Airpack B.V. - Air Compressor –

Integrated Methanol and Ammonia Plant

17735-COM WPQ (K020)

REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
01	12-12-2023	Issued for Information	S.K.	J.J.	S.K.

LIST OF REVISED PAGES

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19	X					**44**	X					**69**						**1**					
20	X					**45**	X					**70**						**2**					
21	X					**46**	X					**71**						**3**					
22	X					**47**	X					**72**						**4**					
23	X					**48**	X					**73**						**5**					
24	X					**49**	X					**74**						**6**					
25	X					**50**	X					**75**						**7**					

WPQ

WPQ

SKID

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN Zierikzee, The Netherlands

AWS - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	Berrevoets A.		Test date	28-11-2022	
ID Number	Verified by DNV		WPQ record number	A1153205-2-61	
Date of birth	27-3-1968		Standard test number	N.A.	Rev. -
Stamp number	BA		WPS record number	S2400	Rev. 0
Company name	Airpack Netherlands BV		Qualification code	AWS D1.1: 2020	
Division	N.A.				

BASE METALS

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Plate	API 2H (50)	U	II	-	-	20	-
Welded to:	Plate	API 2H (50)	U	II	-	-	20	-
Joint type	Fillet							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Plate - Fillet	Fillet welds
Base metal	Group II to Group II	Carbon and Low-Alloy Steel

BASE METAL THICKNESS	Groove	Fillet	Groove	Fillet
Plate thickness (mm)	-	20	-	3 min.
Pipe/tube thickness (mm)	-	-	-	3 min.
Pipe size (mm)	-	-	-	600 min.

PROCESS VARIABLES	Actual values	RANGE QUALIFIED
Welding process	GMAW	GMAW
Type	Semi-automatic	Semi-Automatic, Machine, Automatic
Backing	With	With
Filler metal specification	5.18	A5.xx
Filler metal classification	E70C-6MH4	All
Weld position (Actual position tested)	3F	
Fillet - Plate & Pipe >= 610mm		F,H,V
Fillet - Pipe 73mm to 610mm		F,H,V
Fillet - Pipe < 73mm		F,H,V
Progression	Up	Up
GMAW transfer mode	Spray	Spray, pulse, globular
Shielding gas/flux	AC-20	A5.xx approved

TESTS

Type of test	Acceptance criteria	Result	Comments
Visual examination per clause 4.9.1	clause 4.9.1.2.	Acceptable	ARL 2717
1x Break test acc. clause 4.31.4	clause 4.31.4.1	Acceptable	-
1x macroscopic examination acc. clause 4.31.2.3	clause 4.31.2.3	Acceptable	-
Notes	asdDDD		

CERTIFICATION

Tests conducted by	Maik van den Branden	Laboratory test number	Report ARJ001-22-12-53197-6
Mechanical tests by	Element Breda (NLD)	Test file number	ARL2717

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of section 4 of the ANSI/AWS D1.1 Structural Welding Code-Steel.

Signature 1

Name	Signature
F. van Toledo	
Date	
19-12-2022	

Signature 2

Name	Signature
M. van Ginneken DNV	
Date	
19-12-2022	

Witnessed Reviewed
And found to comply with:
Date: 2022-12-21
Sign: M. van Ginneken

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN Zierikzee, The Netherlands

AWS - Welding Procedure Specification (WPS)

WeldOffice WPS

WPS record number	S2400 Revision 0	Qualified to	AWS D1.1/D1.1M:2010
Date	14-6-2012	Company name	Airpack Netherlands BV
Supporting PQR(s)	RET 0245029-001-26 - Rev 1		
Reference docs.			

Scope	Filletwelds single layer a <= 6 mm and multi layer filletwelds => 8 mm Fillet, no PWHT (As-welded)
Joint	Joint details for this welding procedure specification in: Production drawings

BASE METALS

Type	Plate	P-no. U	Grp-no. II
Welded to	Plate	P-no. U	Grp-no. II
Backing:	None	P-no.	Grp-no.
Retainers	None		
Notes			

THICKNESS RANGE QUALIFIED (mm)

	As-welded		With PWHT	
	Min.	Max.	Min.	Max.
Complete pen.	-	-	-	-
Impact tested	-	-	-	-
Partial pen.	-	-	-	-
Fillet welds	no min.	no max.	-	-

DIAMETER RANGE QUALIFIED (mm)

	As-welded		With PWHT	
	Min.	Max.	Min.	Max.
Nominal pipe size	610,	no max.	-	-

FILLER METALS

THICKNESS RANGE QUALIFIED (mm)

	SFA	Classification	F-no.	A-no.	Chemical analysis or Trade name	As-welded		With PWHT	
						Min.	Max.	Min.	Max.
GMAW	5.18	E70C-6MH4	6	-	Lincoln, Outershield MC715-H	3,	no max.	-	-
Sup. filler	-	-	-	-	-	- None -			

WELDING PROCEDURE

Welding process			GMAW
Type			Semi-automatic
Minimum preheat/interpass temperature		(°C)	10
Maximum interpass temperature		(°C)	188
Filler metal size		(mm)	1,2
Layer number			All
Position			V
Weld progression			Uphill
Current/polarity			DCEP (reverse polarity)
Waveform control			
Energy		(J)	
Power		(J/s)	
Amperes			127 - 157
Volts			14,7- 17,1
Travel speed		(mm/min)	54 - 112
Maximum heat input		(kJ/mm)	1,88
Wire feed speed		(m/min)	0,
Arc transfer mode			Short-circuiting
Shielding:	Gas type		AC-20 (A5.32 SG-)
	Flow rate	(l/min)	12 - 22
Trailing:	Gas type		None
	Flow rate	(l/min)	-
Backing:	Gas type		None
	Flow rate	(l/min)	-
String or weave			Stringer or Weave
Orifice/gas cup size			15
C.T.W.D		(mm)	15
Multi/Single pass per side			Multiple passes
Multi/single electrode			Single electrode
Maximum pass thickness		(mm)	5
Weld deposit chemistry			-
Notes			

WPS record number	S2400 Revision 0	Qualified to	AWS D1.1/D1.1M:2010
Date	14-6-2012	Company name	Airpack Netherlands BV

PREHEAT TABLE

Applicable standard	
AWS D1.1 (Category A)	For thickness 3 to 19(mm): 0(°C). Preheat to 20(°C) if the base metal temperature is below 0(°C). Over 19 thru 38.1(mm): 66(°C). Over 38.1 thru 63.5(mm): 107(°C). Over 63.5(mm): 150(°C).

TECHNIQUE

Peening	Not used
Surface preparation	Grinding
Initial/interpass cleaning	Brushing and Grinding
Back gouging method	None

NOTES

Signature 1

Name	Signature
Date	

Signature 2

Name	Signature
Date	

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KvK 24170257

Arjan Roza Lastechniek
G. Sterkenburgstraat 38
4268 GS MEEUWEN

Date(s) tested : 13-12-2022
Date reported : 13-12-2022
Element report number : ARJ001-22-12-53197-6

Customer reference : ARL2717

TEST REPORT

WELDERS PERFORMANCE QUALIFICATION TEST RECORD

Testing in accordance with : AWS D1.1:2020
Purchaser : Arjan Roza Lastechniek BV
Purchase order no. : ARL2717

Manufacturer : Airpack Nederland BV.
WPS : S2400

Description of sample(s) : Plate with filletweld multipass
Dimension(s) : 380x150x20 mm
Group number : II -II
Material grade : API 2W grade 50 - API 2W grade 50

Welding process(es) : GMAW (metal cored)
Filler : SFA 5.18 : E70C-6MH4, F-number 6
Brand and type : Lincoln Electric Outershield MC715-H
Shielding gas : AC-20 (A5.32 SG-)
Backing gas : N.A.

Welding position : 3Fu
Preheat / Interpass temp. : 10 °C / 188 °C
Joint type : Fillet weld

Welder/Operator

Numbers(s)	Welder(s)	Specimen	Results
ARL2717-6	Berrevoets A.	53197-6 / 1,2	Acceptable
ARL2717-7	Wesdorp J.	53197-7 / 1,2	Acceptable

element

Date(s) tested: 13-12-2022
Date reported: 13-12-2022
P.O. No.: ARL2717
Report No.: ARJ001-22-12-53197-6

FILLET WELD BREAK TEST

Test method: AWS D1.1			Test temperature: R.T.
Specimen	Qty	Results	Remark
53197-6 / 1	1x	No weld defects observed.	Acceptable
53197-7 / 1	1x	No weld defects observed.	Acceptable

MACRO EXAMINATION

Method: ASTM E3				Magnification: 5x
Specimen	Qty	Etchant:	Observations:	Result
53197-6 / 2	1x	Nital	No significant inclusions or other defects	Acceptable
53197-7 / 2	1x	Nital	No significant inclusions or other defects	Acceptable

element
Maik van den Branden

☐ Witnessed ☑ Reviewed
And found to comply with:
DNV
Date: 2022-12-21
Sign: M. van Ginneken

The above mentioned items satisfy the requirements.

Element Materials Technology

RvA TESTING RvA L 063

30 MM plate

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

2 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No./ Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No.: 366375-002 Sheet: 1/...

5 Established inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No. 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No.

B01 Product: HOT ROLLED PLATES

2/ Steel design: 2W-50-MOD

3 Any suppl requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

B01-B99 Description of the product

14 em o.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
		MM			KG				
	1	30,00	x 2500	x 12000	7065	TM	362704	730557-02	
	1	30,00	x 2500	x 12000	7065	TM	362705	730556-01	
	1	30,00	x 2500	x 12000	7065	TM	362705	730556-02	
	3				21195				
*	3				21195				

B06 Marking of the product

ITEM NO.: 04
STEEL DESIGNATION S355G10+M API 2W 50 Z LS MOD
CAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

C10-C29 Tensile test

14 em o.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C10 MPA RP02	C11 REH	C12 RM	C13 A % L0=5D	C14-C15 A % L0=8IN	REH/RM	RP02/RM	Z %
	362704	730557		K4	QO	RT	449	468	537	29		0,87	0,83	
				K2	QO	RT	444	451	535		27			
				F2	QO	RT	454	473	537		28			
				K2	SO	RT			516					70,7
				K2	SO	RT			518					77,2
				K2	SO	RT			511					76,2
				F2	SO	RT			525					74,4
				F2	SO	RT			528					70,0
				F2	SO	RT			528					68,0

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's

Surveyor
Dunkerque Office
Lloyd's Register EMEA

Lloyd's Register

CONTROL NUMBER
DNK 110015-

Inspector

POISSONNET
Test House Manager

GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

A01

Date 05.09.11 CD 1

M-System: Certification as per ISO 9001

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A08/ Manufacturer's order/ A03 Certificate No: 366375-002 Sheet: 2/...

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No. 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No

B01 Product: HOT ROLLED PLATES

2/ Steel design: 2W-50-MOD

3 Any suppl requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C10-C29 Tensile test

14 em o. B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C10 MPA RP02	C11 REH	C12 RM	C13 A % L0=5D	A % L0=8IN	C14-C15 REH/RM	RP02/RM	Z %
362705	730556		K4	QO	RT	450	462	537	29		0,86	0,83	
			K2	QO	RT	449	470	537		27			
			F2	QO	RT	452	469	540		24			
			K2	SO	RT			521					69,8
			K2	SO	RT			520					60,5
			K2	SO	RT			520					75,5
			F2	SO	RT			530					65,4
			F2	SO	RT			524					74,5
			F2	SO	RT			536					70,5

C30-C39 Further information about hardness test

'EM NO.: 04
ARDNESS TEST INFORMATIVE

'EM NO.: 04

07.2	B07.1	C33	C01	C02/C01	RESULTS	AVERAGE
62707	728022	HV10	K9	QO	164/170/167/165	167
62707	728022	HV10	K9	QU	181/186/184/179	183
62446	730483	HV10	K9	QO	187/182/185/188	186
62446	730483	HV10	K9	QU	198/196/197/199	198
62702	730097	HV10	K9	QO	181/175/170/177	176
62702	730097	HV10	K9	QU	174/176/180/183	178
62446	730196	HV10	K9	QO	196/189/189/182	189
62446	730196	HV10	K9	QO	186/191/184/180	185

TFK
Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

Surveyor
Dunkerque Office
Lloyd's Register EMEA
Lloyd's Register
Inspector

POISSONNET
Test House Manager

GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

A01

Date 05.09.11 CD 1

M-System: Certification as per ISO 9001

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A10 Advice of dispatch No./ Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No: 366375-002 Sheet: 3/...

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No. 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No.

B01 Product: HOT ROLLED PLATES

2/ Steel design. 2W-50-MOD

3 Any suppl requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C30-C39 Further information about hardness test

:2712	730551	HV10	K9	QO	165/166/168/168	167
:2712	730551	HV10	K9	QU	166/171/172/169	170
:2446	730195	HV10	K9	QO	175/176/178/177	177
:2446	730195	HV10	K9	QU	177/177/176/178	177

'EM NO.: 04

)7.2	B07.1	C33	C01	C02/C01	RESULTS	AVERAGE
:2705	730556	HV10	K9	QO	166/166/172/169	168
:2705	730556	HV10	K9	QU	174/175/176/174	175
:2702	730096	HV10	K9	QO	166/169/171/171	169
:2702	730096	HV10	K9	QU	172/174/173/171	173
:2446	730555	HV10	K9	QO	176/175/170/172	173
:2446	730555	HV10	K9	QU	178/177/178/175	177
:2446	730105	HV10	K9	QO	166/167/171/188	173
:2446	730105	HV10	K9	QU	171/176/176/174	174
:2446	730107	HV10	K9	QO	177/174/171/173	174
:2446	730107	HV10	K9	QU	178/177/177/179	178
:2446	730197	HV10	K9	QO	181/184/189/182	184
:2446	730197	HV10	K9	QU	194/188/187/188	189

'EM NO.: 04

)7.2	B07.1	C33	C01	C02/C01	RESULTS	AVERAGE
:2446	730198	HV10	K9	QO	194/191/191/190	192
:2446	730198	HV10	K9	QU	188/192/192/191	191
:2712	731016	HV10	K9	QO	166/165/167/166	166
:2712	731016	HV10	K9	QU	167/172/171/170	170

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's

Surveyor
Dunkerque Office
Lloyd's Register EMEA

Lloyd's Register

CONTROL NUMBER
UNK T000154
Inspector 2011

POISSONNET
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B01 Product: HOT ROLLED PLATES

2/ Steel design. 2W-50-MOD

3 Any suppl requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C40-C49 Impact test

14 em o. B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy Joule	C45	C42 Individual values AV=J			C43 Mean value
362704	730557		K4	QX	-40		CHP-V		600	AV	213	233	219	222
			K4	QM	-40		CHP-V		600	AV	161	206	171	179
			K4	QV	-40		CHP-V		600	AV	229	234	205	223
			K2	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	110	120	112	114
362705	730556		K4	QX	-40		CHP-V		600	AV	230	211	218	220
			K4	QM	-40		CHP-V		600	AV	136	133	142	137
			K4	QV	-40		CHP-V		600	AV	236	222	234	231
			K2	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	198	217	219	211

C66-C68 Supplementary tests on test samples

'EM NO.: 04
:OP WEIGHT TEST (PELLINI)
)7.2 B07.1 RESULT
:2704 730557 T -35,0 C : NO BREAK
:2705 730556 T -35,0 C : NO BREAK

'EM NO.: 04
:EP ETCH TESTING AS PER DH-STANDARD <=2B : SATISFACTORY

C70-C99 Chemical composition % - Heat analysis

07.2 eat	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	AS	SN
:2704	Y	0,081	0,384	1,54	0,013	0,0008	0,0047	0,040	0,013	0,064	0,038	0,001	0,020	0,002	0,001
:2705	Y	0,081	0,381	1,54	0,014	0,0007	0,0038	0,039	0,022	0,058	0,036	0,001	0,019	0,003	0,001

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TFK
Manufacturer's

Surveyor
Dunkerque Office
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Lloyd's Register

CONTROL NUMBER
DNK 1000154

POISSONNET
Test House Manager

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Final receiver: AM PROJECTS,ROTTERDA A07.2 No.

B01 Product: HOT ROLLED PLATES

Steel design: 2W-50-MOD

Any suppl. requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C70-C99 Chemical composition % - Heat analysis

07.2 Heat	C70	TI	PB	B	SB	CA	BI	AL-T
2704	Y	0,002	0,001	0,0002	0,0001	0,0022	0,0001	0,033
2705	Y	0,002	0,001	0,0001	0,0002	0,0019	0,0001	0,032

C94 Heat analysis Carbon equivalent / Alloying restrictions

07.2 Heat									
2704	FO-02=	0,35	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1= 7,02
2705	FO-02=	0,36	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1= 8,42

C95 Ladle treatment

ITEM NO.: 04
KIND OF THE INDICATED ITEM: VACUUM DEGASSED

C70-C99 Chemical composition % - Product analysis

07.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	TI	B
2704	730557	K4O	0,084	0,384	1,52	0,013	0,0009	0,0050	0,041	0,015	0,062	0,036	0,000	0,021	0,003	0,0002
2705	730556	K4O	0,085	0,378	1,51	0,013	0,0007	0,0037	0,038	0,024	0,054	0,034	0,000	0,019	0,002	0,0002

07.2 Heat	B07.1 Test No.	C01	AL-T
2704	730557	K4O	0,033
2705	730556	K4O	0,032

C94 Product analysis Carbon equivalent / Alloying restrictions

07.2 Heat	B07.1 Test No.	C01							
2704	730557	K4O	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1= 6,60
2705	730556	K4O	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1= 8,65

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's

Lloyd's Register

CONTROL NUMBER: DNK1100354

POISSONNET
Test House Manager

GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

A01

Date 05.09.11 CD 1

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No./ Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No.: 366375-002 Sheet: 6

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No. 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No.

B01 Product: HOT ROLLED PLATES

2/ Steel design.: 2W-50-MOD

3 Any suppl requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C94 Carbon equivalent formula / Alloying restrictions

-02 = C+(MN/6)+(CR+MO+V)/5+(NI+CU)/15
-31 = C+SI/30+(MN+CR+CU)/20+MO/15+V/10+NI/60+5B
-51 = V +NB
-52 = V +NB+TI
-A1 = AT/N

D01 Marking and identification, surface appearance, shape and dimensional properties

EM NO.: 04
SULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS
RFACE AS PER EN-10163-A3
ICKNESS AS PER EN-10029:91-A
NGTH AND WIDTH AS PER EN-10029:91
ATNESS AS PER EN-10029:91-T4L

D02 Non-destructive tests - Ultrasonic testing

EM NO.: 04
-SPECIFICATION : EN 10160 KLASSE S1/E2 AND API 2W APPENDIX A SUPPLEMENTARY REQUIREMENTS S1
ANNING PLAN BODY : LONGITUDINALLY SCAN LINES SPACING 75 MM
EDGES : 100 MM
RSONNEL QUALIFICATION : LEVEL 2 IN ACC. TO EN 473 AND SNT-TC-1A
E TEST RESULTS MEET THE REQUIREMENTS OF THE ORDER.

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's

Surveyor
Dunkerque Office
Lloyd's Register EMEA

Lloyd's Register

CONTROL NUMBER
DNK 100154
Inspector

POISSONNET
Test House Manager

GTS Industries - Groupe Dillinger Hütte
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F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

A01

Date 05.09.11 CD 1

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN Zierikzee, The Netherlands

AWS - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	Wesdorp J.		Test date	28-11-2022	
ID Number	Verified by DNV		WPQ record number	A1153205-2-62	
Date of birth	12-9-1996		Standard test number	N.A.	Rev. -
Stamp number	JW		WPS record number	S2400	Rev. 0
Company name	Airpack Netherlands BV		Qualification code	AWS D1.1:2020	
Division	N.A.				

BASE METALS

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Plate	API 2H (50)	U	II	-	-	20	-
Welded to:	Plate	API 2H (50)	U	II	-	-	20	-
Joint type	Fillet							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Plate - Fillet	Fillet welds
Base metal	Group II to Group II	Carbon and Low-Alloy Steel

BASE METAL THICKNESS	Groove	Fillet	Groove	Fillet
Plate thickness (mm)	-	20	-	3 min.
Pipe/tube thickness (mm)	-	-	-	3 min.
Pipe size (mm)	-	-	-	600 min.

PROCESS VARIABLES	Actual values	RANGE QUALIFIED
Welding process	GMAW	GMAW
Type	Semi-automatic	Semi-Automatic, Machine, Automatic
Backing	With	With
Filler metal specification	5.18	A5.xx
Filler metal classification	E70C-6MH4	All
Weld position (Actual position tested)	3F	
Fillet - Plate & Pipe >= 610mm		F,H,V
Fillet - Pipe 73mm to 610mm		F,H,V
Fillet - Pipe < 73mm		F,H,V
Progression	Up	Up
GMAW transfer mode	Spray	Spray, pulse, globular
Shielding gas/flux	AC-20	A5.xx approved

TESTS

Type of test	Acceptance criteria	Result	Comments
Visual examination per clause 4.9.1	clause 4.9.1.2.	Acceptable	ARL 2717
1x Break test acc. clause 4.31.4	4.31.4.1	Acceptable	-
1x macroscopic examination acc. clause 4.31.2.3	clause 4.31.2.3	Acceptable	-

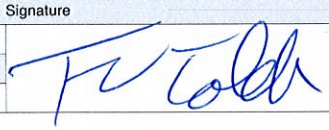
Notes	

CERTIFICATION

Tests conducted by	Maik van den Branden	Laboratory test number	Report ARJ001-22-12-53197-6
Mechanical tests by	Element Breda (NLD)	Test file number	ARL2717

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of section 4 of the ANSI/AWS D1.1 Structural Welding Code-Steel.

Signature 1

Name	Signature
F. van Toledo	
Date	
19-12-2022	

Signature 2

Name	Signature
M. van Ginneken DNV	
Date	
19-12-2022	

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN Zierikzee, The Netherlands

AWS - Welding Procedure Specification (WPS)

WeldOffice WPS

WPS record number	S2400 Revision 0	Qualified to	AWS D1.1/D1.1M:2010
Date	14-6-2012	Company name	Airpack Netherlands BV
Supporting PQR(s)	RET 0245029-001-26 - Rev 1		
Reference docs.			

Scope	Filletwelds single layer a <= 6 mm and multi layer filletwelds => 8 mm Fillet, no PWHT (As-welded)
Joint	Joint details for this welding procedure specification in: Production drawings

BASE METALS

Type	Plate	P-no. U	Grp-no. II
Welded to	Plate	P-no. U	Grp-no. II
Backing:	None	P-no.	Grp-no.
Retainers	None		
Notes			

THICKNESS RANGE QUALIFIED (mm)

	As-welded		With PWHT	
	Min.	Max.	Min.	Max.
Complete pen.	-	-	-	-
Impact tested	-	-	-	-
Partial pen.	-	-	-	-
Fillet welds	no min.	no max.	-	-

DIAMETER RANGE QUALIFIED (mm)

	As-welded		With PWHT	
	Min.	Max.	Min.	Max.
Nominal pipe size	610,	no max.	-	-

FILLER METALS

THICKNESS RANGE QUALIFIED (mm)

	SFA	Classification	F-no.	A-no.	Chemical analysis or Trade name	As-welded Min.	As-welded Max.	With PWHT Min.	With PWHT Max.
GMAW	5.18	E70C-6MH4	6	-	Lincoln, Outershield MC715-H	3,	no max.	-	-
Sup. filler	-	-	-	-	-	- None -			

WELDING PROCEDURE

Welding process		GMAW
Type		Semi-automatic
Minimum preheat/interpass temperature	(°C)	10
Maximum interpass temperature	(°C)	188
Filler metal size	(mm)	1,2
Layer number		All
Position		V
Weld progression		Uphill
Current/polarity		DCEP (reverse polarity)
Waveform control		
Energy	(J)	
Power	(J/s)	
Amperes		127 - 157
Volts		14,7- 17,1
Travel speed	(mm/min)	54 - 112
Maximum heat input	(kJ/mm)	1,88
Wire feed speed	(m/min)	0,
Arc transfer mode		Short-circuiting
Shielding: Gas type		AC-20 (A5.32 SG-)
Flow rate	(l/min)	12 - 22
Trailing: Gas type		None
Flow rate	(l/min)	-
Backing: Gas type		None
Flow rate	(l/min)	-
String or weave		Stringer or Weave
Orifice/gas cup size		15
C.T.W.D	(mm)	15
Multi/Single pass per side		Multiple passes
Multi/single electrode		Single electrode
Maximum pass thickness	(mm)	5
Weld deposit chemistry		-
Notes		

WPS record number	S2400 Revision 0	Qualified to	AWS D1.1/D1.1M:2010
Date	14-6-2012	Company name	Airpack Netherlands BV

PREHEAT TABLE

Applicable standard	
AWS D1.1 (Category A)	For thickness 3 to 19(mm): 0(°C). Preheat to 20(°C) if the base metal temperature is below 0(°C). Over 19 thru 38.1(mm): 66(°C). Over 38.1 thru 63.5(mm): 107(°C). Over 63.5(mm): 150(°C).

TECHNIQUE

Peening	Not used
Surface preparation	Grinding
Initial/interpass cleaning	Brushing and Grinding
Back gouging method	None

NOTES

Signature 1

Name	Signature
Date	

Signature 2

Name	Signature
Date	

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BTW NL8056.95.333.B01
KvK 24170257

Arjan Roza Lastechniek
G. Sterkenburgstraat 38
4268 GS MEEUWEN

Date(s) tested : 13-12-2022
Date reported : 13-12-2022
Element report number : ARJ001-22-12-53197-6

Customer reference : ARL2717

TEST REPORT

WELDERS PERFORMANCE QUALIFICATION TEST RECORD

Testing in accordance with : AWS D1.1:2020
Purchaser : Arjan Roza Lastechniek BV
Purchase order no. : ARL2717

Manufacturer : Airpack Nederland BV.
WPS : S2400

Description of sample(s) : Plate with filletweld multipass
Dimension(s) : 380x150x20 mm
Group number : II -II
Material grade : API 2W grade 50 - API 2W grade 50

Welding process(es) : GMAW (metal cored)
Filler : SFA 5.18 : E70C-6MH4, F-number 6
Brand and type : Lincoln Electric Outershield MC715-H
Shielding gas : AC-20 (A5.32 SG-)
Backing gas : N.A.

Welding position : 3Fu
Preheat / Interpass temp. : 10 °C / 188 °C
Joint type : Fillet weld

Welder/Operator

Numbers(s)	Welder(s)	Specimen	Results
ARL2717-6	Berrevoets A.	53197-6 / 1,2	Acceptable
ARL2717-7	Wesdorp J.	53197-7 / 1,2	Acceptable

Witnessed Reviewed
And found to comply with:
Date: 2022-12-21.
Sign: M. van Ginneken

TESTING
RvA L 063

element

Date(s) tested:	13-12-2022
Date reported:	13-12-2022
P.O. No.:	ARL2717
Report No.:	ARJ001-22-12-53197-6

FILLET WELD BREAK TEST

Test method: AWS D1.1			Test temperature: R.T.
Specimen	Qty	Results	Remark
53197-6 / 1	1x	No weld defects observed.	Acceptable
53197-7 / 1	1x	No weld defects observed.	Acceptable

MACRO EXAMINATION

Method: ASTM E3				Magnification: 5x
Specimen	Qty	Etchant:	Observations:	Result
53197-6 / 2	1x	Nital	No significant inclusions or other defects	Acceptable
53197-7 / 2	1x	Nital	No significant inclusions or other defects	Acceptable

The above mentioned items satisfy the requirements.

element
Maik van den Branden

Element Materials Technology

TESTING
RvA L 063

30 MM plate

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

2 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No./ Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No.: 366375-002 Sheet: 1/...

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No.

B01 Product: HOT ROLLED PLATES

2/ Steel design: 2W-50-MOD

3 Any suppl requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

B01-B99 Description of the product

14 em o.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
		MM			KG				
	1	30,00	x 2500	x 12000	7065	TM	362704	730557-02	
	1	30,00	x 2500	x 12000	7065	TM	362705	730556-01	
	1	30,00	x 2500	x 12000	7065	TM	362705	730556-02	
	3				21195				
*	3				21195				

B06 Marking of the product

ITEM NO.: 04
STEEL DESIGNATION S355G10+M API 2W 50 Z LS MOD
CAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

C10-C29 Tensile test

14 em o.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C10 MPA RP02	C11 REH	C12 RM	C13	A % L0=5D	A % L0=8IN	C14-C15 REH/RM	C14-C15 RP02/RM	Z %
	362704	730557		K4	QO	RT	449	468	537		29		0,87	0,83	
				K2	QO	RT	444	451	535			27			
				F2	QO	RT	454	473	537			28			
				K2	SO	RT			516						70,7
				K2	SO	RT			518						77,2
				K2	SO	RT			511						76,2
				F2	SO	RT			525						74,4
				F2	SO	RT			528						70,0
				F2	SO	RT			528						68,0

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's mark

Surveyor
Dunkerque Office
Lloyd's Register EMEA

Lloyd's Register

CONTROL NUMBER
DNK 0000154

Inspector

POISSONNET
Test House Manager

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F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

A01

Date 05.09.11 CD 1

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

auterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

2 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991	A10 Advice of dispatch No./ Date of dispatch 2378342-02.09.11	A08/ Manufacturer's order/ A03 Certificate No — Sheet 366375-002 — 2/...
5 Established Inspecting body: LR	A06 Purchaser: AM PROJECTS,HEIJNING — A07.1 No. 3200019765 Final receiver: AM PROJECTS,ROTTERDA — A07.2 No	B01 Product HOT ROLLED PLATES

2/ Steel design: 2W-50-MOD

3 Any suppl requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12 AGREED MODIFICATIONS

C10-C29 Tensile test

14 B07.2 ɜm Heat No. ɔ.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C10 C11 MPA RP02	REH	C12 RM	C13 A % L0=5D	A % L0=8IN	C14-C15 REH/RM	RP02/RM	Z %
362705	730556		K4	QO	RT	450	462	537	29		0,86	0,83	
			K2	QO	RT	449	470	537		27			
			F2	QO	RT	452	469	540		24			
			K2	SO	RT			521					69,8
			K2	SO	RT			520					60,5
			K2	SO	RT			520					75,5
			F2	SO	RT			530					65,4
			F2	SO	RT			524					74,5
			F2	SO	RT			536					70,5

C30-C39 Further information about hardness test

'EM NO.: 04

ꓲRDNESS TEST INFORMATIVE

'EM NO.: 04

ı7.2	B07.1	C33	C01	C02/C01	RESULTS	AVERAGE
;2707	728022	HV10	K9	QO	164/170/167/165	167
;2707	728022	HV10	K9	QU	181/186/184/179	183
;2446	730483	HV10	K9	QO	187/182/185/188	186
;2446	730483	HV10	K9	QU	198/196/197/199	198
;2702	730097	HV10	K9	QO	181/175/170/177	176
;2702	730097	HV10	K9	QU	174/176/180/183	178
;2446	730196	HV10	K9	QO	196/189/189/182	189
;2446	730196	HV10	K9	QO	186/191/184/180	185

TFK

Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

Surveyor Dunkerque Office Lloyd's Register EMEA — Lloyd's Register

CONTROL NUMBER DNK 1100154 — Inspector

POISSONNET
Test House Manager

GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

A01

Date 05.09.11 CD 1

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

auterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

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INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No / Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No: 366375-002 Sheet: 3/...

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No. 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No.

B01 Product: HOT ROLLED PLATES

2/ Steel design. 2W-50-MOD

3 Any suppl requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C30-C39 Further information about hardness test

;2712	730551	HV10	K9	QO	165/166/168/168	167
;2712	730551	HV10	K9	QU	166/171/172/169	170
;2446	730195	HV10	K9	QO	175/176/178/177	177
;2446	730195	HV10	K9	QU	177/177/176/178	177

'EM NO.: 04

)7.2	B07.1	C33	C01	C02/C01	RESULTS	AVERAGE
;2705	730556	HV10	K9	QO	166/166/172/169	168
;2705	730556	HV10	K9	QU	174/175/176/174	175
;2702	730096	HV10	K9	QO	166/169/171/171	169
;2702	730096	HV10	K9	QU	172/174/173/171	173
;2446	730555	HV10	K9	QO	176/175/170/172	173
;2446	730555	HV10	K9	QU	178/177/178/175	177
;2446	730105	HV10	K9	QO	166/167/171/188	173
;2446	730105	HV10	K9	QU	171/176/176/174	174
;2446	730107	HV10	K9	QO	177/174/171/173	174
;2446	730107	HV10	K9	QU	178/177/177/179	178
;2446	730197	HV10	K9	QO	181/184/189/182	184
;2446	730197	HV10	K9	QU	194/188/187/188	189

'EM NO.: 04

)7.2	B07.1	C33	C01	C02/C01	RESULTS	AVERAGE
;2446	730198	HV10	K9	QO	194/191/191/190	192
;2446	730198	HV10	K9	QU	188/192/192/191	191
;2712	731016	HV10	K9	QO	166/165/167/166	166
;2712	731016	HV10	K9	QU	167/172/171/170	170

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's

Surveyor
Dunkerque Office
Lloyd's Register EMEA

CONTROL NUMBER
DNK 110154
Inspector 2011

POISSONNET
Test House Manager

GTS Industries - Groupe Dillinger Hütte
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F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

A01

Date 05.09.11 CD 1

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

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INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No./ Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No.: 366375-002 Sheet: 4/...

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No. 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No.

B01 Product: HOT ROLLED PLATES

2/ Steel design.: 2W-50-MOD

3 Any suppl. requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C40-C49 Impact test

14 em o. B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy Joule	C45 C42 Individual values AV=J			C43 Mean value
362704	730557		K4	QX	-40		CHP-V		600	AV 213	233	219	222
			K4	QM	-40		CHP-V		600	AV 161	206	171	179
			K4	QV	-40		CHP-V		600	AV 229	234	205	223
			K2	QX	-40		CHP-V	5,0%-250C/60MN	600	AV 110	120	112	114
362705	730556		K4	QX	-40		CHP-V		600	AV 230	211	218	220
			K4	QM	-40		CHP-V		600	AV 136	133	142	137
			K4	QV	-40		CHP-V		600	AV 236	222	234	231
			K2	QX	-40		CHP-V	5,0%-250C/60MN	600	AV 198	217	219	211

C66-C68 Supplementary tests on test samples

'EM NO.: 04
:OP WEIGHT TEST (PELLINI)
'7.2 B07.1 RESULT
:2704 730557 T -35,0 C : NO BREAK
:2705 730556 T -35,0 C : NO BREAK

'EM NO.: 04
:EP ETCH TESTING AS PER DH-STANDARD <=2B : SATISFACTORY

C70-C99 Chemical composition % - Heat analysis

07.2 eat	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	AS	SN
:2704	Y	0,081	0,384	1,54	0,013	0,0008	0,0047	0,040	0,013	0,064	0,038	0,001	0,020	0,002	0,001
:2705	Y	0,081	0,381	1,54	0,014	0,0007	0,0038	0,039	0,022	0,058	0,036	0,001	0,019	0,003	0,001

Z01/Z02/Z03 We hereby certify. that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's

Surveyor
Dunkerque Office
Lloyd's Register EMEA

Lloyd's Register

CONTROL NUMBER
DNK [illegible]
Site Inspector

POISSONNET
Test House Manager

GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

Date 05.09.11 CD 1

A01

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No./ Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No: 366375-002 Sheet: 5/...

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No. 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No

B01 Product: HOT ROLLED PLATES

2/ Steel design: 2W-50-MOD

3 Any suppl. requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C70-C99 Chemical composition % - Heat analysis

07.2 Heat	C70	TI	PB	B	SB	CA	BI	AL-T
2704	Y	0,002	0,001	0,0002	0,0001	0,0022	0,0001	0,033
2705	Y	0,002	0,001	0,0001	0,0002	0,0019	0,0001	0,032

C94 Heat analysis Carbon equivalent / Alloying restrictions

07.2 Heat									
2704	FO-02=	0,35	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1= 7,02
2705	FO-02=	0,36	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1= 8,42

C95 Ladle treatment

TEM NO.: 04
EAT OF THE INDICATED ITEM: VACUUM DEGASSED

C70-C99 Chemical composition % - Product analysis

07.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	TI	B
2704	730557	K4O	0,084	0,384	1,52	0,013	0,0009	0,0050	0,041	0,015	0,062	0,036	0,000	0,021	0,003	0,0002
2705	730556	K4O	0,085	0,378	1,51	0,013	0,0007	0,0037	0,038	0,024	0,054	0,034	0,000	0,019	0,002	0,0002

07.2 Heat	B07.1 Test No.	C01	AL-T
2704	730557	K4O	0,033
2705	730556	K4O	0,032

C94 Product analysis Carbon equivalent / Alloying restrictions

07.2 Heat	B07.1 Test No.	C01							
2704	730557	K4O	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1= 6,60
2705	730556	K4O	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1= 8,65

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's

Lloyd's Register

CONTROL NUMBER DNK 1100154

POISSONNET
Test House Manager

GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

A01

Date 05.09.11 CD 1

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

äuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

	A10 Advice of dispatch No./ Date of dispatch	A08/ A03 Manufacturer's order/ Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991	2378342-02.09.11	366375-002	6

Established Inspecting body	A06 Purchaser		A07.1 No.	B01 Product
LR		AM PROJECTS, HEIJNING	3200019765	HOT ROLLED PLATES
	Final receiver	AM PROJECTS, ROTTERDA	A07.2 No.	

Steel design. 2W-50-MOD

Any suppl. requirements API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C94 Carbon equivalent formula / Alloying restrictions

-02 = C+(MN/6)+(CR+MO+V)/5+(NI+CU)/15
-31 = C+SI/30+(MN+CR+CU)/20+MO/15+V/10+NI/60+5B
-51 = V +NB
-52 = V +NB+TI
-A1 = AT/N

D01 Marking and identification, surface appearance, shape and dimensional properties

EM NO.: 04
SULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS
RFACE AS PER EN-10163-A3
ICKNESS AS PER EN-10029:91-A
NGTH AND WIDTH AS PER EN-10029:91
ATNESS AS PER EN-10029:91-T4L

D02 Non-destructive tests - Ultrasonic testing

EM NO.: 04
-SPECIFICATION : EN 10160 KLASSE S1/E2 AND API 2W APPENDIX A SUPPLEMENTARY REQUIREMENTS S1
ANNING PLAN BODY : LONGITUDINALLY SCAN LINES SPACING 75 MM
EDGES : 100 MM
RSONNEL QUALIFICATION : LEVEL 2 IN ACC. TO EN 473 AND SNT-TC-1A
E TEST RESULTS MEET THE REQUIREMENTS OF THE ORDER.

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's mark

Surveyor
Dunkerque Office
Lloyd's Register EMEA
Lloyd's Register

CONTROL NUMBER
DNK 1100754
Inspector

POISSONNET
Test House Manager

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Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

Date 05.09.11 CD 1

A01

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN Zierikzee, The Netherlands

AWS - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	Berrevoets A.		Test date	28-11-2022	
ID Number	Verified by DNV		WPQ record number	A1153205-2-63	
Date of birth	27-3-1968		Standard test number	N.A.	Rev. -
Stamp number	BA		WPS record number	S2600	Rev. 1
Company name	Airpack Netherlands BV		Qualification code	AWS D1.1:2020	
Division	N.A.				

BASE METALS

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Plate	API 2H (50)	U	II	-	-	20	-
Welded to:	Plate	API 2H (50)	U	II	-	-	20	-
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Plate - Groove	Groove, Fillet, Plug and Slot welds (T-,Y-,K-Groove PJP only)
Base metal	Group II to Group II	Carbon and Low-Alloy Steel

BASE METAL THICKNESS	Groove	Fillet	Groove	Fillet
Plate thickness (mm)	20	-	3 - 40,0	3 min.
Pipe/tube thickness (mm)	-	-	3 - 40,0	no limit
Pipe size (mm)	-	-	600 min.	no limit

PROCESS VARIABLES	Actual values	RANGE QUALIFIED
Welding process	GMAW	GMAW
Type	Semi-automatic	Semi-Automatic, Machine, Automatic
Backing	With	With
Filler metal specification	5.18	A5.xx
Filler metal classification	E70C-6MH4	All
Weld position (Actual position tested)	2G	
Groove - Plate & Pipe >= 610mm		F,H
Groove - Pipe 73mm to 610mm		-
Groove - Pipe 73mm		-
Fillet - Plate & Pipe >= 610mm		F,H
Fillet - Pipe 73mm to 610mm		F,H
Fillet - Pipe < 73mm		F,H
Progression	-	-
GMAW transfer mode	Short-circuiting	Short-circuiting
Shielding gas/flux	AC-20	A5.xx approved

TESTS

Type of test	Acceptance criteria	Result	Comments
2 transverse side bends acc. clause 4.9.3.1	clause 4.9.3.3	Acceptable	-
Visual examination per clause 4.9.1	clause 4.9.1.1	Acceptable	Report ARL2717

Notes

CERTIFICATION

Tests conducted by	Maik van den Branden	Laboratory test number	Report ARJ001-22-53197-3
Mechanical tests by	Element Breda (NLD)	Test file number	ARL2717

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of section 4 of the ANSI/AWS D1.1 Structural Welding Code-Steel.

Signature 1

Name	Signature
F. van Toledo	F. van Toledo
Date	
19-12-2022	

Signature 2

Name	Signature
M. van Ginneken DNV	Witnessed Reviewed And found to comply with: DNV Date: 2022-12-21 Sign: M. van Ginneken
Date	
19-12-2022	

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN Zierikzee, The Netherlands

AWS - Welding Procedure Specification (WPS)

WeldOffice WPS

WPS record number	S2600 Revision 1	Qualified to	AWS D1.1/D1.1M:2015
Date	1-6-2016	Company name	Airpack Netherlands BV
Supporting PQR(s) Reference docs.	RET0278790/TK/001 - Rev 1		

Scope	Groove, fillet, no PWHT (As-welded), impact testing
Joint	Joint details for this welding procedure specification in: Production drawings

BASE METALS

Type	Plate	P-no. U	Grp-no. II
Welded to	Plate	P-no. U	Grp-no. II
Backing:	None	P-no.	Grp-no.
Retainers Notes	None		

THICKNESS RANGE QUALIFIED (mm)

	As-welded Min.	As-welded Max.	With PWHT Min.	With PWHT Max.
Complete pen.	3,	8,	-	-
Impact tested	3,	8,	-	-
Partial pen.	3,	8,	-	-
Fillet welds	no min.	no max.	-	-

DIAMETER RANGE QUALIFIED (mm)

	As-welded Min.	As-welded Max.	With PWHT Min.	With PWHT Max.
Nominal pipe size	610,	no max.	-	-

FILLER METALS

	SFA	Classification	F-no.	A-no.	Chemical analysis or Trade name	As-welded Min.	As-welded Max.	With PWHT Min.	With PWHT Max.
GMAW	5.18	E70C-6MH4	6	-	Lincoln, Outershield MC715-H	3,	8,	-	-
GMAW						-	-	-	-
GMAW						-	-	-	-
Sup. filler						- Required -			
Suppl. filler metal vol. (mm³)	-								

THICKNESS RANGE QUALIFIED (mm)

WELDING PROCEDURE

Welding process		GMAW	GMAW	GMAW
Type		Semi-automatic	Semi-automatic	Semi-automatic
Minimum preheat/interpass temperature	(°C)	10	10	10
Maximum interpass temperature	(°C)	174	174	174
Filler metal size	(mm)	1,2	1,2	1,2
Layer number		Root	Fill	Cap
Position		F,H	F,H	F,H
Weld progression		Not applicable	Not applicable	Not applicable
Current/polarity		DCEP (reverse polarity)	DCEP (reverse polarity)	DCEP (reverse polarity)
Waveform control		Not Used	Not Used	Not Used
Energy	(J)	Not Used	Not Used	Not Used
Power	(J/s)	Not Used	Not Used	Not Used
Amperes		80 - 100	175 - 185	175 - 185
Volts		14 - 17	19 - 21	10 - 21
Travel speed	(mm/min)	110 - 120	460 - 500	440 - 470
Maximum heat input	(kJ/mm)	0,57 - 0,70	0,40 - 0,49	0,44 - 0,53
Wire feed speed	(m/min)	Not used	Not used	Not used
Arc transfer mode		Short-circuiting	Short-circuiting	Short-circuiting
Shielding: Gas type		AC-20 (A5.32 SG-)	AC-20 (A5.32 SG-)	AC-20 (A5.32 SG-)
Flow rate	(l/min)	14 - 16	14 - 16	14 - 16
Trailing: Gas type		None	None	None
Flow rate	(l/min)	-	-	-
Backing: Gas type		None	None	None
Flow rate	(l/min)	-	-	-
String or weave		Stringer or Weave	Stringer or Weave	Stringer or Weave
Orifice/gas cup size		15	15	15
C.T.W.D	(mm)	15	15	15
Multi/Single pass per side		Single pass	Multiple passes	Multiple passes
Multi/single electrode		Single electrode	Single electrode	Single electrode
Maximum pass thickness	(mm)	5	5	5
Weld deposit chemistry		-	-	-
Notes			-	-

WPS record number	S2600	Revision 1	Qualified to	AWS D1.1/D1.1M:2015
Date	1-6-2016		Company name	Airpack Netherlands BV

PREHEAT TABLE

Applicable standard	
AWS D1.1 (Category B)	For thickness 3 to 19(mm): 0(°C). Preheat to 20(°C) if the base metal temperature is below 0(°C). Over 19 thru 38.1(mm): 10(°C). Over 38.1 thru 63.5(mm): 66(°C). Over 63.5(mm): 107(°C).

TECHNIQUE

Peening	Not used
Surface preparation	Grinding
Initial/interpass cleaning	Brushing and Grinding
Back gouging method	None

NOTES

Signature 1

Name	Signature
F. van Toledo	
Date	
1-6-2016	

Signature 2

Name	Signature
Date	

Element Materials Technology
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4824 GN Breda
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BTW NL8056.95.333.B01
KvK 24170257

Arjan Roza Lastechniek
G. Sterkenburgstraat 38
4268 GS MEEUWEN

Date(s) tested : 13-12-2022
Date reported : 13-12-2022
Element report number : ARJ001-22-12-53197-3

Customer reference : ARL2717

TEST REPORT

WELDERS PERFORMANCE QUALIFICATION TEST RECORD

Testing in accordance with : AWS D1.1:2020
Purchaser : Arjan Roza Lastechniek BV
Purchase order no. : ARL2717

Manufacturer : Airpack Nederland BV.
WPS : S2600

Description of sample(s) : Plate with Single-V-groove
Dimension(s) : 600x400x20 mm
Group number : II -II
Material grade : API 2W grade 50 - API 2W grade 50

Welding process(es) : GMAW (metal cored)
Filler : SFA 5.18 : E70C-6MH4, F-number 6
Brand and type : Lincoln Electric Outershield MC715-H
Shielding gas : AC-20 (A5.32 SG-)
Backing gas : N.A.

Welding position : 2G
Preheat / Interpass temp. : 10 °C / 196 °C

Welder/Operator

Numbers(s)	Welder(s)	Specimen	Results
ARL2717-3	Berrevoets A.	53197-3 / 1,2,3,4	Acceptable

Witnessed ☑ Reviewed
And found to comply with:
Date: 2022-12-21
Sign: M. van Ginneken

element

Date(s) tested: 13-12-2022
Date reported: 13-12-2022
P.O. No.: ARL2717
Report No.: ARJ001-22-12-53197-3

GUIDED BEND TEST

Test method: ASME IX (QW-162)						Test temperature: R.T.	
Specimen	Type	Size [mm]	Former [mm]	Roller distance [mm]	Bend Angle [°]	Results	Remark
53197-3 / 1	Side bend	20x10	40	65	180	Acceptable	
53197-3 / 2	Side bend	20x10	40	65	180	Acceptable	

element
Maik van den Branden

The above mentioned items satisfy the requirements.

Element Materials Technology

20 MM plate

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

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2 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No./ Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No.: 366375-002 Sheet: 1/...

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07 1 No 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07 2 No.

B01 Product: HOT ROLLED PLATES

2/ Steel design: 2W-50-MOD

3 Any suppl requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

B01-B99 Description of the product

14 em o.	B08 Number of pieces	B09 Thickness	B10 Width MM	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
	1	30,00	x 2500	x 12000	7065	TM	362704	730557-02	
	1	30,00	x 2500	x 12000	7065	TM	362705	730556-01	
	1	30,00	x 2500	x 12000	7065	TM	362705	730556-02	
	3				21195				
*	3				21195				

B06 Marking of the product

'EM NO.: 04
TEEL DESIGNATION S355G10+M API 2W 50 Z LS MOD
:AT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

C10-C29 Tensile test

14 em o.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C10 MPA RP02	C11 REH	C12 RM	C13 A % L0=5D	C14-C15 A % L0=8IN	REH/RM	RP02/RM	Z %
:	362704	730557		K4	QO	RT	449	468	537	29		0,87	0,83	
				K2	QO	RT	444	451	535		27			
				F2	QO	RT	454	473	537		28			
				K2	SO	RT			516					70,7
				K2	SO	RT			518					77,2
				K2	SO	RT			511					76,2
				F2	SO	RT			525					74,4
				F2	SO	RT			528					70,0
				F2	SO	RT			528					68,0

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's mark

Surveyor
Dunkerque Office
Lloyd's Register EMEA

Lloyd's Register

CONTROL NUMBER
LINK 1100154

Inspector

POISSONNET
Test House Manager

A01
GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

Date 05.09.11 CD 1

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

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INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No./ Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No: 366375-002 Sheet: 2/...

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No. 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No

B01 Product: HOT ROLLED PLATES

2/ Steel design: 2W-50-MOD

3 Any suppl requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C10-C29 Tensile test

14 em o	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C10 MPA RP02	C11 REH	C12 RM	C13 A % L0=5D	A % L0=8IN	C14-C15 REH/RM	RP02/RM	Z %
	362705	730556		K4	QO	RT	450	462	537	29		0,86	0,83	
				K2	QO	RT	449	470	537		27			
				F2	QO	RT	452	469	540		24			
				K2	SO	RT			521					69,8
				K2	SO	RT			520					60,5
				K2	SO	RT			520					75,5
				F2	SO	RT			530					65,4
				F2	SO	RT			524					74,5
				F2	SO	RT			536					70,5

C30-C39 Further information about hardness test

'EM NO.: 04
ARDNESS TEST INFORMATIVE

'EM NO.: 04

17.2	B07.1	C33	C01	C02/C01	RESULTS	AVERAGE
12707	728022	HV10	K9	QO	164/170/167/165	167
12707	728022	HV10	K9	QU	181/186/184/179	183
12446	730483	HV10	K9	QO	187/182/185/188	186
12446	730483	HV10	K9	QU	198/196/197/199	198
12702	730097	HV10	K9	QO	181/175/170/177	176
12702	730097	HV10	K9	QU	174/176/180/183	178
12446	730196	HV10	K9	QO	196/189/189/182	189
12446	730196	HV10	K9	QO	186/191/184/180	185

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's mark

Surveyor
Dunkerque Office
Lloyd's Register EMEA

Lloyd's Register

CONTROL NUMBER
DNK1100154
Inspector

POISSONNET
Test House Manager

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F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

A01

Date 05.09.11 CD 1

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

auterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

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INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No / Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No: 366375-002 Sheet: 3/...

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No. 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No.

B01 Product: HOT ROLLED PLATES

2/ Steel design. 2W-50-MOD

3 Any suppl requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C30-C39 Further information about hardness test

;2712	730551	HV10	K9	QO	165/166/168/168	167
;2712	730551	HV10	K9	QU	166/171/172/169	170
;2446	730195	HV10	K9	QO	175/176/178/177	177
;2446	730195	HV10	K9	QU	177/177/176/178	177

'EM NO.: 04

)7.2	B07.1	C33	C01	C02/C01	RESULTS	AVERAGE
;2705	730556	HV10	K9	QO	166/166/172/169	168
;2705	730556	HV10	K9	QU	174/175/176/174	175
;2702	730096	HV10	K9	QO	166/169/171/171	169
;2702	730096	HV10	K9	QU	172/174/173/171	173
;2446	730555	HV10	K9	QO	176/175/170/172	173
;2446	730555	HV10	K9	QU	178/177/178/175	177
;2446	730105	HV10	K9	QO	166/167/171/188	173
;2446	730105	HV10	K9	QU	171/176/176/174	174
;2446	730107	HV10	K9	QO	177/174/171/173	174
;2446	730107	HV10	K9	QU	178/177/177/179	178
;2446	730197	HV10	K9	QO	181/184/189/182	184
;2446	730197	HV10	K9	QU	194/188/187/188	189

'EM NO.: 04

)7.2	B07.1	C33	C01	C02/C01	RESULTS	AVERAGE
;2446	730198	HV10	K9	QO	194/191/191/190	192
;2446	730198	HV10	K9	QU	188/192/192/191	191
;2712	731016	HV10	K9	QO	166/165/167/166	166
;2712	731016	HV10	K9	QU	167/172/171/170	170

TFK
Manufacturer's

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

Surveyor
Dunkerque Office
Lloyd's Register EMEA

Lloyd's Register

CONTROL NUMBER
UNK 100134
Inspector 2011

POISSONNET
Test House Manager

GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

A01

Date 05.09.11 CD 1

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

Läuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No./ Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No.: 366375-002 Sheet: 4/...

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No. 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No.

B01 Product: HOT ROLLED PLATES

2/ Steel design. 2W-50-MOD

3 Any suppl. requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C40-C49 Impact test

14 em o.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy Joule	C45	C42 Individual values AV=J			C43 Mean value
	362704	730557		K4	QX	-40		CHP-V		600	AV	213	233	219	222
				K4	QM	-40		CHP-V		600	AV	161	206	171	179
				K4	QV	-40		CHP-V		600	AV	229	234	205	223
				K2	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	110	120	112	114
	362705	730556		K4	QX	-40		CHP-V		600	AV	230	211	218	220
				K4	QM	-40		CHP-V		600	AV	136	133	142	137
				K4	QV	-40		CHP-V		600	AV	236	222	234	231
				K2	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	198	217	219	211

C66-C68 Supplementary tests on test samples

'EM NO.: 04
:OP WEIGHT TEST (PELLINI)
)7.2 B07.1 RESULT
:2704 730557 T -35,0 C : NO BREAK
:2705 730556 T -35,0 C : NO BREAK

'EM NO.: 04
:EP ETCH TESTING AS PER DH-STANDARD <=2B : SATISFACTORY

C70-C99 Chemical composition % - Heat analysis

07.2 eat	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	AS	SN
:2704	Y	0,081	0,384	1,54	0,013	0,0008	0,0047	0,040	0,013	0,064	0,038	0,001	0,020	0,002	0,001
:2705	Y	0,081	0,381	1,54	0,014	0,0007	0,0038	0,039	0,022	0,058	0,036	0,001	0,019	0,003	0,001

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's

Surveyor
Dunkerque Office
Lloyd's Register EMEA

Lloyd's Register

CONTROL NUMBER
DNK1000154
Inspector

POISSONNET
Test House Manager

GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

Date 05.09.11 CD 1

A01

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

Läuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No./ Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No: 366375-002 Sheet: 5/...

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No. 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No

B01 Product: HOT ROLLED PLATES

2/ Steel design: 2W-50-MOD

3 Any suppl. requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C70-C99 Chemical composition % - Heat analysis

07.2 Heat	C70	TI	PB	B	SB	CA	BI	AL-T
2704	Y	0,002	0,001	0,0002	0,0001	0,0022	0,0001	0,033
2705	Y	0,002	0,001	0,0001	0,0002	0,0019	0,0001	0,032

C94 Heat analysis Carbon equivalent / Alloying restrictions

07.2 Heat									
2704	FO-02=	0,35	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1= 7,02
2705	FO-02=	0,36	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1= 8,42

C95 Ladle treatment

TEM NO.: 04
EAT OF THE INDICATED ITEM: VACUUM DEGASSED

C70-C99 Chemical composition % - Product analysis

07.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	TI	B
2704	730557	K4O	0,084	0,384	1,52	0,013	0,0009	0,0050	0,041	0,015	0,062	0,036	0,000	0,021	0,003	0,0002
2705	730556	K4O	0,085	0,378	1,51	0,013	0,0007	0,0037	0,038	0,024	0,054	0,034	0,000	0,019	0,002	0,0002

07.2 Heat	B07.1 Test No.	C01	AL-T
2704	730557	K4O	0,033
2705	730556	K4O	0,032

C94 Product analysis Carbon equivalent / Alloying restrictions

07.2 Heat	B07.1 Test No.	C01							
2704	730557	K4O	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1= 6,60
2705	730556	K4O	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1= 8,65

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

TFK
Manufacturer's

Lloyd's Register

CONTROL NUMBER DNK1100354

POISSONNET
Test House Manager

GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

A01

Date 05.09.11 CD 1

M-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

2 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No./ Date of dispatch: 2378342-02.09.11

A08/ Manufacturer's order/ A03 Certificate No.: 366375-002 Sheet: 6

5 Established Inspecting body: LR

A06 Purchaser: AM PROJECTS,HEIJNING A07.1 No. 3200019765

Final receiver: AM PROJECTS,ROTTERDA A07.2 No.

B01 Product: HOT ROLLED PLATES

2/ Steel design. 2W-50-MOD

3 Any suppl. requirements: API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
AGREED MODIFICATIONS

C94 Carbon equivalent formula / Alloying restrictions

-02 = C+(MN/6)+(CR+MO+V)/5+(NI+CU)/15
-31 = C+SI/30+(MN+CR+CU)/20+MO/15+V/10+NI/60+5B
-51 = V +NB
-52 = V +NB+TI
-A1 = AT/N

D01 Marking and identification, surface appearance, shape and dimensional properties

'EM NO.: 04
'SULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS
'RFACE AS PER EN-10163-A3
'ICKNESS AS PER EN-10029:91-A
'NGTH AND WIDTH AS PER EN-10029:91
'ATNESS AS PER EN-10029:91-T4L

D02 Non-destructive tests - Ultrasonic testing

'EM NO.: 04
'-SPECIFICATION : EN 10160 KLASSE S1/E2 AND API 2W APPENDIX A SUPPLEMENTARY REQUIREMENTS S1
'ANNING PLAN BODY : LONGITUDINALLY SCAN LINES SPACING 75 MM
EDGES : 100 MM
'RSONNEL QUALIFICATION : LEVEL 2 IN ACC. TO EN 473 AND SNT-TC-1A
'E TEST RESULTS MEET THE REQUIREMENTS OF THE ORDER.

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK
Manufacturer's mark

Surveyor
Dunkerque Office
Lloyd's Register EMEA

CONTROL NUMBER
DNK 100154
Inspector

POISSONNET
Test House Manager

GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

A01

Date 05.09.11 CD 1

WPQ

CS PIPING

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN, Zierikzee, Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	J. Wesdorp		Test date	1/14/2020	
ID Number	5171457148		WPQ record number	A0790090-1	
Date of birth	9-12-1996		Standard test number	N.A.	Rev. -
Stamp number	JW		WPS record number	P2250	Rev. 1
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX: 2019	
Division					

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-106 (B)	1	1	50,80	XS	5,54	60,33
Welded to:	Pipe	SA-106 (B)	1	1	50,80	XS	5,54	60,33
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P1 to P1	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	5,54	-	-	no limit	no limit	-
Pipe diameter (mm)	60,33	-	-	25,4 min	no limit	-

PROCESS VARIABLES	Actual values	RANGE QUALIFIED
Welding process	GTAW	GTAW
Type	Manual	Manual
Backing	No backing used	With, without
Filler metal specification	5.18	5.xx
Filler metal classification	ER70S-3	Any
Filler metal F-number	6	6
Filler metal variety (QW-404.23)	Bare (solid)	Solid, metal cored
Consumable insert	None	Without
Number of layers deposited	3	
Weld deposit thickness (mm)	5,54	11,08 max
Weld position (Actual position tested)	6G	
Groove - Plate & Pipe > 610mm		All
Groove - Pipe 73mm to 610mm		All
Groove - Pipe 73mm		All
Fillet - Plate & Pipe > 610mm		All
Fillet - Pipe 73mm to 610mm		All
Fillet - Pipe < 73mm		All
Progression	Up	Up
Backing gas	Without	With, without
GTAW welding current/polarity	DCEN (straight polarity)	DCEN (straight polarity)

TESTS

Type of test	Acceptance criteria	Result	Comments
2 traverse face bends per QW-161.2, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
2 traverse root bends per QW-161.3, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
Visual examination per QW-302.4	QW-194	Acceptable	

Notes	This WPQ is based on PQR RET 0245029-001-18

CERTIFICATION

Tests conducted by	Element Breda (NLD)	Laboratory test number	ARJ001-20-01-39594-2
Mechanical tests by	N.A.	Test file number	ARI 2503-3

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature 1

Name	Signature
F. van Toledo	
Date	
9/4/2023	

Signature 2

Name	Signature
M. van Ginneken DNV	for DNV This document has been digitally signed and will therefore not have handwritten signatures. M. van Ginneken Surveyor
Date	
9/4/2023	

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN, Zierikzee, Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	R. Ali		Test date	1/14/2020	
ID Number	4882630217		WPQ record number	A0790090-2	
Date of birth	8/9/1957		Standard test number	N.A.	Rev. -
Stamp number	RA		WPS record number	P2250	Rev. 1
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX: 2019	
Division	N.A.				

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-106 (B)	1	1	50,80	XS	5,54	60,33
Welded to:	Pipe	SA-106 (B)	1	1	50,80	XS	5,54	60,33
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P1 to P1	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	5,54	-	-	no limit	no limit	-
Pipe diameter (mm)	60,33	-	-	25,4 min	no limit	-

PROCESS VARIABLES	Actual values	RANGE QUALIFIED
Welding process	GTAW	GTAW
Type	Manual	Manual
Backing	No backing used	With, without
Filler metal specification	5.18	5.xx
Filler metal classification	ER70S-3	Any
Filler metal F-number	6	6
Filler metal variety (QW-404.23)	Bare (solid)	Solid, metal cored
Consumable insert	None	Without
Number of layers deposited	3	
Weld deposit thickness (mm)	5,54	11,08 max
Weld position (Actual position tested)	6G	
Groove - Plate & Pipe > 610mm		All
Groove - Pipe 73mm to 610mm		All
Groove - Pipe 73mm		All
Fillet - Plate & Pipe > 610mm		All
Fillet - Pipe 73mm to 610mm		All
Fillet - Pipe < 73mm		All
Progression	Up	Up
Backing gas	Without	With, without
GTAW welding current/polarity	DCEN (straight polarity)	DCEN (straight polarity)

TESTS

Type of test	Acceptance criteria	Result	Comments
2 traverse face bends per QW-161.2, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
2 traverse root bends per QW-161.3, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
Visual examination per QW-302.4	QW-194	Acceptable	

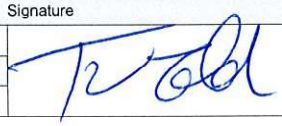
Notes	This WPQ is based on PQR RET 0245029-001-18

CERTIFICATION

Tests conducted by	Element Breda (NLD)	Laboratory test number	ARJ001-20-01-39594-2
Mechanical tests by	N.A.	Test file number	ARL2503-3

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature 1

Name	Signature
F. van Toledo	
Date	
9/4/2023	

Signature 2

Name	Signature
M. van Ginneken DNV	for DNV This document has been digitally signed and will therefore not have handwritten signatures. M. van Ginneken Surveyor
Date	
9/4/2023	

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN Zierikzee, The Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	A. Sumantri		Test date	25-5-2012	
ID Number	ID Card IXH4P6551		WPQ record number	RET 0245029-002-23 Rev 1	
Date of birth	23-02-1962		Standard test number	N.A.	Rev. -
Stamp number	W-102		WPS record number	P2000	Rev. 0
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX:2010 including	
Division	N.A.				

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-333 (6)	1	1	12,70	160	4,78	21,34
Welded to:	Pipe	SA-333 (6)	1	1	12,70	160	4,78	21,34
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P1 to P1	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	4,78	-	-	no limit	no limit	-
Pipe diameter (mm)	21,34	-	-	21,34 min	no limit	-

PROCESS VARIABLES	Actual values	RANGE QUALIFIED
Welding process	GTAW	GTAW
Type	Manual	Manual
Backing	No backing used	With, without
Filler metal specification	5.18	5.xx
Filler metal classification	ER70S-3	Any
Filler metal F-number	6	6
Filler metal variety (QW-404.23)	Bare (solid)	Solid, metal cored
Consumable insert	None	Without
Number of layers deposited	5	
Weld deposit thickness (mm)	4,78	9,56 max
Weld position (Actual position tested)	6G	
Groove - Plate & Pipe > 610mm		All
Groove - Pipe 73mm to 610mm		All
Groove - Pipe 73mm		All
Fillet - Plate & Pipe > 610mm		All
Fillet - Pipe 73mm to 610mm		All
Fillet - Pipe < 73mm		All
Progression	Up	Up
Backing gas	Without	With, without
GTAW welding current/polarity	DCEN (straight polarity)	DCEN (straight polarity)

TESTS

Type of test	Acceptance criteria	Result	Comments
Radiographic examination	ASME IX	Acceptable	Report number 1213-1012-24-020

Notes

CERTIFICATION

Tests conducted by	Schielab BV Breda (NLD)	Laboratory test number	SL 12 6538-1
Mechanical tests by	N.A.	Test file number	ARL1559-7

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature

Name	Signature
F. van Toledo	
Date	
21-6-2012	

Signature Welder

Name	Signature
W. Korndeur (Lloyds)	
Date	
21-6-2012	

WELDING PROCEDURE QUALIFICATION RECORD AND WELDERS PERFORMANCE QUALIFICATION TEST RECORD

Testing in accordance with	: ASME IX:2010
Purchaser	: Arjan Roza Lastechniek BV
Purchase order no.	: ARL1559-1
Manufacturer	: Airpack Nederland BV.
WPS	: P2000
Description of sample(s)	: Pipe with Single-V-groove
Dimension(s)	: 2,5" Sch 40S (Ø 73,03 x 5,15 mm)
Material grade	: P1 Gr.1 – P1 Gr. 1
Material	: ASTM SA-333 Gr.6 - ASTM SA-333 Gr.6
Welding process(es)	: GTAW
Filler	: F-no.6 A-no. 1
Brand and type	: Lincoln Electric LNT 25, ER70S-3
Shielding gas	: Argon (A5.32 SG-A)
Backing gas	: Not used
Welding position	: 6G progression up
Preheat / Interpass temp.	: 10 °C / 166 °C
Joint type	: Single-V-groove
Welder	: A. Sumantri
Date / place of birth	: 23-02-1962 / Oost- en West-Souburg
Stamp. No. / ID	: W-102 / ID Card IXH4P6551
Testpiece marked with	: ARL1559-1

NON DESTRUCTIVE EXAMINATION

* Visual examination	: performed by examiner

CROSS WELD TENSILE TESTS

Dimensions(s) [mm]	Rm [N/mm^2]	Fracture location
19.01 x 4.53	538	Base material
19.02 x 4.73	527	Base material
Requirements;	≥ 415	

TECHNOLOGICAL TESTS

Type	Former / Bending angle	Results
Face bend	4t / 180°	2 x acceptable
root bend	4t / 180°	2 x acceptable

07 JUNI 2012

IMPACT TESTS - Type: Charpy KV

Notch location	Size [mm]	Test temp. [°C]	Results [J]	Average value [J]
Midweld	10 x 4	-55	52-19-55	42
Fusion line	10 x 4	-55	74-61-58	64
Requirements for size 10x10mm;			≥ 19	≥ 27
Requirements for size 10x4mm;			≥ 7.5	≥ 11

Conclusion: The results satisfy the requirements.

Breda, 07-06-2012

Witnessed and approved by; Mr.
Representing: Lloyd's Register Nederland B.V.
[RET 0245029]

0 7 JUNI 2012

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN Zierikzee, The Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	A. Sumantri		Test date	25-5-2012
ID Number	ID Card IXH4P6551		WPQ record number	RET 0245029-002-15
Date of birth	23-02-1962		Standard test number	N.A. Rev. -
Stamp number	W-102		WPS record number	P2250 Rev. 0
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX:2010 including
Division	N.A.			

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-333 (6)	1	1	63,50	160	9,53	73,03
Welded to:	Pipe	SA-333 (6)	1	1	63,50	160	9,53	73,03
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P1 to P1	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	9,53	-	-	no limit	no limit	-
Pipe diameter (mm)	73,03	-	-	73 min	no limit	-

PROCESS VARIABLES	Actual values	RANGE QUALIFIED
Welding process	GTAW	GTAW
Type	Manual	Manual
Backing	No backing used	With, without
Filler metal specification	5.18	5.xx
Filler metal classification	ER70S-3	Any
Filler metal F-number	6	6
Filler metal variety (QW-404.23)	Bare (solid)	Solid, metal cored
Consumable insert	None	Without
Number of layers deposited	5	
Weld deposit thickness (mm)	9,53	19,06 max
Weld position (Actual position tested)	6G	
Groove - Plate & Pipe > 610mm		All
Groove - Pipe 73mm to 610mm		All
Groove - Pipe 73mm		All
Fillet - Plate & Pipe > 610mm		All
Fillet - Pipe 73mm to 610mm		All
Fillet - Pipe < 73mm		All
Progression	Up	Up
Backing gas	Without	With, without
GTAW welding current/polarity	DCEN (straight polarity)	DCEN (straight polarity)

TESTS

Type of test	Acceptance criteria	Result	Comments
Face bend test per QW-463.2(a)	QW-163	Acceptable	see -
Face bend test per QW-463.2(a)	QW-163	Acceptable	see -
Root bend test per QW-463.2(a)	QW-163	Acceptable	see -
Root bend test per QW-463.2(a)	QW-163	Acceptable	see -

Notes	This WPQ is based on PQR RET 0245029-001-17

CERTIFICATION

Tests conducted by	Schielab BV Breda (NLD)	Laboratory test number	SL 12.6044-1A
Mechanical tests by	N.A.	Test file number	ARL1559-2

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature

Name	Signature
Franky van Toledo	
Date	
8-6-2012	

Signature Welder

Name	Signature
A. Sumantri	
Date	
8-6-2012	

Lloyd's Register Nederland B.V. Wim Komdeur Lloyd's Register

WELDING PROCEDURE QUALIFICATION RECORD AND WELDERS PERFORMANCE QUALIFICATION TEST RECORD

Testing in accordance with	: ASME IX:2010
Purchaser	: Arjan Roza Lastechniek BV
Purchase order no.	: ARL1559-2
Manufacturer	: Airpack Nederland BV.
WPS	: P2250
Description of sample(s)	: Pipe with Single-V-groove
Dimension(s)	: 2,5" Sch 160 (Ø 73,03 x 9,52 mm)
Material grade	: P1 Gr.1 – P1 Gr. 1
Material	: ASTM SA-333 Gr. 6 - ASTM SA-333 Gr. 6
Welding process(es)	: GTAW
Filler	: F-no.6 A-no. 1
Brand and type	: Lincoln Electric LNT 25, ER70S-3
Shielding gas	: Argon (A5.32 SG-A)
Backing gas	: Not used
Welding position	: 6G progression up
Preheat / Interpass temp.	: 10 °C / 156 °C
Joint type	: Single-V-groove
Welder	: A. Sumantri
Date / place of birth	: 23-02-1962 / Oost- en West-Souburg
Stamp. No. / ID	: W-102 / ID Card IXH4P6551
Testpiece marked with	: ARL1559-2

NON DESTRUCTIVE EXAMINATION

* Visual examination	: performed by examiner

CROSS WELD TENSILE TESTS

Dimensions(s) [mm]	Rm [N/mm^2]	Fracture location
19.04 x 8.80	490	Base material
19.02 x 8.94	488	Base material
Requirements;	≥ 415	

TECHNOLOGICAL TESTS

Type	Former / Bending angle	Results
Face bend	4t / 180°	2 x acceptable
root bend	4t / 180°	2 x acceptable

7 JUNI 2012

Schielab-Breda Voorerf 18-20, 4824 GN Breda, Tel. 076 - 5424 300, Fax 076 - 5424 848
Schielab b.v. Handelsregister/Register of Commerce Rotterdam nr. 24170257

IMPACT TESTS - Type: Charpy KV

Notch location	Size [mm]	Test temp. [°C]	Results [J]	Average value [J]
Midweld	10 x 7.5	-49	141-170-212	174
Fusion line	10 x 7.5	-49	214-212-218	215
Requirements for size 10x10mm;			≥ 19	≥ 27
Requirements for size 10x7.5mm;			≥ 14	≥ 20

Conclusion: The results satisfy the requirements.

Breda, 07-06-2012

A. Karstanje

Witnessed and approved by; Mr.
Representing: Lloyd's Register Nederland B.V.
[RET 0245029]

0 7 JUNI 2012

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN Zierikzee, The Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	A. Sumantri		Test date	9/22/2020	
ID Number	ID Card IXH4P6551		WPQ record number	A0790090-58	
Date of birth	23-02-1962		Standard test number	N.A.	Rev. -
Stamp number	W-102		WPS record number	PGF-2000	Rev. 0
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX: 2019	
Division	N.A.				

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-333 (6)	1	1	101.60	40	6.02	114.30
Welded to:	Pipe	SA-350 (LF2)	1	2	101.60	40	6.02	114.30
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P1 to P1	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	6.02	-	-	no limit	no limit	-
Pipe diameter (mm)	114.30	-	-	73 min	no limit	-

PROCESS VARIABLES	Actual values		RANGE QUALIFIED	
Welding process	GTAW	FCAW	GTAW	FCAW
Type	Manual	Semi-automatic	Manual	Semi-automatic
Backing	Without	With	With, without	With
Filler metal specification	5.18	5.20	5.xx	5.xx
Filler metal classification	ER70S-3	E71T-9M-J	Any	Any
Filler metal F-number	6	6	6	6
Filler metal variety (QW-404.23)	Bare (solid)	-	Solid, metal cored	-
Consumable insert	None	-	Without	-
Number of layers deposited	1	2		
Weld deposit thickness (mm)	2.02	4.0	4.04 max	8.0 max
Weld position (Actual position tested)	1G Rotated	1G Rotated		
Groove - Plate & Pipe > 610mm			F	F
Groove - Pipe 73mm to 610mm			F	F
Groove - Pipe 73mm			F	F
Fillet - Plate & Pipe > 610mm			F	F
Fillet - Pipe 73mm to 610mm			F	F
Fillet - Pipe < 73mm			F	F
Progression	-	-	-	-
Backing gas	Without	Without	With, without	With, without
GMAW transfer mode (QW-409)	-		-	Spray, pulse, globular
GTAW welding current/polarity	DCSP	-	DCSP	-

TESTS

Type of test	Acceptance criteria	Result	Comments
1 transverse face bend per QW-161.2 and QW-462.3(a)	QW-163	Acceptable	see - ASME IX - QW-452.1 (a)
1 transverse root bend per QW-161.3 and QW-462.3(a)	QW-163	Acceptable	see - ASME IX - QW-452.1 (a)
Visual examination per QW-302.4	QW-194	Acceptable	see - ASME IX - QW-452.1 (a)

Notes

CERTIFICATION

Tests conducted by	Daniel Schutt	Laboratory test number	ARJ001-20-09-42663-1
Mechanical tests by	Element Breda (NLD)	Test file number	ARL2542-1A0790090-60

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

DNVGL Witnessed Reviewed And found to comply with: Date: 7/10/20 Sign: L. Knops

Signature 1		Signature 2	
Name	Signature	Name	Signature
F. van Toledo (Airpack)	QUALITY INSPECTED DATE: NAME: AIRPACK NEDERLAND B.V.	L. Knops (DNVGL)	
Date		Date	
9/22/2020		10/6/2020	

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN, Zierikzee, Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	J. Wesdorp		Test date	9/22/2020	
ID Number	5171457148		WPQ record number	A0790090-60	
Date of birth	9-12-1996		Standard test number	N.A.	Rev. -
Stamp number	JW		WPS record number	PGF-2000	Rev. 1
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX: 2019	
Division					

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-333 (6)	1	1	101,60	40	6,02	114,30
Welded to:	Pipe	SA-350 (LF2)	1	2	101,60	40	6,02	114,30
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P1 to P1	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	6,02	-	-	no limit	no limit	-
Pipe diameter (mm)	114,30	-	-	73 min	no limit	-

PROCESS VARIABLES	Actual values		RANGE QUALIFIED	
Welding process	GTAW	FCAW	GTAW	FCAW
Type	Manual	Semi-automatic	Manual	Semi-automatic
Backing	Without	With	With, without	With
Filler metal specification	5.18	5.20	5.xx	5.xx
Filler metal classification	ER70S-3	E71T-9M-J	Any	Any
Filler metal F-number	6	6	6	6
Filler metal variety (QW-404.23)	Bare (solid)	-	Solid, metal cored	-
Consumable insert	None	-	Without	-
Number of layers deposited	1	2		
Weld deposit thickness (mm)	2,02	4,0	4,04 max	8,0 max
Weld position (Actual position tested)	1G Rotated	1G Rotated		
Groove - Plate & Pipe > 610mm			F	F
Groove - Pipe 73mm to 610mm			F	F
Groove - Pipe 73mm			F	F
Fillet - Plate & Pipe > 610mm			F	F
Fillet - Pipe 73mm to 610mm			F	F
Fillet - Pipe < 73mm			F	F
Progression	-	-	-	-
Backing gas	Without	Without	With, without	With, without
GMAW transfer mode (QW-409)	-	Spray	-	Spray, pulse, globular
GTAW welding current/polarity	DCEN (straight polarity)	-	DCEN (straight polarity)	-

TESTS

Type of test	Acceptance criteria	Result	Comments
1 traverse face bends per QW-161.2, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
1 traverse root bends per QW-161.3, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
Visual examination per QW-302.4	QW-194	Acceptable	

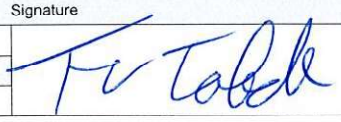
Notes

CERTIFICATION

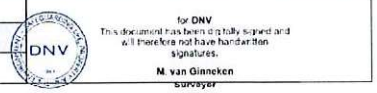
Tests conducted by	Daniel Schutt	Laboratory test number	ARJ001-20-09-42663-2
Mechanical tests by	Element Breda (NLD)	Test file number	ARL2542-2

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature 1

Name	Signature
F. van Toledo	
Date	
9/4/2023	

Signature 2

Name	Signature
M. van Ginneken DNV	
Date	
9/4/2023	

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN, Zierikzee, Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	R. Ali		Test date	9/22/2020	
ID Number	4882630217		WPQ record number	A0790090-62	
Date of birth	8/9/1957		Standard test number	N.A.	Rev. -
Stamp number	RA		WPS record number	PGF-2000	Rev. 1
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX: 2019	
Division	N.A.				

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-333 (6)	1	1	101,60	40	6,02	114,30
Welded to:	Pipe	SA-350 (LF2)	1	2	101,60	40	6,02	114,30
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P1 to P1	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	6,02	-	-	no limit	no limit	-
Pipe diameter (mm)	114,30	-	-	73 min	no limit	-

PROCESS VARIABLES	Actual values		RANGE QUALIFIED	
Welding process	GTAW	FCAW	GTAW	FCAW
Type	Manual	Semi-automatic	Manual	Semi-automatic
Backing	Without	With	With, without	With
Filler metal specification	5.18	5.20	5.xx	5.xx
Filler metal classification	ER70S-3	E71T-9M-J	Any	Any
Filler metal F-number	6	6	6	6
Filler metal variety (QW-404.23)	Bare (solid)	-	Solid, metal cored	-
Consumable insert	None	-	Without	-
Number of layers deposited	1	2		
Weld deposit thickness (mm)	2,02	4,0	4,04 max	8,0 max
Weld position (Actual position tested)	1G Rotated	1G Rotated		
Groove - Plate & Pipe > 610mm			F	F
Groove - Pipe 73mm to 610mm			F	F
Groove - Pipe 73mm			F	F
Fillet - Plate & Pipe > 610mm			F	F
Fillet - Pipe 73mm to 610mm			F	F
Fillet - Pipe < 73mm			F	F
Progression	-	-	-	-
Backing gas	Without	Without	With, without	With, without
GMAW transfer mode (QW-409)	-	Spray	-	Spray, pulse, globular
GTAW welding current/polarity	DCEN (straight polarity)	-	DCEN (straight polarity)	-

TESTS

Type of test	Acceptance criteria	Result	Comments
1 traverse face bends per QW-161.2, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
1 traverse root bends per QW-161.3, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
Visual examination per QW-302.4	QW-194	Acceptable	

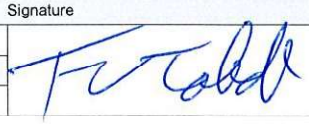
Notes

CERTIFICATION

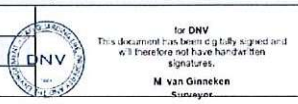
Tests conducted by	Daniel Schutt	Laboratory test number	ARJ001-20-09-42663-3
Mechanical tests by	Element Breda (NLD)	Test file number	ARL2542-3

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature 1

Name	Signature
F. van Toledo	
Date	
9/4/2023	

Signature 2

Name	Signature
M. van Ginneken DNV	
Date	
9/4/2023	

WPQ

SS PIPING

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN, Zierikzee, Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	J. Wesdorp		Test date	1/14/2020	
ID Number	5171457148		WPQ record number	A0790090-3	
Date of birth	9-12-1996		Standard test number	N.A.	Rev. -
Stamp number	JW		WPS record number	P3000	Rev. 1
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX: 2019	
Division					

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-312 (TP316L)	8	1	50,80	XS	5,54	60,33
Welded to:	Pipe	SA-312 (TP316L)	8	1	50,80	XS	5,54	60,33
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P8 to P8	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	5,54	-	-	no limit	no limit	-
Pipe diameter (mm)	60,33	-	-	25,4 min	no limit	-

PROCESS VARIABLES	Actual values	RANGE QUALIFIED
Welding process	GTAW	GTAW
Type	Manual	Manual
Backing	No backing used	With, without
Filler metal specification	5.9	5.xx
Filler metal classification	ER316LSi	Any
Filler metal F-number	6	6
Filler metal variety (QW-404.23)	Bare (solid)	Solid, metal cored
Consumable insert	None	Without
Number of layers deposited	3	
Weld deposit thickness (mm)	5,54	11,08 max
Weld position (Actual position tested)	6G	
Groove - Plate & Pipe > 610mm		All
Groove - Pipe 73mm to 610mm		All
Groove - Pipe 73mm		All
Fillet - Plate & Pipe > 610mm		All
Fillet - Pipe 73mm to 610mm		All
Fillet - Pipe < 73mm		All
Progression	Up	Up
Backing gas	With	With
GTAW welding current/polarity	DCEN (straight polarity)	DCEN (straight polarity)

TESTS

Type of test	Acceptance criteria	Result	Comments
2 traverse face bends per QW-161.2, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
2 traverse root bends per QW-161.3, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
Visual examination per QW-302.4	QW-194	Acceptable	
Notes	This WPQ is based on PQR RET 0245029-001-21		

CERTIFICATION

Tests conducted by	Element Breda (NLD)	Laboratory test number	ARJ001-20-01-39594-1
Mechanical tests by	N.A.	Test file number	ARL2503-2

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature 1

Name	Signature
F. van Toledo	
Date	
9/4/2023	

Signature 2

Name	Signature
M. van Ginneken DNV	for DNV This document has been digitally signed and will therefore not have handwritten signatures. M. van Ginneken Surveyor
Date	
9/4/2023	

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN, Zierikzee, Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	R. Ali		Test date	1/14/2020	
ID Number	4882630217		WPQ record number	A0790090-4	
Date of birth	8/9/1957		Standard test number	N.A.	Rev. -
Stamp number	RA		WPS record number	P3000	Rev. 1
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX: 2019	
Division	N.A.				

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-312 (TP316L)	8	1	50,80	XS	5,54	60,33
Welded to:	Pipe	SA-312 (TP316L)	8	1	50,80	XS	5,54	60,33
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P8 to P8	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	5,54	-	-	no limit	no limit	-
Pipe diameter (mm)	60,33	-	-	25,4 min	no limit	-

PROCESS VARIABLES	Actual values	RANGE QUALIFIED
Welding process	GTAW	GTAW
Type	Manual	Manual
Backing	No backing used	With, without
Filler metal specification	5.9	5.xx
Filler metal classification	ER316LSi	Any
Filler metal F-number	6	6
Filler metal variety (QW-404.23)	Bare (solid)	Solid, metal cored
Consumable insert	None	Without
Number of layers deposited	3	
Weld deposit thickness (mm)	5,54	11,08 max
Weld position (Actual position tested)	6G	
Groove - Plate & Pipe > 610mm		All
Groove - Pipe 73mm to 610mm		All
Groove - Pipe 73mm		All
Fillet - Plate & Pipe > 610mm		All
Fillet - Pipe 73mm to 610mm		All
Fillet - Pipe < 73mm		All
Progression	Up	Up
Backing gas	With	With
GTAW welding current/polarity	DCEN (straight polarity)	DCEN (straight polarity)

TESTS

Type of test	Acceptance criteria	Result	Comments
2 traverse face bends per QW-161.2, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
2 traverse root bends per QW-161.3, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
Visual examination per QW-302.4	QW-194	Acceptable	

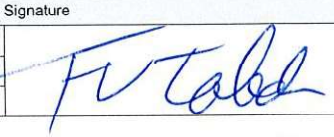
Notes	This WPQ is based on PQR RET 0245029-001-21

CERTIFICATION

Tests conducted by	Element Breda (NLD)	Laboratory test number	ARJ001-20-01-39594-1
Mechanical tests by	N.A.	Test file number	ARL2503-2

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature 1

Name	Signature
F. van Toledo	
Date	
9/4/2023	

Signature 2

Name	Signature
M. van Ginneken DNV	for DNV This document has been digitally signed and will therefore not have handwritten signatures. M. van Ginneken Surveyor
Date	
4/9/2023	

Certificate No.: N142M8JA

WELDER PERFORMANCE QUALIFICATION CERTIFICATE ASME BPVC.IX

Welder's identification:	ID card	Verified
Employer:	Airpack	
Welder's name:	A. Sumantri	
Place of birth and date:	Oost- en West Souburg/ 23-02-1962	
Specification and type/grade or UNS number of base metal(s):	A106-Gr.B / AISI 316	Thickness(mm): 1: 10 2: 5,08

Welding variables (QW-350)	Actual Values		Range qualified	
Welding process(es)	1: GTAW 2: -		1: GTAW 2: -	
Transfer mode	1: - 2: -		1: - 2: -	
Product type (Plate/Pipe)	Pipe - Fillet		Plate & Pipe- Fillet or Tack	
Backing (with/ without)	1: Without 2: -		1: With/ without 2: -	
Base metal P-No. to P-No.	1: P-No.1 2: P-No.8		P-No.1 through P-No.15F, P-No.34, or P-No.41 through P-No.49	Photo (if required)
Filler metal specification(s) (SFA)	1: SFA-5.9 2: -		For information only	Identification of test pieces:
Filler metal classification(s)	1: ER 309LSi 2: -			QSH 23-131
Filler metal F-number(s)	1: F-No.6		All F-No.6	Identification of WPS followed:
	2: -		-	SP 4000
Consumable insert (GTAW or PAW)	Without		With, Without	
Filler Metal Product Form (QW-404.23) (GTAW or PAW)	1: Solid 2: -		1: Solid, Metal cored 2: -	Test coupon ☑
Deposited thickness (mm) 3 layers minimum	1: - 1: -		All fillet sizes	Production weld ☐
Deposited thickness (mm) 3 layers minimum	2: - 2: -		-	
Outside pipe diameter [O.D.] (mm)	48,3		≥25	
Welding position(s)	1: 2F 2: -		(Fillet/ Tack) F, H	
Vertical progression (uphill/downhill)	1: - 2: -		1: - 2: -	
Type of fuel gas (OFW only)	-		-	
Use of backing gas (GTAW, PAW, GMAW)	Without		With, Without	
GTAW current type and polarity	DCEN		DCEN	
Type (manual, semi-automatic)	1: Manual 2: -		1: - 2: -	
Date of welding	26-04-2023		Examiner:	M. van Ginneken
Place of welding	Rotterdam			

Type of inspection/ test	Performed & accepted / Not tested	
Visual examination (QW-302.4)	Performed & accepted	-
Radiography (QW-191)	-	Not tested
Ultrasonic (QW-191)	-	Not tested
Macro examination (QW-184)	Performed & accepted	-
Fracture test (QW-181.2)	Performed & accepted	-
Bend tests (QW-462)	-	Not tested
Other tests	-	Not tested

Place: Barendrecht

Date: 16-05-2023

Qualification valid until:

26-04-2025

DNV Netherlands B.V.

Signature

Stamp

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

See reverse side for confirmation statement by employer and prolongation by DNV Netherlands B.V.
Additional information may also be stated in the column "Supplementary remarks".

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Quality Support Holleman
Lavendelberg 26
4708 LE ROOSENDAAL

Date(s) tested : 4-5-2023
Date reported : 4-5-2023
Element report number : QUA002-23-05-55363-1

Customer reference : QSH 23-131

TEST REPORT

TEST REPORT FOR THE PURPOSE OF: WELDERS PERFORMANCE QUALIFICATION

Testing in accordance with:	- NEN-EN-ISO 9606-1 - ASME-IX
pWPS No.:	SP 4000
Test No.:	QSH 23-131
Manufacturer:	Airpack Nederland B.V.
Item Description:	Pipe on plate with fillet weld
Dimensions :	Pipe Ø 48.3 x 5.08 mm Plate thickness = 10 mm
Material type and grade:	Plate = S355MC, Heat no.: 208954 Pipe = AISI 316L, Heat no.: 53298
Identification on Sample:	Test no.
Welding Process(es):	141 / GTAW
Welding Consumable:	Lincoln Electric LNT309LSi / W 23 12 Lsi, Batch no.: 8011096
Shieldinggas:	I1 / 99,996%Ar
Welding position:	PB / 2F
Joint Type:	FW, ml
Welder:	A. Sumantri
Place and D.O.B.:	Oost- en West Souburg, 23-02-1962

NON-DESTRUCTIVE TEST

- Visual examination:	Performed on site

Note: *The above mentioned data is only for information and is no part of the examination in this test report*

element

Date(s) tested: 4-5-2023
Date reported: 4-5-2023
P.O. No.: QSH 23-131
Report No.: QUA002-23-05-55363-1

MACRO EXAMINATION

Method: ISO 17639 / ASTM E3 / ISO 5817 / ISO 6520-1			Magnification: 5x
Specimen	Etchant:	Observations:	Remark
55363 / 1	Adler	No significant inclusions or other defects	Acceptable
55363 / 2	Adler	No significant inclusions or other defects	Acceptable

FILLET WELD BREAK TEST

Test method: ISO 9017			Test temperature: R.T.
Specimen	Qty	Results	Remark
55363 / 3	1x	No weld defects observed.	Acceptable

The above mentioned items satisfy the requirements.

element
Jens de Koning

Element Materials Technology

TESTING RvA L 063 ilac-MRA

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN Zierikzee, The Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	A. Sumantri		Test date	25-5-2012	
ID Number	ID Card IXH4P6551		WPQ record number	RET 0245029-002-18	
Date of birth	23-02-1962		Standard test number	N.A.	Rev. -
Stamp number	W-102		WPS record number	P3000	Rev. 0
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX:2010 including	
Division	N.A.				

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-312 (TP316L)	8	1	63,50	160	9,53	73,03
Welded to:	Pipe	SA-312 (TP316L)	8	1	63,50	160	9,53	73,03
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P8 to P8	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	9,53	-	-	no limit	no limit	-
Pipe diameter (mm)	73,03	-	-	73 min	no limit	-

PROCESS VARIABLES	Actual values	RANGE QUALIFIED
Welding process	GTAW	GTAW
Type	Manual	Manual
Backing	No backing used	With, without
Filler metal specification	5.9	5.xx
Filler metal classification	ER316LSi	Any
Filler metal F-number	6	6
Filler metal variety (QW-404.23)	Bare (solid)	Solid, metal cored
Consumable insert	None	Without
Number of layers deposited	5	
Weld deposit thickness (mm)	9,53	19,06 max
Weld position (Actual position tested)	6G	
Groove - Plate & Pipe > 610mm		All
Groove - Pipe 73mm to 610mm		All
Groove - Pipe 73mm		All
Fillet - Plate & Pipe > 610mm		All
Fillet - Pipe 73mm to 610mm		All
Fillet - Pipe < 73mm		All
Progression	Up	Up
Backing gas	Without	With, without
GTAW welding current/polarity	DCEN (straight polarity)	DCEN (straight polarity)

TESTS

Type of test	Acceptance criteria	Result	Comments
Face bend test per QW-463.2(a)	QW-163	Acceptable	see -
Face bend test per QW-463.2(a)	QW-163	Acceptable	see -
Root bend test per QW-463.2(a)	QW-163	Acceptable	see -
Root bend test per QW-463.2(a)	QW-163	Acceptable	see -

Notes	This WPQ is based on PQR RET 0245029-001-21

CERTIFICATION

Tests conducted by	Schielab BV Breda (NLD)	Laboratory test number	SL 12.6047-1A
Mechanical tests by	N.A.	Test file number	ARL1559-5

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature

Name	Signature
Franky van Toledo	
Date	
8-6-2012	

Signature Welder

Name	Signature
A. Sumantri	
Date	
8-6-2012	

WELDING PROCEDURE QUALIFICATION RECORD AND WELDERS PERFORMANCE QUALIFICATION TEST RECORD

Testing in accordance with	: ASME IX:2010
Purchaser	: Arjan Roza Lastechniek BV
Purchase order no.	: ARL1559-5
Manufacturer	: Airpack Nederland BV.
WPS	: P3000
Description of sample(s)	: Pipe with Single-V-groove
Dimension(s)	: 2,5" Sch 160 (Ø 73,03 x 9,52 mm)
Material grade	: P8 gr. 1 - P8 gr. 1
Material	: ASTM SA-312 TP316L - ASTM SA-312 TP316L
Welding process(es)	: GTAW
Filler	: F-no.6 A-no. 8
Brand and type	: Lincoln Electric LNT 316LSi , ER316LSi
Shielding gas	: Argon (A5.32 SG-A)
Backing gas	: 95% N_2 + 5% H_2
Welding position	: 6G progression up
Preheat / Interpass temp.	: 10 °C / 132 °C
Joint type	: Single-V-groove
Welder	: A. Sumantri
Date / place of birth	: 23-02-1962 / Oost- en West-Souburg
Stamp. No. / ID	: W-102 / ID Card IXH4P6551
Testpiece marked with	: ARL1559-5

NON DESTRUCTIVE EXAMINATION

* Visual examination	: performed by examiner

CROSS WELD TENSILE TESTS

Dimensions(s) [mm]	Rm [N/mm²]	Fracture location
19.00 x 9.42	555	Base material
19.00 x 9.30	581	Base material
Requirements;	≥ 515	

TECHNOLOGICAL TESTS

Type	Former / Bending angle	Results
Face bend	4t / 180°	2 x acceptable
root bend	4t / 180°	2 x acceptable

Conclusion: The results satisfy the requirements.

Breda, 07-06-2012

Witnessed and approved by; Mr.
Representing: Lloyd's Register Nederland B.V.
[RET 0245029]

TESTING
RvA L 063

Ingeschreven in het RvA register voor laboratoria onder nr. L 063 voor gebieden zoals nader omschreven in de erkenning.
Entered in the RvA register for laboratories under number L 063 for the areas outlined in the approval.

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN Zierikzee, The Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	A. Sumantri		Test date	25-5-2012	
ID Number	ID Card IXH4P6551		WPQ record number	RET 0245029-002-24	
Date of birth	23-02-1962		Standard test number	N.A.	Rev. -
Stamp number	W-102		WPS record number	P3000	Rev. 0
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX:2010 including	
Division	N.A.				

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-312 (TP316)	8	1	12,70	160	4,78	21,34
Welded to:	Pipe	SA-312 (TP316)	8	1	12,70	160	4,78	21,34
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P8 to P8	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	4,78	-	-	no limit	no limit	-
Pipe diameter (mm)	21,34	-	-	21,34 min	no limit	-

PROCESS VARIABLES	Actual values	RANGE QUALIFIED
Welding process	GTAW	GTAW
Type	Manual	Manual
Backing	No backing used	With, without
Filler metal specification	5.9	5.xx
Filler metal classification	ER316LSi	Any
Filler metal F-number	6	6
Filler metal variety (QW-404.23)	Bare (solid)	Solid, metal cored
Consumable insert	None	Without
Number of layers deposited	5	
Weld deposit thickness (mm)	4,78	9,56 max
Weld position (Actual position tested)	6G	
Groove - Plate & Pipe > 610mm		All
Groove - Pipe 73mm to 610mm		All
Groove - Pipe 73mm		All
Fillet - Plate & Pipe > 610mm		All
Fillet - Pipe 73mm to 610mm		All
Fillet - Pipe < 73mm		All
Progression	Up	Up
Backing gas	Without	With, without
GTAW welding current/polarity	DCEN (straight polarity)	DCEN (straight polarity)

TESTS

Type of test	Acceptance criteria	Result	Comments
Radiographic examination	ASME IX	Acceptable	

Notes

CERTIFICATION

Tests conducted by	Schielab BV Breda (NLD)	Laboratory test number	SL 12.6404-1
Mechanical tests by	N.A.	Test file number	ARL1559-9

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature

Name	Signature
Fv Toledo	Airpack Nederland bv
Date	

Signature Welder

Name	Signature
	Lloyd's Register Nederland B.V. Wim Komdeur Lloyd's Register
Date	

WELDERS PERFORMANCE QUALIFICATION TEST RECORD

Testing in accordance with	: ASME IX:2012
Purchaser	: Arjan Roza Lastechniek BV
Purchase order no.	: ARL1559-9
Manufacturer	: Airpack Nederland BV.
WPS	: P3000
Description of sample(s)	: Pipe with Single-V-groove
Dimension(s)	: 1/2" Sch 160 (Ø 21,3 x 4,78 mm)
Material grade	: P8 gr. 1 - P8 gr. 1
Material	: ASTM SA-312 TP316L - ASTM SA-312 TP316L
Welding process(es)	: GTAW
Filler	: F-no.6 A-no. 8
Brand and type	: Lincoln Electric LNT 316LSi , ER316LSi
Shielding gas	: Argon (A5.32 SG-A)
Backing gas	: Argon (A5.32 SG-A)
Welding position	: 6G progression up
Preheat / Interpass temp.	: 10 °C / 150 °C
Joint type	: Single-V-groove
Welder	: A. Sumantri
Date / place of birth	: 23-02-1962 / Oost- en West-Souburg
Stamp. No. / ID	: A1 / ID Card IXH4P6551
Testpiece marked with	: ARL1559-9

NON DESTRUCTIVE EXAMINATION

* Visual examination	: performed by examiner
* Radiographic examination	: acceptable, see RTD report 1213-2012-24-020, film no. 6404

Conclusion: The results satisfy the requirements.

Breda, 13.06.2012

Testing witnessed by; Mr.
Representing; Lloyd's Register (RET 0245029)

S. Wevers

Lloyd's Register Nederland B.V.
P. Schmitz
Green Office
Reviewed/ Examined

TESTING
RvA L 063

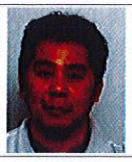
Ingeschreven in het RvA register voor laboratoria onder nr. L 063 voor gebieden zoals nader omschreven in de erkenning.
Entered in the RvA register for laboratories under number L 063 for the areas outlined in the approval.

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN Zierikzee, The Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	A. Sumantri		Test date	9/22/2020	
ID Number	ID Card IXH4P6551		WPQ record number	A0790090-59	
Date of birth	23-02-1962		Standard test number	N.A.	Rev. -
Stamp number	W-102		WPS record number	PGF-3000	Rev. 0
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX	
Division	N.A.				

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-312 (TP316L)	8	1	101.60	40S	6.02	114.30
Welded to:	Pipe	SA-312 (TP316L)	8	1	101.60	40S	6.02	114.30
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P8 to P8	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	6.02	-	-	no limit	no limit	-
Pipe diameter (mm)	114.30	-	-	73 min	no limit	-

PROCESS VARIABLES	Actual values		RANGE QUALIFIED	
Welding process	GTAW	FCAW	GTAW	FCAW
Type	Manual	Semi-automatic	Manual	Semi-automatic
Backing	Without	With	With, without	With
Filler metal specification	5.9	5.22	5.xx	5.xx
Filler metal classification	ER316LSi	E316LT0-1	Any	Any
Filler metal F-number	6	6	6	6
Filler metal variety (QW-404.23)	Bare (solid)	-	Solid, metal cored	-
Consumable insert	None	-	Without	-
Number of layers deposited	1	2		
Weld deposit thickness (mm)	2.02	4	4.04 max	8.0 max
Weld position (Actual position tested)	1G Rotated	1G Rotated		
Groove - Plate & Pipe > 610mm			F	F
Groove - Pipe 73mm to 610mm			F	F
Groove - Pipe 73mm			F	F
Fillet - Plate & Pipe > 610mm			F	F
Fillet - Pipe 73mm to 610mm			F	F
Fillet - Pipe < 73mm			F	F
Progression	-	-	-	-
Backing gas	Without	Without	With, without	With, without
GMAW transfer mode (QW-409)	-	Spray	-	Spray, pulse, globular
GTAW welding current/polarity	DCSP	-	DCSP	-

TESTS

Type of test	Acceptance criteria	Result	Comments
1 transverse face bend per QW-161.2 and QW-462.3(a)	QW-163	Acceptable	see - ASME IX - QW-452.1 (a)
1 transverse root bend per QW-161.3 and QW-462.3(a)	QW-163	Acceptable	see - ASME IX - QW-452.1 (a)
Visual examination per QW-302.4	QW-194	Acceptable	see - ASME IX - QW-452.1 (a)

Notes

CERTIFICATION

Tests conducted by	Daniel Schutt	Laboratory test number	ARJ001-20-09-42663-4
Mechanical tests by	Element Breda (NLD)	Test file number	ARL2542-4

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

☐ Witnessed ☑ Reviewed
And found to comply with:
Date: 7/10/20
Sign: L. Knops

Signature 1

Name	Signature
F. van Toledo (Airpack)	
Date	
10/6/2020	

QUALITY INSPECTED DATE: NAME: AIRPACK NEDERLAND B.V.

Signature 2

Name	Signature
L. Knops (DNVGL)	
Date	
10/6/2020	

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN, Zierikzee, Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	J. Wesdorp		Test date	9/22/2020	
ID Number	5171457148		WPQ record number	A0790090-61	
Date of birth	9-12-1996		Standard test number	N.A.	Rev. -
Stamp number	JW		WPS record number	PGF-3000	Rev. 1
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX: 2019	
Division					

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-312 (TP316L)	8	1	101,60	40S	6,02	114,30
Welded to:	Pipe	SA-312 (TP316L)	8	1	101,60	40S	6,02	114,30
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P8 to P8	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	6,02	-	-	no limit	no limit	-
Pipe diameter (mm)	114,30	-	-	73 min	no limit	-

PROCESS VARIABLES	Actual values		RANGE QUALIFIED	
Welding process	GTAW	FCAW	GTAW	FCAW
Type	Manual	Semi-automatic	Manual	Semi-automatic
Backing	Without	With	With, without	With
Filler metal specification	5.9	5.22	5.xx	5.xx
Filler metal classification	ER316LSi	E316LT0-1	Any	Any
Filler metal F-number	6	6	6	6
Filler metal variety (QW-404.23)	Bare (solid)	-	Solid, metal cored	-
Consumable insert	None	-	Without	-
Number of layers deposited	1	2		
Weld deposit thickness (mm)	2,02	4,0	4,04 max	8,0 max
Weld position (Actual position tested)	1G Rotated	1G Rotated		
Groove - Plate & Pipe > 610mm			F	F
Groove - Pipe 73mm to 610mm			F	F
Groove - Pipe 73mm			F	F
Fillet - Plate & Pipe > 610mm			F	F
Fillet - Pipe 73mm to 610mm			F	F
Fillet - Pipe < 73mm			F	F
Progression	-	-	-	-
Backing gas	With	With	With	With
GMAW transfer mode (QW-409)	-	Spray	-	Spray, pulse, globular
GTAW welding current/polarity	DCEN (straight polarity)	-	DCEN (straight polarity)	-

TESTS

Type of test	Acceptance criteria	Result	Comments
1 traverse face bends per QW-161.2, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
1 traverse root bends per QW-161.3, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
Visual examination per QW-302.4	QW-194	Acceptable	

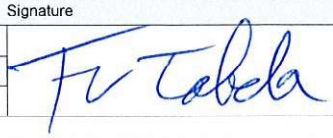
Notes

CERTIFICATION

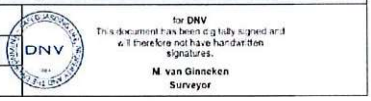
Tests conducted by	Daniel Schutt	Laboratory test number	ARJ001-20-09-42663-5
Mechanical tests by	Element Breda (NLD)	Test file number	ARL2542-5

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature 1

Name	Signature
F. van Toledo	
Date	
9/4/2023	

Signature 2

Name	Signature
M. van Ginneken DNV	
Date	
9/4/2023	

Airpack Netherlands BV

Groeneweegje 19 - 25, 4301 RN, Zierikzee, Netherlands

ASME Section IX - Welder Performance Qualification (WPQ)

WeldOffice WPQ

Welder's name	R. Ali		Test date	9/22/2020	
ID Number	4882630217		WPQ record number	A0790090-63	
Date of birth	8/9/1957		Standard test number	N.A.	Rev. -
Stamp number	RA		WPS record number	PGF-3000	Rev. 1
Company name	Airpack Netherlands BV		Qualification code	ASME Section IX: 2019	
Division	N.A.				

BASE METALS (QW-403)

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. (mm)	Dia. (mm)
	Pipe	SA-312 (TP316L)	8	1	101,60	40S	6,02	114,30
Welded to:	Pipe	SA-312 (TP316L)	8	1	101,60	40S	6,02	114,30
Joint type	Groove							

VARIABLES	Actual values	RANGE QUALIFIED
Type of weld joint	Pipe - Groove	Groove and Fillet welds
Base metal	P8 to P8	P-no. 1 thru 15F, 34, 41 thru 49

BASE METAL THICKNESS	Groove	Fillet	Overlay	Groove	Fillet	Overlay
Plate thickness (mm)	-	-	-	no limit	no limit	-
Pipe/tube thickness (mm)	6,02	-	-	no limit	no limit	-
Pipe diameter (mm)	114,30	-	-	73 min	no limit	-

PROCESS VARIABLES	Actual values		RANGE QUALIFIED	
Welding process	GTAW	FCAW	GTAW	FCAW
Type	Manual	Semi-automatic	Manual	Semi-automatic
Backing	Without	With	With, without	With
Filler metal specification	5.9	5.22	5.xx	5.xx
Filler metal classification	ER316LSi	E316LT0-1	Any	Any
Filler metal F-number	6	6	6	6
Filler metal variety (QW-404.23)	Bare (solid)	-	Solid, metal cored	-
Consumable insert	None	-	Without	-
Number of layers deposited	1	2		
Weld deposit thickness (mm)	2,02	4,0	4,04 max	8,0 max
Weld position (Actual position tested)	1G Rotated	1G Rotated		
Groove - Plate & Pipe > 610mm			F	F
Groove - Pipe 73mm to 610mm			F	F
Groove - Pipe 73mm			F	F
Fillet - Plate & Pipe > 610mm			F	F
Fillet - Pipe 73mm to 610mm			F	F
Fillet - Pipe < 73mm			F	F
Progression	-	-	-	-
Backing gas	With	With	With	With
GMAW transfer mode (QW-409)	-	Spray	-	Spray, pulse, globular
GTAW welding current/polarity	DCEN (straight polarity)	-	DCEN (straight polarity)	-

TESTS

Type of test	Acceptance criteria	Result	Comments
1 traverse face bends per QW-161.2, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
1 traverse root bends per QW-161.3, QW-463.2(d) and QW-462.3(a)	QW-163	Acceptable	see - ASME IX QW-452.1(a) Note 1
Visual examination per QW-302.4	QW-194	Acceptable	

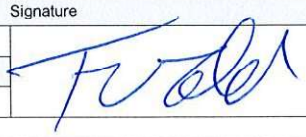
Notes

CERTIFICATION

Tests conducted by	Daniel Schutt	Laboratory test number	ARJ001-20-09-42663-6
Mechanical tests by	Element Breda (NLD)	Test file number	ARL2542-6

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

Signature 1

Name	Signature
F. van Toledo	
Date	
9/4/2023	

Signature 2

Name	Signature
M. van Ginneken DNV	for DNV This document has been digitally signed and will therefore not have handwritten signatures. M. van Ginneken Surveyor
Date	
9/4/2023	