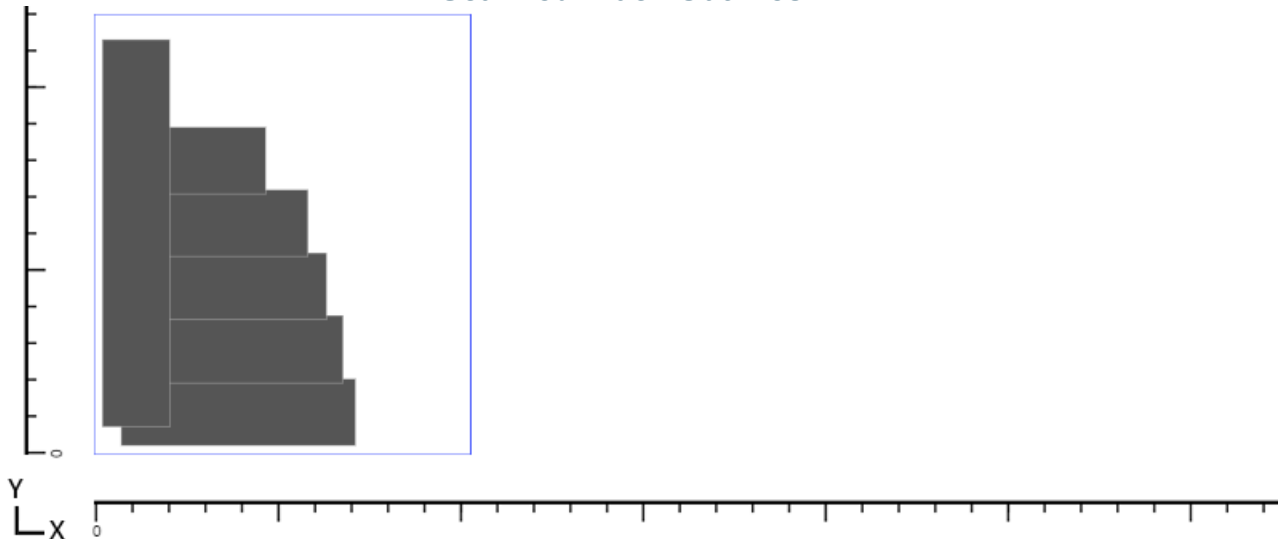
Thickness: 6,35  
mm

Selected Signal Range: 3 – 450 mV

## Recorded Measurements



## Scanned Track Outlines





12/08/17

# MFE Enterprises, Inc.

## THIS CERTIFIES THAT Gisli Gudmundsson

HAS SUCCESSFULLY COMPLETED 40 HOURS OF TRAINING AND PASSED THE STANDARDS  
PER API 653 ANNEX G AND SNT TC-1A

Scanner Equipment	MFE Mark IV Mapping
Plate Thickness (T)	.250 Inch
Coating Thickness (tc)	.005 Inch
% of Defects found	100% Passed
I < .050	90% Passed
.050 in. < I < 1/2T	100% Passed
1/2T < I < 2/3T	100% Passed
General Corrosion	100% Passed

Critical Equipment Settings Function Test Check	Per Manufacturer Per Manufacturer
Hours of MFL Training	40
Final Written Test Grade	92%
Final Result	Passed



DYLAN DUKE, DIRECTOR OF TRAINING



BILL DUKE, PRESIDENT



# MFE Enterprises, Inc.

07/18/2017

## Verification Certificate

Scanner ID#  
Model:  
Standard Name:  
Range:  
Resolution:

MK4-0016-A-TFS  
Tank Floor Scanner  
MFE-TFSE1  
0-23"  
0.024"

Scan #	Encoder Start Point	Encoder End Point	Distance Traveled (Encoder Ep-Sp)
1 (Forward)	0.000	22.752	22.752
2 (Reverse)	22.752	-0.098	22.850
3 (Forward)	-0.098	22.752	22.850
4 (Reverse)	22.752	-0.098	22.850
5 (Forward)	-0.098	22.752	22.850
6 (Reverse)	22.752	-0.098	22.850

Scan #	Measured Start Point	Measured End Point	Distance Traveled (Measured Ep-Sp)
1 (Forward)	24.188	1.375	22.813
2 (Reverse)	1.375	24.188	22.813
3 (Forward)	24.188	1.375	22.813
4 (Reverse)	1.375	24.188	22.813
5 (Forward)	24.188	1.375	22.813
6 (Reverse)	1.375	24.188	22.813

Scan #	Distance Traveled (Encoder Ep-Sp)	Distance Traveled (Measured Ep-Sp)	Deviation +/-	Tolerance +/-	PASS/FAIL
1 (Forward)	22.752	22.813	-0.061	0.125"	PASS
2 (Reverse)	22.850	22.813	0.037	0.125"	PASS
3 (Forward)	22.850	22.813	0.037	0.125"	PASS
4 (Reverse)	22.850	22.813	0.037	0.125"	PASS
5 (Forward)	22.850	22.813	0.037	0.125"	PASS
6 (Reverse)	22.850	22.813	0.037	0.125"	PASS

Measurement Tool:  
MK4-TM001

Encoder Data Log#:  
stream\_data\_170718122200

Inspector Name:  
William Duke

Date of Inspection:  
July 18, 2017

Certificate Expires:  
July 18, 2018

WILLIAM DUKE, DIRECTOR OF OPERATIONS



## Starfsleyfi til þykktarmælinga á skipum

Starfsleyfið er veitt samkvæmt heimild í lögum um Samgöngustofu, stjórnarsýslustofnun samgöngumála, nr. 119/2012 og Skipalögum nr. 66/2021

Nafn:	Heimili:	Sveitarfélag:	Kt.:
<b>HD ehf.</b>	<b>Vesturvör 36</b>	<b>200 Kópavogi</b>	<b>431298-2799</b>
- Gísli Arnar Guðmundsson	Sómatúni 18	600 Akureyri	251172-4639

Með starfsleyfi þessu er ofanrituðum veitt heimild til að annast þykktarmælingar á skipum og bátum, skýrslugerð og innfærslu í skipaskrá vegna þeirra.

Um framkvæmd þykktarmælingar, skýrslugerðar og innfærslu í skipaskrá skal hafa samráð við starfsmenn Samgöngustofu. Fylgja skal ákvæðum í lögum, reglugerðum og verklagsreglum um þykktarmælingar, sjá VIN – 2142 *Þykktarmæling á skipum sem smíðuð eru úr stáli og áli.*

Gildi starfsleyfis er m.a. bundið því skilyrði að HD ehf. og starfsmenn fyrirtækisins sé samþykkt af viðurkenndu flokkunarfélagi til að framkvæma þykktarmælingar á flokkuðum skipum.

Starfsleyfið gildir til: **4. nóvember 2027**

Fella má starfsleyfið úr gildi ef ekki er farið í einu og öllu eftir settum reglum og leiðbeiningum þar um.

F.h. Samgöngustofu

Reykjavík  
Staður

4.11.2022  
Dagsetning

  
Undirskrift og stimpill

# LAVENDER

## INTERNATIONAL NDT TRAINING SCHOOL

UNIT 7, PENISTONE STATION, SHEFFIELD, S36 6HP, UK



INVESTORS  
IN PEOPLE

Gold

Tel: (44) (0) 1226 765769 Fax: (44) (0) 1226 760707 E-mail: nicola@lavender-ndt.com

FOR VERIFICATION, PLEASE CONTACT THE ABOVE



# Certificate of Training

GISLI ARNAR GUÐMUNDSSON

This is to certify that \_\_\_\_\_  
NDT EHF

of \_\_\_\_\_

has successfully completed a course of training in:  
ULTRASONIC INSPECTION – WELDS – LEVEL 2

To the syllabus outlined in the document: \_\_\_\_\_  
PCN GEN ISS 14 2017

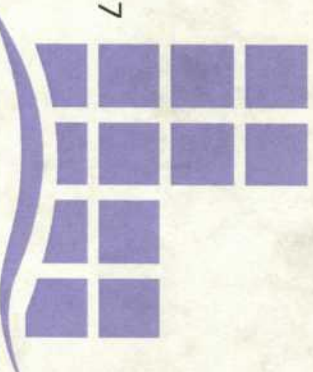
Date: 9-10.02.2017 \_\_\_\_\_  
Hours: 8

TUTOR: J P TREWEEK  
\_\_\_\_\_

B SCOTT  
ADMINISTRATION ASSISTANT  
67057 dated 10 MARCH 2017

For Lavender International NDT Consultancy Services Ltd. No. \_\_\_\_\_

This course is accredited by the British Institute of NDT  
QD 258 ISSUE 2 19.05.2016 TRAINING WAS CONDUCTED AT LAVENDER UK WHICH IS A BINDT APPROVED TRAINING ORGANISATION



Baugh & Weedon NDE Ltd.  
 11-16 Burcott Business Park,  
 Burcott Road, Hereford, HR4 9JQ.  
 Tel: +44 (0)1432 267671  
 Email: [sales@bw-nde.com](mailto:sales@bw-nde.com)  
 Web: [www.bw-nde.com](http://www.bw-nde.com)



<b>Calibration Certificate No.</b>	PS7923-1
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<b>Customer</b>	<b>Acceptance</b>	Pass
Gisli Gudmundsson	<b>Date of Calibration</b>	07.09.23
<b>Customer Purchase Order No.</b>	<b>Date of Expiry</b>	07.09.24
N/A	<b>Adjustment</b>	No

Item	Description of Customer Equipment Under Test	Serial No. & Reference No.
1	Olympus 45MG Ultrasonic Thickness Gauge	8440313
1a	Olympus D7910 5MHz Ultrasonic Thickness Probe	1394385
<b>Remarks</b>	The readings obtained by the equipment under test, are within tolerance, of those given by the traceable test equipment.	

**Conclusion & Specification**

It is hereby certified that the whole of the equipment specified has been calibrated and conforms to an accuracy of +/- 0.1mm.

The calibration has been completed by using; equipment traceable to National Standards (NPL), the general principles of BS EN ISO 16809:2019 and our latest work instruction and procedure documents.

In accordance with ISO 9001:2015 - The quality management system applies to; the service, repair, and calibration of non-destructive test equipment. (Certificate No. AVQ5007104 which expires on 31<sup>st</sup> May 2025)

<b>Test Conditions</b>	Temperature (20 +/- 2 °C) & Humidity (50 +/- 20%)
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Reference Test Equipment Used	Serial No.	Certificate No.
B&W Thickness Test Block 200mm	B18	51156 - UKAS
B&W Thickness Test Block 50-75mm	B29	51157 - UKAS
B&W Thickness Test Block 1.5-20mm	B202	51159 - UKAS

The above equipment is traceable to NPL and was calibrated by a UKAS accredited Calibration Laboratory.

<b>Test Equipment Uncertainty</b>	The uncertainties are based on a probability of a 95% level of confidence.
<b>Measurement Uncertainty</b>	B18 +/-0.014, B29 +/- 0.014, B202 +/- 0.021

<b>Calibrated By</b>	P. Stimson Calibration Manager	<b>Approved Signatory</b>	
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Baugh & Weedon NDE Ltd.  
 11-16 Burcott Business Park,  
 Burcott Road, Hereford, HR4 9JQ.  
 Tel: +44 (0)1432 267671  
 Email: [sales@bw-nde.com](mailto:sales@bw-nde.com)  
 Web: [www.bw-nde.com](http://www.bw-nde.com)



<b>Calibration Certificate No.</b>	PS7923-1
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<b>Customer Requirements</b>
None supplied.

<b>Results</b>
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<b>Note</b>	Any acceptances indicated as 'OOS' are outside of specification.
	Any acceptances indicated as 'OOCR' are outside of customer requirements.

<b>Work Instruction No.</b>	CAL-WI032 Issue 1	<b>Procedure</b>	CAL-WI014 Issue 1
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Test Block	Nominal Thickness (mm)	Ref. Test Equipment	Customer Equipment	
		Actual Thickness (mm)	Measured Thickness (mm)	Acceptance
B202	1.5	1.5	1.46	Pass
B202	2.5	2.5	2.45	Pass
B202	5	5.0	4.99	Pass
B202	10	10.0	9.98	Pass
B202	15	15.0	14.96	Pass
B202	20	20.0	19.94	Pass
B29	50	50.0	49.96	Pass
B29	75	75.0	74.92	Pass
B18	100	100.0	99.97	Pass
B18	200	200.0	199.97	Pass

<b>Calibrated By</b>	P. Stimson Calibration Manager	<b>Approved Signatory</b>	
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