



KNE Ventures Sdn. Bhd.
 Lot 32826, Jalan SM 6/8, Kawasan Perindustrian, Seri Manjung, Fasa II, 32040, Seri Manjung, Perak
AWS D1.1 Welding Procedure Specification (WPS)
 Weldspec

PQRD number	PQRD/KNEV/SAW-001/16	Revision 0	Date	26/5/2016
PQR number	PQR/KNEV/SAW-001/16	Revision 0	Welding standard	AWS D1.1: 2015
WPS number	WPS/KNEV/SAW-001/16	Revision 0	Company name	KNE Ventures Sdn. Bhd.
			To be tested	Without PWHT

WELDING PROCESSES

Welding process	SAW	SAW	SAW
Type	Manual	Manual	Manual

BASE METALS

Product form	Plate	Welded to:	Product form	Plate
Material control number	S275JR		Material control number	S275JR
Specification (type or grade)	unlisted		Specification (type or grade)	unlisted
Nominal composition	0.161C-0.994Mn		Nominal composition	0.161C-0.994Mn
Trade name	Ji Kang Dimensi Sdn. Bhd.		Trade name	Ji Kang Dimensi Sdn. Bhd.
P number	-		P number	-
G number	-		G number	-
AWS group number	-		AWS group number	-
Nominal pipe/tube size	-		Nominal pipe/tube size	-
Schedule	-		Schedule	-
Length	mm 400		Length	mm 400
Width (OD)	mm 800		Width (OD)	mm 800
Thickness	mm 25		Thickness	mm 25

JOINT SPECIFICATION

Joint design	Single-bevel-groove		
Backing:	None		
Retainers	None		
Groove angle	deg. 60-70		
Root opening	mm 3.2		
Root face	mm 2.0		

CLEANING/ROOT TREATMENT

Surface preparation	Grinding and wire brushing
Initial/Interpass cleaning	Brushing and Grinding
Back gouging method	None





KNE Ventures Sdn. Bhd.
 Lot 32826, Jalan SM 6/8, Kawasan Perindustrian, Seri Manjung, Fasa II, 32040, Seri Manjung, Perak
AWS D1.1 Welding Procedure Specification (WPS)
 Weldspec

PQRD number	PQRD/KNEV/SAW-001/16	Revision 0	Date	26/5/2016
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PASS INFORMATION						
Pass number	1	2	3-4	5-7	8-11	12-15
Layer number	1	2	3	4	5	6

WELDING PROCESSES						
Welding process	SMAW	SMAW	SMAW	SMAW	SMAW	SMAW
Type	Manual	Manual	Manual	Manual	Manual	Manual

FILLER METALS						
Material control number	-	-	-	-	-	-
SFA specification	5.1	5.1	5.1	5.1	5.1	5.1
AWS Classification	E7018	E7018	E7018	E7018	E7018	E7018
Filler metal F-number	4	4	4	4	4	4
Weld metal A-number	1	1	1	1	1	1
Filler metal nominal composition	0.35Si-0.75Mn	0.35Si-0.75Mn	0.35Si-0.75Mn	0.35Si-0.75Mn	0.35Si-0.75Mn	0.35Si-0.75Mn
Filler metal trade name	Kobelco	Kobelco	Kobelco	Kobelco	Kobelco	Kobelco
Filler metal size	mm 3.2	3.2	3.2	3.2	3.2	3.2
Length of filler metal consumed	mm 402	430	805	1175	1585	1610
Deposited thickness	mm 3.0	3.0	3.0	3.0	3.0	3.0
Maximum pass thickness	mm 3.0	3.0	3.0	3.0	3.0	3.0
Weld deposit chemistry	C-Si-Mn	C-Si-Mn	C-Si-Mn	C-Si-Mn	C-Si-Mn	C-Si-Mn

POSITION						
Position of groove	4G	4G	4G	4G	4G	4G
Weld progression	-	-	-	-	-	-

PREHEAT						
Preheat temperature	°C 65	65	65	65	65	65
Maximum interpass temperature	°C 111	130	140	120	162	140

ELECTRICAL						
Filler metal size	mm 3.2	3.2	3.2	3.2	3.2	3.2
Amperes	Amps 76	105	120-130	119-142	115-121	113-116
Volts	Volts 23	23	28	27-29	25-28	24-29
Travel speed	mm/min 34.66	56.80	52.93-54.93	53.39-65.18	52.48-109.89	55.78-109.59
Maximum heat input	kJ/mm 3.026	2.5511	4.13	4.25	3.87	3.09
Current/polarity	DCSP	DCEP	DCEP	DCEP	DCEP	DCEP

TECHNIQUE						
String or weave	Stringer	Stringer	Stringer	Stringer	Stringer	Stringer
Multi/Single pass per side	Single pass	Single pass	Multiple passes	Multiple passes	Multiple passes	Multiple passes
Peening	Not used	Not used	Not used	Not used	Not used	Not used
Initial/interpass cleaning	Brushing and Grinding	Brushing and Grinding	Brushing and Grinding	Brushing and Grinding	Brushing and Grinding	Brushing and Grinding
Back gouging method	None	None	None	None	None	None

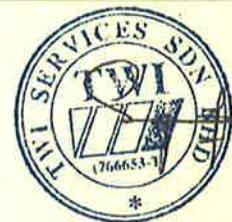
PASS PERFORMED/WITNESSED BY						
Welders name	Mohd Noor Firdaus Mohd Ghani	Mohd Noor Firdaus Mohd Ghani	Mohd Noor Firdaus Mohd Ghani	Mohd Noor Firdaus Mohd Ghani	Mohd Noor Firdaus Mohd Ghani	Mohd Noor Firdaus Mohd Ghani
Recorded/witnessed by	Abdul Halim Mahmood	Abdul Halim Mahmood	Abdul Halim Mahmood	Abdul Halim Mahmood	Abdul Halim Mahmood	Abdul Halim Mahmood
Date	25/5/2016	25/5/2016	25/5/2016	25/5/2016	25/5/2016	25/5/2016
Date entry by	Nur Syazana	Nur Syazana	Nur Syazana	Nur Syazana	Nur Syazana	Nur Syazana





KNE Ventures Sdn. Bhd.
 Lot 32828, Jalan SM 6/8, Kawasan Perindustrian, Seri Manjung, Fasa II, 32040, Seri Manjung, Perak
AWS D1.1 Welding Procedure Specification (WPS)
 Weldspec

PQRD number	PQRD/KNEV/SAW-001/16	Revision 0	Date	26/5/2016
PASS INFORMATION				
Pass number	16-19	20-24		
Layer number	7	8		
WELDING PROCESSES				
Welding process	SMAW	SMAW		
Type	Manual	Manual		
FILLER METALS				
Material control number	-	-		
SFA specification	5.1	5.1		
Classification	E7018	E7018		
Filler metal F-number	4	4		
Weld metal A-number	1	1		
Filler metal nominal composition	0.35Si-0.75Mn	0.35Si-0.75Mn		
Filler metal trade name	Kobelco	Kobelco		
Filler metal size	mm 3.2	3.2		
Length of filler metal consumed	mm 1515	2020		
Deposited thickness	mm 3.0	3.0		
Maximum pass thickness	mm 3.0	3.0		
Weld deposit chemistry	C-Si-Mn	C-Si-Mn		
POSITION				
Position of groove	4G	4G		
Weld progression	-	-		
PREHEAT				
Preheat temperature	°C 65	65		
Maximum interpass temperature	°C 135	145		
ELECTRICAL				
Filler metal size	mm 3.2	3.2		
Amperes	Amps 116-118	114-126		
Volts	Volts 25-28	25-38		
Travel speed	mm/min 56.25-121.58	55.94-116.86		
Maximum heat input	kJ/mm 3.37	3.84		
Current/polarity	DCEP	DCEP		
TECHNIQUE				
String or weave	Stringer	Stringer		
Multi/Single pass per side	Multiple passes	Multiple passes		
Peening	Not used	Not used		
Initial/Interpass cleaning	Brushing and Grinding	Brushing and Grinding		
Back gouging method	None	None		
PASS PERFORMED/WITNESSED BY				
Welders name	Mohd Noor Firdaus Mohd Ghani	Mohd Noor Firdaus Mohd Ghani		
Recorded/witnessed by	Abdul Hallim Mahmood	Abdul Hallim Mahmood		
Date	25/5/2016	25/5/2016		
Data entry by	Nur Syazana	Nur Syazana		





KNE Ventures Sdn. Bhd.
 Lot 32826, Jalan SM 6/8, Kawasan Perindustrian, Seri Manjung, Fasa II, 32040, Seri Manjung, Perak
AWS D1.1 Welding Procedure Specification (WPS)
 Weldspec

WPS record number	WPS/KNEV/SMAW-001/16	Revision 0	Qualified to	AWS D1.1: 2015
Date	17/6/2016		Company name	KNE Ventures Sdn. Bhd.
Supporting PQR(s)	PQR/KNEV/SMAW-001/16 - Rev 0			
Reference docs.				

Scope	Groove, fillet, no PWHT (As-welded)
Joint	Joint details for this welding procedure specification in: JOINTS section of this WPS

BASE METALS

Type	S275JR	P-no.	-	Grp-no.	-
Welded to	S275JR	P-no.	-	Grp-no.	-
Backing:	None	P-no.	-	Grp-no.	-
Retainers	None				
Notes					

THICKNESS RANGE QUALIFIED mm

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

DIAMETER RANGE QUALIFIED mm

Pipe/Tube Diameter Range Qualified	Nominal pipe size	As-welded		With PWHT	
		Min.	Max.	Min.	Max.
	600	no max.	-	-	-

FILLER METALS

	SFA	AWS Classification	F-no.	A-no.	Chemical analysis or Trade name	As-welded		With PWHT	
						Min.	Max.	Min.	Max.
SMAW	5.1	E7018	4	1	Kobelco	3	no max.	-	-
SMAW	5.1	E7018	4	1	Kobelco	3	no max.	-	-
SMAW	5.1	E7018	4	1	Kobelco	3	no max.	-	-

WELDING PROCEDURE

	SMAW	SMAW	SMAW
Welding process	SMAW	SMAW	SMAW
Type	Manual	Manual	Manual
Minimum preheat/Interpass temp. °C	65	65	65
Maximum interpass temperature °C	111	130	162
Filler metal size mm	4.0 max	4.0 max	4.0 max
Layer number	Root	Hot	Fill and Cap
Position of groove	OH	OH	OH
Weld progression	Not applicable	Not applicable	Not applicable
Current/polarity	DCSP	DCEP	DCEP
Amperes Amps	76	105	113-142
Volts Volts	23	23	24-38
Travel speed mm/min	34.66	58.80	52.48-121.58
Maximum heat input kJ/mm	3.026	2.5511	4.25
String or weave	Stringer	Stringer	Stringer
Multi/Single pass per side	Single pass	Single pass	Multiple passes
Maximum pass thickness mm	3.0	3.0	3.0
Weld deposit chemistry	C-Si-Mn	C-Si-Mn	C-Si-Mn
Notes			

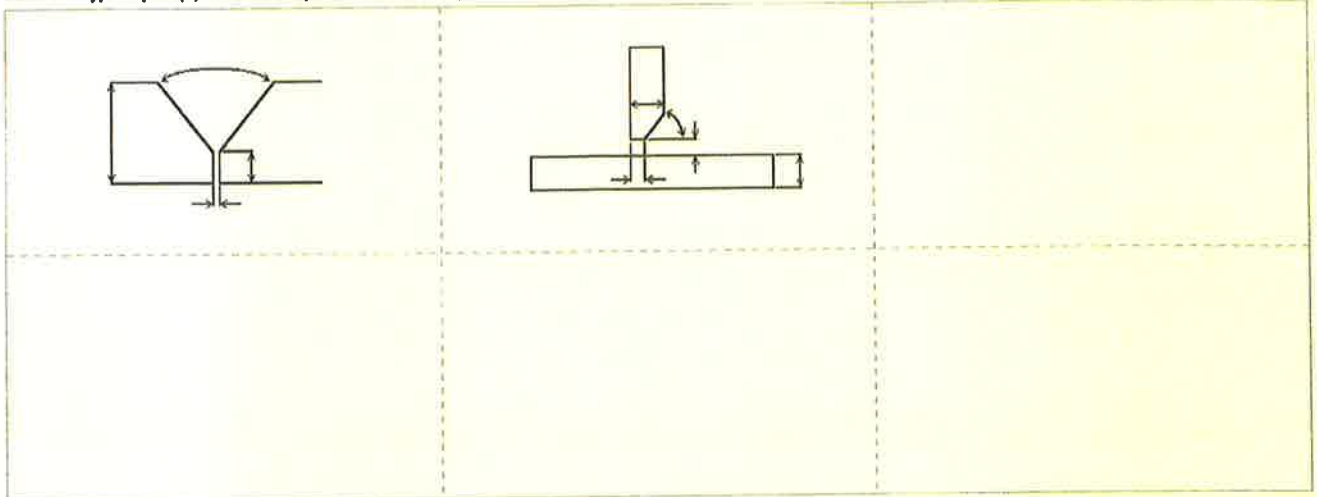




KNE Ventures Sdn. Bhd.
 Lot 32828, Jalan SM 6/8, Kawasan Perindustrian, Seri Manjung, Fasa II, 32040, Seri Manjung, Perak
AWS D1.1 Welding Procedure Specification (WPS)
 Weldspec

WPS record number	WPS/KNEV/SAW-001/16	Revision 0	Qualified to	AWS D1.1: 2015
Date	17/6/2016		Company name	KNE Ventures Sdn. Bhd.

JOINTS: Typical joint(s). See actual production drawings and engineering specifications for details.



Type of groove	Single-V-groove	Minimum groove angle	deg.	55.0
		Maximum root face	mm	4.0
		Minimum root gap	mm	1.2

TECHNIQUE

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

NOTES

Some of the parameters that require requalification of the PQR:

- a decrease in the groove angle
- a decrease in the root opening
- an increase in the root face
- a change in welding position
- a change to a square-groove joint
- an addition of PWHT
- a change in base metal
- a decrease in preheat and interpass temperature by more than 15°C

TWI Services Sdn. Bhd.

Name
Nur Syazana Shahrudin
Date
17/6/2016

Signature



Bureau Veritas Sdn. Bhd.

Name
MOHD JAMALULLAIL
Date
21/6/2016

Signature




KNE Ventures Sdn. Bhd.

Name
EU TEIK CHYE
Date
17/06/2016

Signature





KNE Ventures Sdn. Bhd.
 Lot 32826, Jalan SM 6/8, Kawasan Perindustrian, Seri Manjung, Fasa II, 32040, Seri Manjung, Perak
AWS D1.1 - Welder Performance Qualification (WPQ)
 Welderqual

Welder's name	Mohd Noor Firdaus Mohd Ghani		Test date	25/5/2016	
ID Number	WA012016		WPQ record number	TWI/NSS/WQT/AWS/01-16	
Date of birth	14/9/1982		Standard test number	Not applicable	Rev. -
Stamp number	Not applicable		WPS record number	WPS/KNEV/SMAW-001/16	Rev. 0
Company name	KNE Ventures Sdn. Bhd.		Qualification code	AWS D1.1: 2015	
Division	Not applicable				

BASE METALS		Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. mm	Dia. mm
Welded to:	Plate	Plate	S275JR	-	-	-	-	25	-
	Plate	Plate	S275JR	-	-	-	-	25	-
Joint type	Groove								

VARIABLES		Actual values	RANGE QUALIFIED
Type of weld joint	Plate - Groove		Groove, Fillet, Plug and Slot welds (T-,Y-,K-Connection PJP only)
Base metal	S275JR to S275JR		S275JR to S275JR

BASE METAL THICKNESS		Groove	Fillet	Groove	Fillet
Plate thickness	mm	25	-	3 min.	3 min.
Pipe/tube thickness	mm	-	-	3 min.	no limit
Pipe diameter	mm	-	-	600 min.	no limit

VARIABLES		Actual values	RANGE QUALIFIED
Welding process	SMAW		SMAW
Type	Manual		Manual
Backing	Without		With, without
Filler metal specification	5.1		A5.xx
Filler metal classification	E7018		All
Filler metal F-number	4		1..4
Weld position (Actual position tested)	4G		F,OH
Groove - Plate & Pipe >= 600mm			-
Groove - Pipe 73mm to 600mm			-
Groove - Pipe < 73mm			-
Fillet - Plate & Pipe >= 600mm			F,H,OH
Fillet - Pipe 73mm to 600mm			F,H,OH
Fillet - Pipe < 73mm			F,H,OH
Progression			-

TESTS		Type of test	Acceptance criteria	Result	Comments
		Welder Qualification through WPS qualification 4.15.3	4.9, 4.15.1, 4.15.2	Acceptable	see - AWS D1.1

Notes

CERTIFICATION			
Tests conducted by	TWI Services Sdn. Bhd.	Laboratory test number	MAT/2658-01/16
Mechanical tests by	Nusantara Technologies Sdn Bhd	Test file number	NT/162658-01

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 AWS D1.1/D1.1M:2015

TWI Services Sdn. Bhd.		Bureau Veritas Sdn. Bhd.	
Name	Signature	Name	Signature
Nur Syazana Shahrudin		Mohd Jamalulhazil	
Date		Date	21/6/2016
17/6/2016			
KNE Ventures Sdn. Bhd.			
Name	Signature		
EU BEIK CADE			
Date			
17/06/2016			



KNE Ventures Sdn. Bhd.
 Lot 32826, Jalan SM 6/8, Kawasan Perindustrian, Seri Manjung, Fasa II, 32040, Seri Manjung, Perak
AWS D1.1 Preliminary Welding Procedure Specification (pWPS)
 Weldspec

WPS record number	pWPS/KNEV/SMAW-001/16	Revision 1	Qualified to	AWS D1.1: 2015
Date	23/5/2016		Company name	KNE Ventures Sdn. Bhd.
Supporting PQR(s)	N/A			
Reference docs.				

Scope	Groove, fillet, no PWHT (As-welded)
Joint	Joint details for this welding procedure specification in: JOINTS section of this WPS

BASE METALS

Type	S275JR	P-no. -	Grp-no. -
Welded to	S275JR	P-no. -	Grp-no. -
Backing:	Without	P-no.	Grp-no. -
Retainers	None		
Notes			

THICKNESS RANGE QUALIFIED mm

	As-welded		With PWHT	
	Min.	Max.	Min.	Max.
Complete pen.	3	unlimited	-	-
Impact tested	-	-	-	-
Partial pen.	-	-	-	-
Fillet welds	3	unlimited	-	-

DIAMETER RANGE QUALIFIED mm

Pipe/Tube Diameter Range Qualified	Nominal pipe size	As-welded		With PWHT	
		Min.	Max.	Min.	Max.
		3.0	no max	-	-

FILLER METALS

	SFA	AWS Classification	F-no.	A-no.	Chemical analysis or Trade name	As-welded		With PWHT	
						Min.	Max.	Min.	Max.
SMAW	5.1	E7018	4	1	Kobelco	3	unlimited	-	-
SMAW								-	-

WELDING PROCEDURE

	SMAW	SMAW
Welding process	SMAW	SMAW
Type	Manual	Manual
Minimum preheat/Interpass temp. °C	65	65
Maximum interpass temperature °C	150	150
Filler metal size mm	2.8	3.2
Layer number	Root	Hot, Fill and Pass
Position of groove	OH	OH
Weld progression	Not applicable	Not applicable
Current/polarity	DCSP	DCEP
Amperes Amps	100-140	140-160
Volts Volts	16-20	20-25
Travel speed mm/min	TBA	TBA
Maximum heat input kJ/mm	1.5-2.1	1.5-2.1
String or weave	Stringer	Stringer
Multi/Single pass per side	Multiple passes	Multiple passes
Maximum pass thickness mm	3.0	3.0
Weld deposit chemistry	C-Mn-Si	C-Mn-Si
Notes		

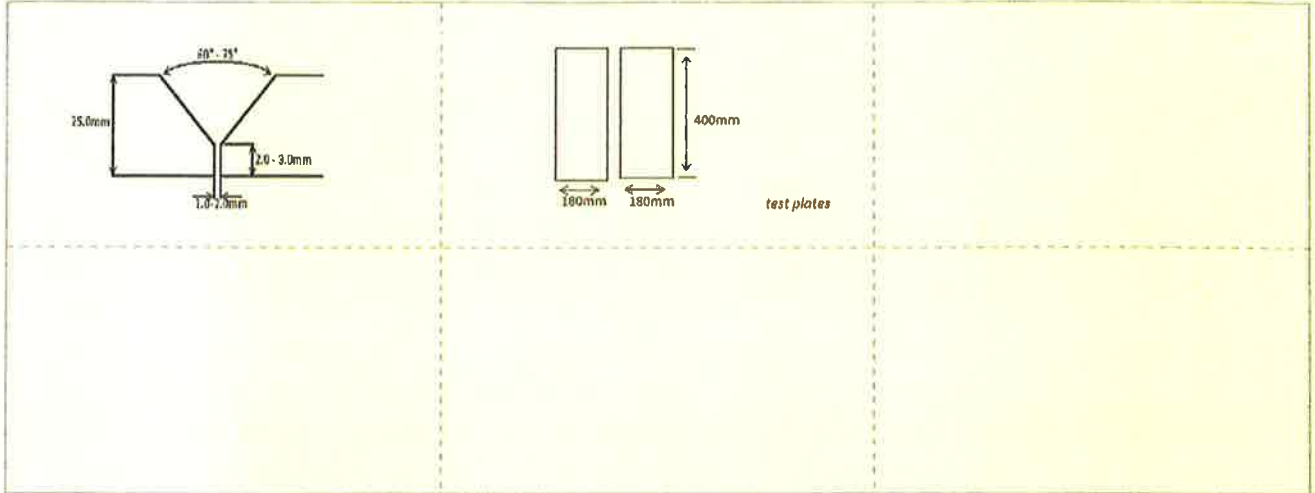




KNE Ventures Sdn. Bhd.
 Lot 32826, Jalan SM 6/8, Kawasan Perindustrian, Seri Manjung, Fasa II, 32040, Seri Manjung, Perak
AWS D1.1 Preliminary Welding Procedure Specification (pWPS)
 Weldspec

WPS record number	pWPS/KNEV/SAW-001/16	Revision 1	Qualified to	AWS D1.1: 2015
Date	23/5/2016		Company name	KNE Ventures Sdn. Bhd.

JOINTS: Typical joint(s). See actual production drawings and engineering specifications for details.



Type of groove	Double-V-groove	Minimum groove angle	deg. 60
		Maximum root face	mm 3.0
		Minimum root gap	mm 2.0

TECHNIQUE

Peening	Not used
Surface preparation	Brushing and grinding
Initial/Interpass cleaning	Brushing and Grinding
Back gouging method	Not applicable

NOTES

1. Prior to welding, surfaces for welding shall be clean and free from paint, oil, rust, scale, slag, grease and other foreign materials that are detrimental to welding

TWI Services Sdn. Bhd.

Name	Signature
Nur Syazana Shahiruddin	
Date	
23/5/2016	
KNE Ventures Sdn. Bhd.	
Name	Signature
Date	



Bureau Veritas Sdn. Bhd.

Name	Signature
Mohd Jamalullail	
Date	
21/6/2016	





KNE Ventures Sdn. Bhd.
 Lot 32826, Jalan SM 6/8, Kawasan Perindustrian, Seri Manjung, Fasa II, 32040, Seri Manjung, Perak
AWS D1.1 Procedure Qualification Record (PQR)
 Weldspec

PQR record number	PQR/KNEV/SMAW-001/16	Revision 0	WPS record number	WPS/KNEV/SMAW-001/16	Revision 0
Date	09/6/2016		Company name	KNE Ventures Sdn. Bhd.	
			Welding standard	AWS D1.1: 2015	

BASE METALS

	Product form	Specification (type or grade)	P no.	Grp-no.	Size	Sch.	Thick. mm	Dia. mm
Welded to:	Plate	S275JR	-	-	-	-	25	-
and tested:	Plate	S275JR	-	-	-	-	25	-
Notes	Without PWHT							

JOINT SPECIFICATION

Joint design	Single-V-groove		
Backing:	None		
Retainers	None		
Groove angle deg.	60-70		
Root opening mm	3.2		
Root face mm	2		

WELDING PROCESSES

Welding process	SMAW	SMAW	SMAW
Type	Manual	Manual	Manual

FILLER METALS

SFA specification	5.1	5.1	5.1
AWS Classification	E7018	E7018	E7018
Filler metal F-number	4	4	4
Weld metal A-number	1	1	1
Filler metal nominal composition	0.35Si-0.75Mn	0.35Si-0.75Mn	0.35Si-0.75Mn
Filler metal trade name	Kobelco	Kobelco	Kobelco
Filler metal size mm	3.2	3.2	3.2
Deposited thickness mm	3.0	3.0	18.0
Maximum pass thickness mm	3.0	3.0	3.0
Weld deposit chemistry	C-Si-Mn	C-Si-Mn	C-Si-Mn

POSITION

Position of groove	4G	4G	4G
Weld progression			

PREHEAT

Preheat temperature °C	65	65	65
Maximum interpass temperature °C	111	130	162

ELECTRICAL

Filler metal size mm	3.2	3.2	3.2
Amperes Amps	76	105	113-142
Volts Volts	23	23	24-38
Travel speed mm/min	34.86	56.80	52.48-121.58
Heat input kJ/mm	3.026	2.5511	4.25
Current/polarity	DCSP	DCEP	DCEP

TECHNIQUE

String or weave	Stringer	Stringer	Stringer
Multi/Single pass per side	Single pass	Single pass	Multiple passes
Peening	Not used	Not used	Not used
Initial/Interpass cleaning	Brushing and Grinding	Brushing and Grinding	Brushing and Grinding
Back gouging method	None	None	None





KNE Ventures Sdn. Bhd.
 Lot 32826, Jalan SM 6/6, Kawasan Perindustrian, Seri Manjung, Fasa II, 32040, Seri Manjung, Perak
AWS D1.1 Procedure Qualification Record (PQR) - Test results (as welded)
Weldspec

PQR record number	PQR/KNEV/SMAW-001/16	Revision 0	WPS record number	WPS/KNEV/SMAW-001/16	Revision 0
Date	09/6/2016		Company name	KNE Ventures Sdn. Bhd.	
			Welding standard	AWS D1.1: 2015	

TENSILE TESTS

Specimen number	Width	Thickness	Area	Ultimate total load	Ultimate unit stress	Type of failure and location
	mm	mm		mm ²	N	
T1	20.09	24.43	490.80	268897.47	547.88	Ductile-Base Metal
T2	20.12	24.43	491.53	270352.94	550.02	Ductile-Base Metal

Comments: 2 reduced section tension tests per 4.9.3.4

GUIDED BEND TESTS

Type of test	Acceptance criteria	Result	Comments
4 transverse side bends per 4.9.3.1	4.9.3.3	Acceptable	see - AWS D1.1

Comments:

OTHER TESTS

Type of test	Acceptance criteria	Result	Comments
Visual inspection per 4.9.1	4.9.1.1	Acceptable	see - AWS D1.1
Radiographic testing (RT) per 4.9.2.1	4.9.2.2	Acceptable	see - AWS D1.1

Comments:

CERTIFICATION

Welder's name	ID Number	Stamp number	Mechanical testing by	Nusantara Technologies Sdn. Bhd
Mohd Noor Firdaus Mohd Ghani	WA012016	Not applicable	Laboratory test number	MAT/2658-01/16
			Test file number	NT/162658-01
			Tests conducted by	TWI Services Sdn. Bhd.

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 AWS D1.1/D1.1M:2015 Structural Welding Code - Steel

TWI Services Sdn Bhd

Name
Nur Syazana Shahiruddin
Date
17/6/2016

Signature


Bureau Veritas (M) Sdn Bhd

Name
Date 21/6/2016

Signature


KNE Ventures Sdn. Bhd.

Name
Date

Signature

