



ASPC Project



END CUSTOMER	: Arya Sasol Polymer Company
CONTRACTOR	: DYPNF Co., Ltd.
VENDOR NAME	: Airpack Netherlands BV
EQUIPMENT DESCRIPTION	: Screw Compressor & Roots Blower Package
PURCHASE ORDER NUMBER	: PO-PC2312-08

Customer Document : 3944-VD-0171-DYP-RE-400-PRC-0018
Number

Airpack Document Number : 23383-26

Document Title : WPQ for Skid

Review Code and Status		Contractor Initials/Signature	Date signed
<input type="checkbox"/>	Code 1 REJECTED - Vendor to revise and Resubmit. Work cannot proceed		
<input checked="" type="checkbox"/>	Code 2 Comments As Noted - Work May proceed, subject to compliance with and incorporation of comments	H.J, Kim	2025-07-18
<input type="checkbox"/>	Code 3 No Comments - Work may proceed.		
<input type="checkbox"/>	Code 4 Information only - Review not required.		

Rev. No.	Description	Date	Prepared by	Checked by	Approved by
00	Issued for Information	16-04-2025	SC	SC	JJ

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.
Stamp number	BA	WPS record number	S2400
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)
Welded to:	Plate	API 2H (50)	U	II	-	-	20	-
	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.

Group I to Group II

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	F.H,V
Fillet - Plate & Pipe >= 610mm		F.H,V
Fillet - Pipe 73mm to 610mm		F.H,V
Fillet - Pipe < 73mm		Up
Progression	Up	Spray, pulse, globular
GMAW transfer mode	Spray	A5.xx approved
Shielding gas/flux	AC-20	

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

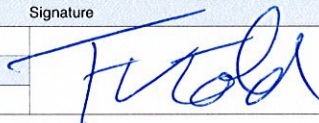

CERTIFICATION

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

Signature 2

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



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

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

	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

Signature 2

Name	Signature	Name	Signature
Date		Date	



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

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 Materials Technology

All characteristics of the above object(s) have, as far as accessible and relevant, been verified by Element Materials Technology Rotterdam b.v. (Element). Other information was provided by the purchaser. This information was verified as far as possible and has been copied into this report, unchanged. Element does not bear responsibility for the correctness of this submitted information. Any kind of "witnessing" and conclusions by a third party is not covered by the RVA accreditation L063 and is no part of the Element report. We hereby certify that the reported test data is correct and that the above object(s) was (were) tested/examined in accordance with purchaser's requirements and/or the above procedure(s) and/or code(s)/specification(s). If a declaration of conformity is issued in the report with regard to compliance with a specification or standard, this declaration is only applicable to the product(s) examined. In this assessment, the decision rule is applied that assumes that the expanded measurement uncertainty is not included in the assessment. Unless otherwise stated in the test standard or accreditation rules, the rounding rule according to ISO 80000-1 Annex A Rule B is used. On occasion a test is subcontracted by Element, the accreditation number of the subcontracted party is reported. Interpretations, opinions, conclusions and advice are partly based on the examination results and partly on information supplied by the purchaser. This report has legal value only when furnished with an authorized signature. If, upon reproduction, only part of this report is copied, Element will not bear any responsibility for content, purport and conclusions of that reproduction.



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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 Final receiver AM PROJECTS, ROTTERDA	A07.1 No. 3200019765 A07.2 No.	B01 Product HOT ROLLED PLATES	
2/ Steel design	2W-50-MOD			
3 Any supply requirements	API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12 AGREED MODIFICATIONS			

B01-B99 Description of the product

14 sm 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
 MATERIAL NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

C10-C29 Tensile test

14 sm o.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01 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 %
	362704	730557		K4	QO RT	449	468	537		29		0,87	0,83	
				K2	QO RT	444	451	535			27			70,7
				F2	QO RT	454	473	537			28			77,2
				K2	SO RT			516						76,2
				K2	SO RT			518						74,4
				K2	SO RT			511						70,0
				F2	SO RT			525						68,0
				F2	SO RT			528						
				F2	SO RT			528						

2017/202/203 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

TFK

Manufacturer's mark

Dunkirk Office
Lloyd's Register EMER



CONTROL NUMBER
DNK 1100134
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

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	Final receiver AM PROJECTS, ROTTERDA	A07.2 No		
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 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01 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		69,8
			F2	QO	RT	452	469	540		24		60,5
			K2	SO	RT			521				75,5
			K2	SO	RT			520				65,4
			K2	SO	RT			520				74,5
			F2	SO	RT			530				70,5
			F2	SO	RT			524				
			F2	SO	RT			536				

C30-C39 Further information about hardness test

MEM NO.: 04
HARDNESS TEST INFORMATIVE

MEM NO.: 04

17.2	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	QU	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 Group
Lloyd's Register EMEA

Lloyd's Register

CONTROL NUMBER
DNK 110154
Inspector

POISSONNET
Test House Manager

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

Date 05.09.11

A01
CD 1

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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

ITEM NO.: 04

ITEM NO.	ITEM NO.	C33	C01	C02/C01	RESULTS	AVERAGE
27.2	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

ITEM NO.: 04

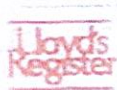
ITEM NO.	ITEM NO.	C33	C01	C02/C01	RESULTS	AVERAGE
27.2	B07.1	C33	C01	C02/C01	RESULTS	AVERAGE
2446	730198	HV10	K9	QO	194/191/191/190	192
2446	730198	HV10	K9	QU	188/192/192/191	191
2712	731016	HV10	K9	QO	166/165/167/166	166
2712	731016	HV10	K9	QU	167/172/171/170	170

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
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Inspector 2011

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Service Qualité-Essais

A01

Date 05.09.11

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2/ Steel design. 2W-50-MOD 3 Any suppl. API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12 requirements AGREED MODIFICATIONS				

C40-C49 Impact test

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

C66-C68 Supplementary tests on test samples

MEM NO.: 04
 TOP WEIGHT TEST (PELLINI)
 7.2 B07.1 RESULT
 2704 730557 T -35,0 C : NO BREAK
 2705 730556 T -35,0 C : NO BREAK

MEM NO.: 04
 REP ETCH TESTING AS PER DH-STANDARD <=2B : SATISFACTORY

C70-C99 Chemical composition % - Heat analysis

07.2	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

201/202/203 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 1101134
 Surveyor's Office

POISSONNET
 Test House Manager

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 Service Qualité-Essais

Date 05.09.11

CD 1

A01

M-System: Certification as per ISO 9001



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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

17.2 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

17.2 Heat	FO-02=	0,35	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1=	7,02
2704										
2705										

C95 Ladle treatment

ITEM NO.: 04

TREATMENT OF THE INDICATED ITEM: VACUUM DEGASSED

C70-C99 Chemical composition % - Product analysis

17.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	TI	B
2704	730557	K40	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	K40	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

17.2 Heat	B07.1 Test No.	C01	AL-T
2704	730557	K40	0,033
2705	730556	K40	0,032

C94 Product analysis Carbon equivalent / Alloying restrictions

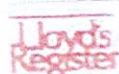
17.2 Heat	B07.1 Test No.	C01	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1=	6,60
2704	730557	K40								
2705	730556	K40								

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
Dunkerque Office



CONTROL NUMBER
DNK110034

[Signature]
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

Erklärungen 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 Final receiver AM PROJECTS, ROTTERDA	A07.1 No. 3200019765 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

ITEM NO.: 04
 RESULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS
 SURFACE AS PER EN-10163-A3
 THICKNESS AS PER EN-10029:91-A
 LENGTH AND WIDTH AS PER EN-10029:91
 TENSILE STRENGTH AS PER EN-10029:91-T4L

D02 Non-destructive tests - Ultrasonic testing

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

2011/202/203 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 1100154
 Inspector: [Signature]

[Signature]
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

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.
Stamp number	JW	WPS record number	S2400
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)
Welded to:	Plate	API 2H (50)	U	II	-	-	20	-
	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
Plate thickness (mm)	-	20
Pipe/tube thickness (mm)	-	-
Pipe size (mm)	-	-
		3 min.
		3 min.
		600 min.

Group I to Group II

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	F.H,V
Fillet - Plate & Pipe >= 610mm		F.H,V
Fillet - Pipe 73mm to 610mm		F.H,V
Fillet - Pipe < 73mm		Up
Progression	Up	Spray, pulse, globular
GMAW transfer mode	Spray	A5.xx approved
Shielding gas/flux	AC-20	

TESTS

Type of test	Acceptance criteria	Result	Comments
Visual examination per clause 4.9.1	clause 4.9.1.2.	Acceptable	ARL2717
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

Signature 2

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

Signature Witnessed Reviewed

And found to comply with:

Date: 2022-12-21

Sign: M. van Ginneken



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

	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 -			

THICKNESS RANGE QUALIFIED (mm)

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

Signature 2

Name	Signature	Name	Signature
Date		Date	

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



ARJ001-22-12-53197-6
page 1 of 2

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.



Maik van den Branden

Element Materials Technology

All characteristics of the above object(s) have, as far as accessible and relevant, been verified by Element Materials Technology Rotterdam b.v. (Element). Other information was provided by the purchaser. This information was verified as far as possible and has been copied into this report, unchanged. Element does not bear responsibility for the correctness of this submitted information. Any kind of "witnessing" and conclusions by a third party is not covered by the RVA accreditation L063 and is no part of the Element report. We hereby certify that the reported test data is correct and that the above object(s) was (were) tested/examined in accordance with purchaser's requirements and/or the above procedure(s) and/or code(s)/specification(s). If a declaration of conformity is issued in the report with regard to compliance with a specification or standard, this declaration is only applicable to the product(s) examined. In this assessment, the decision rule is applied that assumes that the expanded measurement uncertainty is not included in the assessment. Unless otherwise stated in the test standard or accreditation rules, the rounding rule according to ISO 80000-1 Annex A Rule B is used. On occasion a test is subcontracted by Element, the accreditation number of the subcontracted party is reported. Interpretations, opinions, conclusions and advice are partly based on the examination results and partly on information supplied by the purchaser. This report has legal value only when furnished with an authorized signature. If, upon reproduction, only part of this report is copied, Element will not bear any responsibility for content, purport and conclusions of that reproduction.





DILLINGER HÜTTE

M-System: Certification as per ISO 9001

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

2 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004		A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991		2378342-02.09.11	366375-002	1/...
5 Established inspecting body		B01 Product		
LR		HOT ROLLED PLATES		
A06 Purchaser		AM PROJECTS, HEIJNING A07 1 No 3200019765		
Final receiver		AM PROJECTS, ROTTERDA A07 2 No.		
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 B08 Am No. 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
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
 PLATE NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

C10-C29 Tensile test

14 B07.2 Am Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01 C02/ C03 C01 Temp. G.R.C.	C10 C11 MPA RP02	C12 C13 RM	A % LO=5D	A % LO=8IN	REH/RM	RP02/RM	Z %
362704	730557		K4 Q0 RT	449	537	29	27	0,87	0,83	70,7
			K2 Q0 RT	444	535		28			77,2
			F2 Q0 RT	454	537					76,2
			K2 SO RT		516					74,4
			K2 SO RT		518					70,0
			K2 SO RT		511					68,0
			F2 SO RT		525					
			F2 SO RT		528					
			F2 SO RT		528					

201Z02Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK Manufacturer's

CONTROL NUMBER: DNK 110134
 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



M-System: Certification as per ISO 9001

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

2	INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004	A10	Advice of dispatch No./ Date of dispatch	2378342-02.09.11	A08/ Manufacturer's order/ A03 Certificate No	366375-002	2/...
5	Established inspecting body LR	A06 Purchaser	AM PROJECTS, HEIJNING	A071 No. 3200019765	B01 Product	HOT ROLLED PLATES	
	2/ Steel design 2W-50-MOD	Final receiver	AM PROJECTS, ROTTERDA	A072 No.			
3	Any suppl requirements API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12 AGREED MODIFICATIONS						

C10-C29 Tensile test

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

C30-C39 Further information about hardness test

TEM NO.: 04

RDNESS TEST INFORMATIVE

TEM NO.:	B07.1	C33	C01	C02/C01	RESULTS	AVERAGE
17.2	B07.1	HV10	K9	QO	164/170/167/165	167
17.2	728022	HV10	K9	QU	181/186/184/179	183
17.2	728022	HV10	K9	QO	187/182/185/188	186
17.2	730483	HV10	K9	QU	198/196/197/199	198
17.2	730483	HV10	K9	QO	181/175/170/177	176
17.2	730097	HV10	K9	QU	174/176/180/183	178
17.2	730196	HV10	K9	QO	196/189/189/182	189
17.2	730196	HV10	K9	QO	186/191/184/180	185

201202203 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK Manufacturer's mark

Supervisor
Dunkque Office
Lloyd's Register EMEA

CONTROL NUMBER
DNK 110154
Inspector 210

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

Sheet A01



DILLINGER HÜTTE

M-System: Certification as per ISO 9001

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

2 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 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 A06 Purchaser AM PROJECTS, HEIJNING A07.1 No. 3200019765

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

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

Table with columns: ITEM NO., C33, C01, C02/C01, RESULTS, AVERAGE. Rows include items 17.2, 2705, 2702, 2446.

ITEM NO.: 04

Table with columns: ITEM NO., C33, C01, C02/C01, RESULTS, AVERAGE. Rows include items 17.2, 2446, 2712.

2011/2012/03 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 ENK1100154

Signature of Poissonnet

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



M-System: Certification as per ISO 9001

Änderungen 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/...

Established Inspecting body A06 Purchaser AM PROJECTS, HEIJNING A07.1 No. 3200019765
LR 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

B01 Product
HOT ROLLED PLATES

C40-C49 Impact test

14	B07.2 Heat No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 GR.C	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy Joule	C45 AV=J	C42 Individual values	C43 Mean value
362704	730557	K4 QX	K4	QX	-40	CHP-V	CHP-V	600	AV 213	233	219	222
		K4 QM	K4	QM	-40	CHP-V	CHP-V	600	AV 161	206	171	179
		K4 QV	K4	QV	-40	CHP-V	CHP-V	600	AV 229	234	205	223
		K2 QX	K2	QX	-40	CHP-V	5, 0%-250C/60MN	600	AV 110	120	112	114
		K4 QX	K4	QX	-40	CHP-V	CHP-V	600	AV 230	211	218	220
		K4 QM	K4	QM	-40	CHP-V	CHP-V	600	AV 136	133	142	137
		K4 QV	K4	QV	-40	CHP-V	CHP-V	600	AV 236	222	234	231
		K2 QX	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	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	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	0,001
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	0,001

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



Surveyor
Bureau Officer
Lloyd's Register EMEA

CONTROL NUMBER
DNK 7100154
Surveyor

Signature

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

TFK
Manufacturer's



M-System: Certification as per ISO 9001

Unterlagen 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	A08/ Manufacturer's order/ A03 Certificate No	Sheet
2378342-02.09.11	366375-002	5/.....
B01 Product		
HOT ROLLED PLATES		

Established inspecting body A06 Purchaser AM PROJECTS, HEIJNING A07.1 No 3200019765

LR Final receiver AM PROJECTS, ROTTERDA A07.2 No

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

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

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

C95 Ladle treatment

ITEM NO. : 04

AT OF THE INDICATED ITEM: VACUUM DEGASSED

C70-C99 Chemical composition % - Product analysis

C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	TI	B
17.2 sat	K40	0,084	0,384	1,52	0,013	0,0009	0,041	0,015	0,062	0,036	0,000	0,021	0,003	0,0002
2704	K40	0,085	0,378	1,51	0,013	0,0007	0,038	0,024	0,054	0,034	0,000	0,019	0,002	0,0002
2705														

C94 Product analysis Carbon equivalent / Alloying restrictions

C01	FO-31=	FO-51=	FO-52=	FO-A1=
17.2 sat	K40	0,18	0,02	6,60
2704	K40	0,18	0,02	8,65
2705				

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



Manufacturer's

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

CONTROL NUMBER
DNA-EUR154
Insephint



Lloyds Register
Dunkerque Office
100, rue de la République
F-59100 Dunkerque



M-System: Certification as per ISO 9001

Änderungen 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

Established inspecting body A08 Purchaser AM PROJECTS, HEIJNING A07.1 No. 3200019765
LR Final receiver AM PROJECTS, ROTTERDA A07.2 No.

2/ Steel design. 2W-50-MOD
API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
3 Any suppl. requirements 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

ITEM NO.: 04
RESULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS
SURFACE AS PER EN-10163-A3
THICKNESS AS PER EN-10029:91-A
LENGTH AND WIDTH AS PER EN-10029:91
FITNESS AS PER EN-10029:91-T4L

D02 Non-destructive tests - Ultrasonic testing

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



Manufacturer's mark

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



CONTROL NUMBER
DNK 110054
Inspector: SHELL

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



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.
Stamp number	BA	WPS record number	S2600
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)
Welded to:	Plate	API 2H (50)	U	II	-	-	20	-
	Plate	API 2H (50)	U	II	-	-	20	-
Joint type	Groove							

VARIABLES

Type of weld joint	Plate - Groove	RANGE QUALIFIED
Base metal	Group II to Group II	Groove, Fillet, Plug and Slot welds (T-,Y-,K-Groove PJP only) 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)	-	-		no limit
Pipe size (mm)	-	-		no limit

Group I to Group II

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 Visual examination per clause 4.9.1	clause 4.9.3.3 clause 4.9.1.1	Acceptable 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	
Date	19-12-2022

Signature 2

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

Signature

Witnessed Reviewed
 And found to comply with:

Date: 2022-12-21
 Sign: M. van Ginneken



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	None		
Notes			

THICKNESS RANGE QUALIFIED (mm)

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

FILLER METALS

	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,	8,	-	-
GMAW						-	-	-	-
GMAW						-	-	-	-
Sup. filler						- Required -			
Suppl. filler metal vol. (mm ³)	-								

THICKNESS RANGE QUALIFIED (mm)

WELDING PROCEDURE

	GMAW	GMAW	GMAW
	Semi-automatic	Semi-automatic	Semi-automatic
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 Date	S2600 1-6-2016	Revision 1	Qualified to Company name	AWS D1.1/D1.1M:2015 Airpack Netherlands BV
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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

Signature 2

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

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



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	

The above mentioned items satisfy the requirements.

Element Materials Technology

All characteristics of the above object(s) have, as far as accessible and relevant, been verified by Element Materials Technology Rotterdam b.v. (Element). Other information was provided by the purchaser. This information was verified as far as possible and has been copied into this report, unchanged. Element does not bear responsibility for the correctness of this submitted information. Any kind of "witnessing" and conclusions by a third party is not covered by the RVA accreditation L063 and is no part of the Element report. We hereby certify that the reported test data is correct and that the above object(s) was (were) tested/examined in accordance with purchaser's requirements and/or the above procedure(s) and/or code(s)/specification(s). If a declaration of conformity is issued in the report with regard to compliance with a specification or standard, this declaration is only applicable to the product(s) examined. In this assessment, the decision rule is applied that assumes that the expanded measurement uncertainty is not included in the assessment. Unless otherwise stated in the test standard or accreditation rules, the rounding rule according to ISO 80000-1 Annex A Rule B is used. On occasion a test is subcontracted by Element, the accreditation number of the subcontracted party is reported. Interpretations, opinions, conclusions and advice are partly based on the examination results and partly on information supplied by the purchaser. This report has legal value only when furnished with an authorized signature. If, upon reproduction, only part of this report is copied, Element will not bear any responsibility for content, purport and conclusions of that reproduction.

200 MM sheet



M-System: Certification as per ISO 9001

aufzungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)		A10 Advice of dispatch No./ Date of dispatch		A08/ Manufacturer's order/ A03 Certificate No.		Sheet	
2 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004		2378342-02.09.11		366375-002		1/...	
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991							
5 Established inspecting body		A06 Purchaser		A071 No		B01 Product	
LR		Final receiver		AM PROJECTS, HEIJNING		HOT ROLLED PLATES	
				A072 No			
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 B08 am p.	B08 Number of pieces	B09 Thickness	B10 Width	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

ITEM 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 B07.2 am p.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01 C02/ C03 Temp. GR.C	C10 C11 MPA RP02	C12 C13 RM	A % L0=5D	A % L0=8IN	REH/RM RP02/RM	Z %
	362704 730557		K4 Q0 RT	449 468	537	29	27	0,87 0,83	70,7
			K2 Q0 RT	444 451	535		28		77,2
			F2 Q0 RT	454 473	537				76,2
			K2 SO RT		516				74,4
			K2 SO RT		518				70,0
			K2 SO RT		511				68,0
			F2 SO RT		525				
			F2 SO RT		528				
			F2 SO RT		528				

201Z02Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK Manufacturer's

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

Inspector POISSONNET
 Test House Manager

CONTROL NUMBER
 DNK 110154

Lloyd's Register

Supplier:
 Dunkerque office
 Lloyd's Register, EMF

CD 1

M-System: Certification as per ISO 9001



unterlagen 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 2/...
5	Established Inspecting body LR	A06 Purchaser AM PROJECTS, HEIJNING	A071 No. 3200019765	
	2/ Steel design 2W-50-MOD	Final receiver AM PROJECTS, ROTTERDA	A072 No	
3	Any suppl requirements API-2W: 06+OPTION-S1; S3; S4; S5; S8; S10; S12 AGREED MODIFICATIONS			

C10-C29 Tensile test

14	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 % LO=5D	C14-C15 REH/RM RP02/RM	Z %
	362705	730556		K4 QO	RT	450	462	537	29	0,86 0,83	69,8
				K2 QO	RT	449	470	537	27		60,5
				F2 QO	RT	452	469	540	24		75,5
				K2 SO	RT			521			65,4
				K2 SO	RT			520			74,5
				K2 SO	RT			520			70,5
				F2 SO	RT			530			
				F2 SO	RT			524			
				F2 SO	RT			536			

C30-C39 Further information about hardness test

TEM NO.: 04
JRDNESS TEST INFORMATIVE

TEM NO.:	B07.1	C33	C01	C02/C01	RESULTS	AVERAGE
17.2	2707	HV10	K9	QO	164/170/167/165	167
	2707	HV10	K9	QU	181/186/184/179	183
	2446	HV10	K9	QO	187/182/185/188	186
	2446	HV10	K9	QU	198/196/197/199	198
	2702	HV10	K9	QO	181/175/170/177	176
	2702	HV10	K9	QU	174/176/180/183	178
	2446	HV10	K9	QO	196/189/189/182	189
	2446	HV10	K9	QO	186/191/184/180	185

201202Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK Manufacturer's mark

Supervisor
Dunkelmeier Götting
Lloyd's Register EMEA

CONTROL NUMBER
DANK 1101134
Inspector 2010

Signature:

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 Qualifié-Essais
Date 05.09.11

A01



M-System: Certification as per ISO 9001

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

INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004		A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No	Sheet
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991		2378342-02.09.11	366375-002	3/....
5 Established inspecting body	A06 Purchaser	AM PROJECTS, HEIJNING A07.1 No. 3200019765		
LR	Final receiver	AM PROJECTS, ROTTERDA A07.2 No.		

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

ITEM NO.:	04	C33	C01	C02/C01	RESULTS	AVERAGE
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
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

ITEM NO.:	04	C33	C01	C02/C01	RESULTS	AVERAGE
2712	730198	HV10	K9	QO	194/191/191/190	192
2712	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

2012/02/03 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
DN K 1100134
7.5.11 Inspector 2011

POISSONNET
Test House Manager



M-System: Certification as per ISO 9001

Erklärungen 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	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
	2378342-02.09.11	366375-002	4 / ...
		B01 Product	
		HOT ROLLED PLATES	

Established inspecting body A06 Purchaser AM PROJECTS, HEIJNING A07.1 No. 3200019765
L.R. Final receiver AM PROJECTS, ROTTERDA A07.2 No.

2/ Steel design. 2W-50-MOD
3 Any suppl. API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12 requirements AGREED MODIFICATIONS

C40-C49 Impact test

Item	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 AV=J	C42 Individual values	C43 Mean value
14	362704	730557	K4 QX	K4	QX	-40	-40	CHP-V	5,0%-250C/60MN	600	AV 213	233	222
			K4 QM	K4	QM	-40	-40	CHP-V		600	AV 161	206	179
			K4 QV	K4	QV	-40	-40	CHP-V		600	AV 229	234	223
			K2 QX	K2	QX	-40	-40	CHP-V		600	AV 110	120	114
			K4 QX	K4	QX	-40	-40	CHP-V		600	AV 230	211	220
			K4 QM	K4	QM	-40	-40	CHP-V		600	AV 136	133	137
			K4 QV	K4	QV	-40	-40	CHP-V		600	AV 236	222	231
			K2 QX	K2	QX	-40	-40	CHP-V		600	AV 198	217	211

C66-C68 Supplementary tests on test samples

ITEM NO.: 04
TOP WEIGHT TEST (PELLINI)
17.2 B07.1 RESULT
2704 730557 T -35,0 C : NO BREAK
2705 730556 T -35,0 C : NO BREAK
ITEM NO.: 04
REP ETCH TESTING AS PER DH-STANDARD <=2B : SATISFACTORY

C70-C99 Chemical composition % - Heat analysis

Item	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

Z01Z02Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order

TFK Manufacturer's

Surveyor
Dunkernue Office
Lloyd's Register EMEA
Lloyd's Register

CONTROL NUMBER
DNK110034
E-Shop 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



M-System: Certification as per ISO 9001

Untersuchungen 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/...

Established inspecting body A06 Purchaser AM PROJECTS, HEIJNING A07.1 No 3200019765
LR 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

B01 Product
HOT ROLLED PLATES

C70-C99 Chemical composition % - Heat analysis

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

C94 Heat analysis Carbon equivalent / Alloying restrictions

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

C95 Ladle treatment

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

C70-C99 Chemical composition % - Product analysis

C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	TI	B
2704	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	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

C94 Product analysis Carbon equivalent / Alloying restrictions

2704	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1=	6,60
2705	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1=	8,65

Z017Z02Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order



Manufacturer's

POISSONNET
Test House Manager

Lloyds Register
Dunstanville Office
Dunstanville, Essex, UK

CONTROL NUMBER
DNK1100154
Inscribed

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

Untersuchungen 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	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
	2378342-02.09.11	366375-002	6
B01 Product		HOT ROLLED PLATES	

3 Established Inspecting body A06 Purchaser AM PROJECTS, HEIJNING A07.1 No. 3200019765
 LR Final receiver AM PROJECTS, ROTTERDA A07.2 No.

2/ Steel design. 2W-50-MOD
 API-2W:06+OPTION-S1;S3;S4;S5;S8;S10;S12
 requirements 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 + SB
- 51 = V +NB
- 52 = V +NB+TI
- A1 = AT/N

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

EM NO.: 04
 RESULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS
 REFACE AS PER EN-10163-A3
 THICKNESS AS PER EN-10029:91-A
 LENGTH AND WIDTH AS PER EN-10029:91
 FINISH AS PER EN-10029:91-T4L

D02 Non-destructive tests - Ultrasonic testing

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

Z01Z02Z03 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 INCHARGE DAN K HOUT 54 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
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