

SKÝRSLA

ÞYKKTARMÆLINGAR Á OLÍUGEYMI 14 Í ÖRFIRISEY

ULTRASONIC THICKNESS MEASUREMENT

UTM SKÝRSLA NR. 1767



APRÍL 2018

FASTANÚMÉR: T0109

MÆLINGAR FRAMKVÆMDAR , STAÐUR: ÖRFIRISEY, REYKJAVÍK

EIGANDANÚMÉR: 101.14.00

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EHF

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+354 8440313

Framkvæmd mælinga

Þykktarmælingu framkvæmdi Gísli A. Guðmundsson hjá NDT ehf á Akureyri. Upplýsingar varðandi aðstæður, notkun geyma o.fl. veitti Árni Ingimundarson hjá Olíudreifingu ehf.

Framkvæmd þykktarmælinga, segulsviðskönnunar og sjónskoðunar á geyminum fóru fram í apríl mánuði 2018 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.

Segulsviðsmælingar

Gólfskanninn er kvarðaður á 6 mm 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 að mæla.

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 ómálaður að innan. Geymir er í góðu ásigkomulagi að innanverðu, gólf ásamt neðsta umfarinu er ótært að innan Sjá teikningar og ljósmyndir. Eigandi geymis var látin vita. Sjá meðf. niðurstöður mælingar. Öll uppgefin mál á teikningum eru í mm.

Akureyri, 15 apríl 2018

Virðingarfyllst.



Gísli Arnar Guðmundsson

STAÐFESTING ÞYKKTAR OG SEGULSVIÐSMÆLINGA

SKÝRSLA NR.: 1767
DAGS. SKÝRSLU: 15 apríl 2018
EIGANDI GEYMIS: Oliudreifing ehf
REKSTRARAÐILI: Oliudreifing ehf
DAGS. FRAMKV.: 06 apríl 2018
STAÐUR Örfirisey Reykjavík
HVAÐ MÆLT: Geymir 14
FASTANÚMER: T0109
EIGENDANÚMER: 101.14.00
SMÍÐAÁR: 1987

MÆLIBÚNAÐUR: Olympus 45MG. 5 Mhz Serial nr: 130177407, skoðað og vottað þann 30.08.2016
Stilliklossar (Calibration blocks): 3mm, 6mm 9mm 12mm og 18mm.
MFE MK IV Tank Floor Scanner. Serial No.MK4 0016-A-TFS

FRAMKV. MÆLINGA: Gísli Arnar Guðmundsson

SKÍRTEINI (CERTIFICATE): Ultrasonic Inspection – Level II
PCN GEN ISS 6 2010/ n.r. 52140
10/03/2017 - 10/043/2022
Ultrasonic Inspection – Level II
PCN Cert no: E013S3329037 (UT, PA,TOFD)
10/07/2013-09/07/2018

Hér staðfestist að framkvæmdar hafa verið þykktarmæling og segulsviðsskönnun á ofangreindum geymi, í eigu og rekstri Oliudreifingar ehf, að ósk rekstraraðila. Niðurstöður mælinga eru skráðar á meðfylgjandi blaðsíður (teikningar) og eru öll mál í mm. Alls eru þar skráðar 73 niðurstöður. Þykktarmælir, gólfskanni og nemar tengdir búnaðinum voru sannreyndir og prófaðir með mælingum á stilliklossum fyrir, á meðan og að loknum mælingum.

Skoðað/dags./af: 15/04/2018

Samþykkt/dags./af:





ENTERPRISES
INCORPORATED



MFE Scan Survey Report



Skýrsla nr: TM-1767-T0109-14-2018

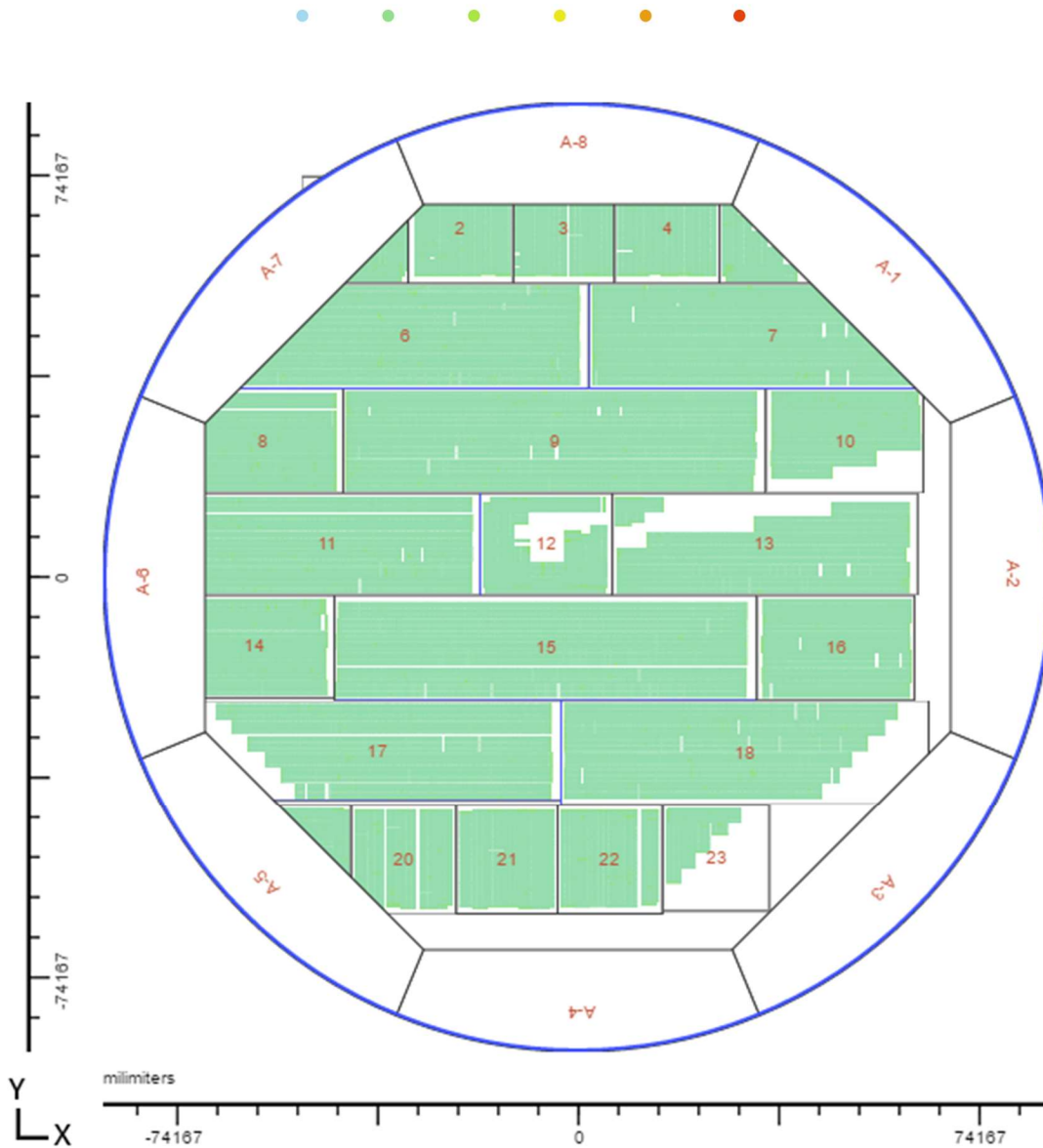
Umsjónaraðili: Olíudreifing
Unnið af: Gísli Arnar Guðmundsson
Fyrirtæki: NDT ehf

Dags.skoðanna: 06 April 2018
Dags.skýrslu: 15 April 2018
Umbeðið af: Árni Ingimundars.





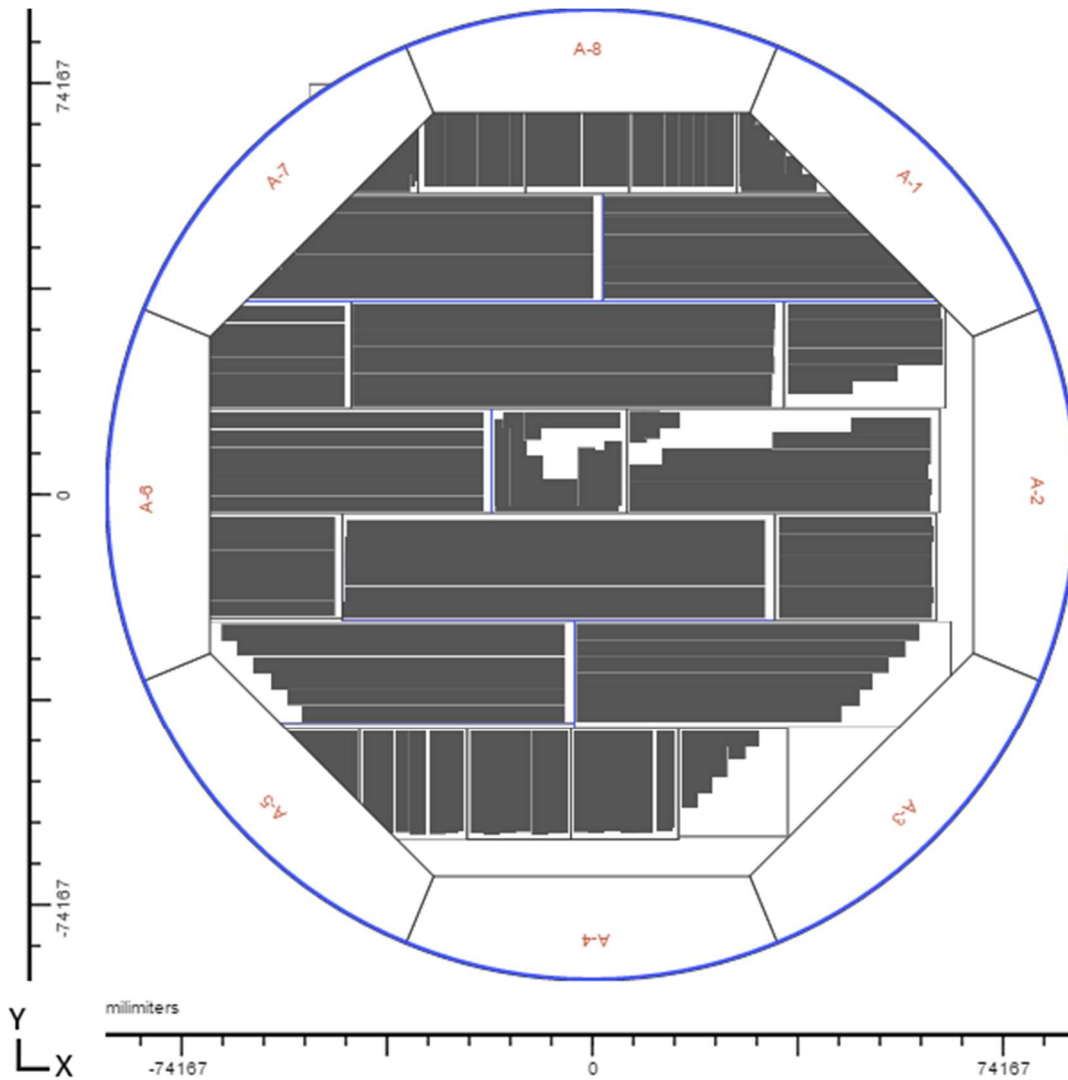
Tank Overview



PLÖTUR A1 TIL A8 HANDSKANNAÐAR

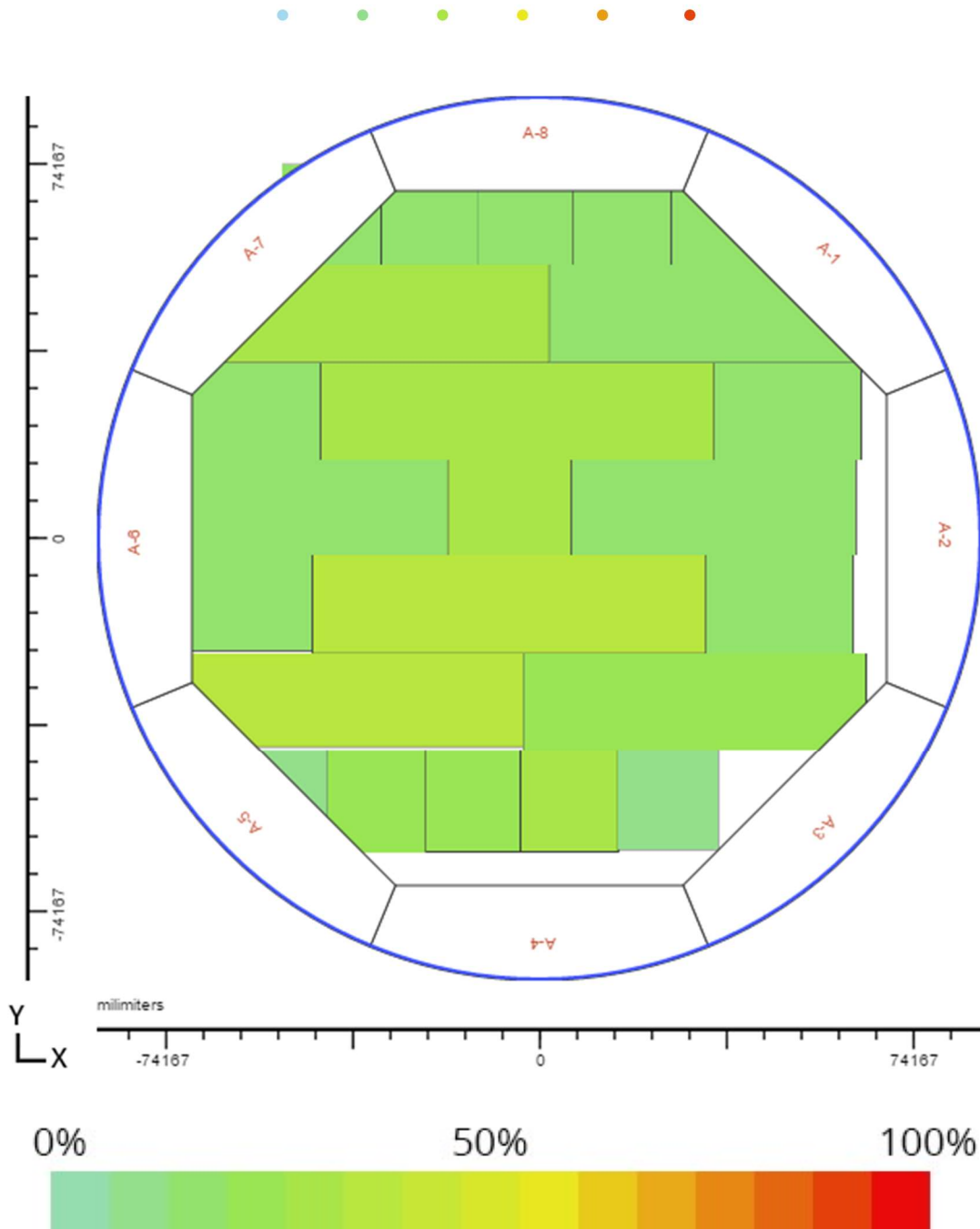


Track Coverage Overview





Maximum Defect by Plate



Myndir frá geymi 14



Mynd 1. Pak Geymis



Mynd 2. Geymir er ómálaður að innan.



Mynd 3. Gólf og hliðar eru í góðu ásigkomulagi.



Mynd 4. Gólf og hliðar eru í góðu ásigkomulagi.

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Mynd 5. Geymir lítur vel út að utanverðu.



Mynd 6. Geymir lítur vel út að utanverðu. Einstaka ryðbletti má finna neðarlega á neðsta umfari.

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Certificate No: MNDE/2016/7521
Valid From: 07 September 2016
Date of Issue: 07 September 2016
Issue Office: Southampton GTC
LR File Ref: MNDE/41334

Lloyd's Register Approved Service Supplier

This is to Certify:

***NDT ehf
Sómatúni 18
600 Akureyri
Iceland***

has been assessed and approved in accordance with the requirements of *Lloyd's Register Approval for Thickness Measurement of Hull Structure* as a service supplier for the provision of

Thickness Measurements of Hull Structure

made in accordance with LR's relevant Rules and Regulations for Classification as amended from time to time. The thickness measurements may be used by the surveyors or shipowners' representatives when making decisions affecting classification, statutory certification or the operation of the ship.

Personnel Authorised to carry out Thickness Measurement Survey's pertinent to this approval are listed on page 2 of 2.

The approval is conditional upon the firm maintaining the audited scheme and notifying Lloyd's Register of any significant changes in personnel, equipment or procedures.

This certificate is issued to the above firm and is valid until the date given below.

Expiry Date: 07 September 2019

Philip Leaver
Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group





Certificate No: MNDE/2016/7521
Valid From: 07 September 2016
Date of Issue: 07 September 2016
Issue Office: Southampton GTC
LR File Ref: MNDE/41334

Lloyd's Register Approved Service Supplier

List of Approved Personnel

Supervisors

Gisli Arnar Guðmundsson

Philip Leaver
Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group



A member of the Lloyd's Register group. Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

CERTIFICATE OF CALIBRATION

LR REYKJAVIK

It is hereby certified that thickness measurement gauge, OLYMPUS 45 MG, serial no. 130177407, has been calibrated, by Mr. Guðni Guðnason, using LR's Step wedge no. LR RJK 01, certified on 26. November 2001, by T. Kalland Surveyor to Lloyd's Register Aalborg.

Nominal Value (mm)	Measured Value (mm)	Tolerance (mm)
<u>4,99</u>	<u>5,0</u>	+/- <u>0,01</u>
<u>10,00</u>	<u>10,0</u>	+/- <u>0,00</u>
<u>15,00</u>	<u>15,0</u>	+/- <u>0,00</u>
<u>19,99</u>	<u>20,1</u>	+/- <u>0,11</u>

Reykjavik, 30th August 2016

Calibration made by:

Guðni Guðnason



Witnessed by:

Þorvaldur Ólafsson

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



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



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

For Lavender International NDT Consultancy Services Ltd.

No. _____

67057 dated 10 MARCH 2017

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

