



NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D)

No. 5, Jalan Anggerik Mokara 31/45, Seksyen 31, Kota Kemuning, 40460 Shah Alam, Selangor Darul Ehsan, Malaysia.

Tel: 03-5122 9766/7/8 Fax: 03-5122 8766/7 E-mail: info@nusatek.com

Our Ref.: NT/103452/18-07

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Report No: I NDT/RT/180340-07/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Recron (M) Sdn Bhd	Procedure No:	NT/RT/ASME Rev. 7.0
Project :	HTM Piping	IQI type :	ASTM 1A
Material:	Carbon Steel	Film Manufacturer/Type :	FUJI 100(class II)
Welding Process :	GTAW	Density :	2.0 - 3.5
Examination Code :	ASME V	Sensitivity:	0.20mm(2 wires visible)
Acceptance Code:	ASME B31.3	Source to Object Distance :	400mm
Examination Date:	06 April 2018	Source Side of Object to Film Distance:	(73.0)mm
		No of Radiograph(exposure) :	Single Exposure
		No. of Film Each Cassette :	1 Film
		Radiographic Technique :	DWDI
		Film Viewing Technique :	Double Viewing
		Source Type/Size :	Iridium192 (3.2mm)
		Location Markers :	Film Side

Radiographic Examination Result

Weld Reference (Welder No)	WT (mm)	RT (mm)	Pipe Diameter (mm)	Material Thickness (mm)	Film Position	Film Interpretation	Result	Remarks
JT - 168	7	3	73	4	X	Por	Accept	
					Y	NRI	Accept	
JT - 169	7	3	73	4	X	Por	Accept	
					Y	Por	Accept	
JT - 171	7	3	73	4	X	NRI	Accept	
					Y	NRI	Accept	

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Legend:

TI: Tungsten Inclusion	NRI: No Relevant Indication	Uc: Undercut	Por: Porosity	WT: Weld Thickness
SI: Slag Inclusion	LP: Lack of Penetration	Con: Concavity	BT: Burn Through	RT: Reinforcement Thickness
LF: Lack of Fusion	EP: Excess Penetration	AR: Artifact	Sur: Surface	

Personnel Particulars

Radiographer : Emirsham - NDT Lev. II

Interpreted & Evaluated By: Amat Hamidi - NDT Lev. II

Date: 07 April 2018



Client Representative:

Name:

Date:



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Radiographic Examination Result

Weld Reference (Welder No)	WT (mm)	RT (mm)	Pipe Diameter (mm)	Material Thickness (mm)	Film Position	Film Interpretation	Result	Remarks
JT - 172	7	3	73	4	X Y	NRI NRI	Accept Accept	
JT - 173	7	3	73	4	X Y	NRI NRI	Accept Accept	
JT - 151	7	3	73	4	X Y	NRI NRI	Accept Accept	
JT - 150	7	3	73	4	X Y	NRI NRI	Accept Accept	

End of Report





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RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Recron (M) Sdn Bhd	Procedure No:	NT/RT/ASME Rev. 7.0
Project :	HTM Piping	IQI type :	ASTM 1A
Material:	Carbon Steel	Film Manufacturer/Type :	FUJI 100(class II)
Welding Process :	GTAW	Density :	2.0 - 3.5
Examination Code :	ASME V	Sensitivity:	0.20mm(2 wires visible)
Acceptance Code:	ASME B31.3	Source to Object Distance :	400mm
Examination Date:	06 April 2018	Source Side of Object to Film Distance:	(73.0)mm
		No of Radiograph(exposure) :	Single Exposure
		No. of Film Each Cassette :	1 Film
		Radiographic Technique :	DWDI
		Film Viewing Technique :	Double Viewing
		Source Type/Size :	Iridium192 (3.2mm)
		Location Markers :	Film Side

Radiographic Examination Result

Weld Reference (Welder No)	WT (mm)	RT (mm)	Pipe Diameter (mm)	Material Thickness (mm)	Film Position	Film Interpretation	Result	Remarks
JT - 153	7	3	73	4	X	NRI	Accept	
					Y	NRI	Accept	
					Z	NRI	Accept	

End of Report

Legend:

Ti : Tungsten Inclusion	NRI : No Relevant Indication	Uc : Undercut	Por : Porosity	WT : Weld Thickness
SI : Slag Inclusion	LP : Lack of Penetration	Con : Concavily	BT : Burn Through	RT : Reinforcement Thickness
LF : Lack of Fusion	EP : Excess Penetration	AR : Artifact	Sur : Surface	

Personnel Particulars

Radiographer : Emirsham - NDT Lev. II

Interpreted & Evaluated By: Amat Hamidi - NDT Lev. II

Date: 07 April 2018



Client Representative:

Name:

Date:



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RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client : Recron (M) Sdn Bhd	Procedure No: NT/RT/ASME Rev. 7.0
Project : HTM Piping	IQI type : ASTM 1A
Material: Carbon Steel	Film Manufacturer/Type : FUJI 100(class II)
Welding Process : GTAW	Density : 2.0 - 3.5
Examination Code : ASME V	Sensitivity: 0.20mm(2 wires visible)
Acceptance Code: ASME B31.3	Source to Object Distance : 400mm
Examination Date: 06 April 2018	Source Side of Object to Film Distance: (73.0)mm
	No of Radiograph(exposure) : Single Exposure
	No. of Film Each Cassette : 1 Film
	Radiographic Technique : DWDI
	Film Viewing Technique : Double Viewing
	Source Type/Size : Iridium192 (3.2mm)
	Location Markers : Film Side

Radiographic Examination Result

Weld Reference (Welder No)	WT (mm)	RT (mm)	Pipe Diameter (mm)	Material Thickness (mm)	Film Position	Film Interpretation	Result	Remarks
JT - 149	7	3	73	4	X	NRI	Accept	
					Y	NRI	Accept	
					Z	NRI	Accept	

End of Report

Legend:

TI: Tungsten Inclusion	NRI: No Relevant Indication	Uc: Undercut	Por: Porosity	WT: Weld Thickness
SI: Slag Inclusion	LP: Lack of Penetration	Con: Concavity	BT: Burn Through	RT: Reinforcement Thickness
LF: Lack of Fusion	EP: Excess Penetration	AR: Artifact	Sur: Surface	

Personnel Particulars

Radiographer : Emirsham - NDT Lev. II

Interpreted & Evaluated By: Amat Hamidi - NDT Lev. II

Date: 07 April 2018



Client Representative:

Name:

Date:



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RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Recron (M) Sdn Bhd	Procedure No:	NT/RT/ASME Rev. 7.0
Project :	HTM Piping	IQI type :	ASTM 1A
Material:	Carbon Steel	Film Manufacturer/Type :	FUJI 100(class II)
Welding Process :	GTAW	Density :	2.0 - 3.5
Examination Code :	ASME V	Sensitivity:	0.20mm(2 wires visible)
Acceptance Code:	ASME B31.3	Source to Object Distance :	400mm
Examination Date:	06 April 2018	Source Side of Object to Film Distance:	(73.0)mm
		No of Radiograph(exposure) :	Single Exposure
		No. of Film Each Cassette :	1 Film
		Radiographic Technique :	DWDI
		Film Viewing Technique :	Double Viewing
		Source Type/Size :	Iridium192 (3.2mm)
		Location Markers :	Film Side

Radiographic Examination Result

Weld Reference (Welder No)	WT (mm)	RT (mm)	Pipe Diameter (mm)	Material Thickness (mm)	Film Position	Film Interpretation	Result	Remarks
JT - 157					X	NRI	Accept	
					Y	Por	Accept	
JT - 159					X	NRI	Accept	
					Y	NRI	Accept	
JT - 158					X	NRI	Accept	
					Y	NRI	Accept	

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Legend:

TI : Tungsten Inclusion	NRI : No Relevant Indication	Uc : Undercut	Por : Porosity	WT : Weld Thickness
SI : Slag Inclusion	LP : Lack of Penetration	Con : Concavity	BT : Burn Through	RT : Reinforcement Thickness
LF : Lack of Fusion	EP : Excess Penetration	AR : Artifact	Sur : Surface	

Personnel Particulars

Radiographer : Emirsham - NDT Lev. II
 Interpreted & Evaluated By: Amat Hamidi - NDT Lev. II
 Date: 07 April 2018



Client Representative:
 Name:
 Date:



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Radiographic Examination Result

Weld Reference (Welder No)	WT (mm)	RT (mm)	Pipe Diameter (mm)	Material Thickness (mm)	Film Position	Film Interpretation	Result	Remarks
JT - 160	7	3	73	4	X Y	NRI Por	Accept Accept	
JT - 163	7	3	73	4	X Y	NRI NRI	Accept Accept	
JT - 164	7	3	73	4	X Y	Sur Por	Accept Accept	
JT - 166	7	3	73	4	X Y	NRI NRI	Accept Accept	

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RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Recron (M) Sdn Bhd	Procedure No:	NT/RT/ASME Rev. 7.0
Project :	HTM Piping	IQI type :	ASTM 1B
Material:	Carbon Steel	Film Manufacturer/Type :	FUJI 100(class II)
Welding Process :	GTAW	Density :	2.0 - 3.5
Examination Code :	ASME V	Sensitivity:	0.33mm(5 wires visible)
Acceptance Code:	ASME B31.3	Source to Object Distance :	139.7mm
Examination Date:	06 April 2018	Source Side of Object to Film Distance:	(17.5+3)mm
		No of Radiograph(exposure) :	Single Exposure
		No. of Film Each Cassette :	1 Film
		Radiographic Technique :	DWSI
		Film Viewing Technique :	Single Viewing
		Source Type/Size :	Iridium192 (3.2mm)
		Location Markers :	Film Side

Radiographic Examination Result

Weld Reference (Welder No)	WT (mm)	RT (mm)	Pipe Diameter (mm)	Material Thickness (mm)	Film Position	Film Interpretation	Result	Remarks
Booster Pump								
JT - 3	20.5	3	139.7	17.5	0 - 1	NRI	Accept	
					1 - 2	NRI	Accept	
					2 - 3	NRI	Accept	
					3 - 0	LP	Accept	

End of Report

Legend:

Ti : Tungsten Inclusion	NRI: No Relevant Indication	Uc: Undercut	Por: Porosity	WT: Weld Thickness
SI: Slag Inclusion	LP: Lack of Penetration	Con: Concavity	BT: Burn Through	RT: Reinforcement Thickness
LF: Lack of Fusion	EP: Excess Penetration	AR: Artifact	Sur: Surface	

Personnel Particulars

Radiographer : Emirsham - NDT Lev. II

Client Representative:

Interpreted & Evaluated By: Amat Hamidi - NDT Lev. II

Name:

Date: 07 April 2018

Date:





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Report No: T NDT/RT/180340-02/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Recron (M) Sdn Bhd	Procedure No:	NT/RT/ASME Rev. 7.0
Project :	HTM Piping	IQI type :	ASTM 1B
Material:	Carbon Steel	Film Manufacturer/Type :	FUJI 100(class II)
Welding Process :	GTAW	Density :	2.0 - 3.5
Examination Code :	ASME V	Sensitivity:	0.33mm(5 wires visible)
Acceptance Code:	ASME B31.3	Source to Object Distance :	139.7mm
Examination Date:	06 April 2018	Source Side of Object to Film Distance:	(17.5+3)mm
		No of Radiograph(exposure) :	Single Exposure
		No. of Film Each Cassette :	1 Film
		Radiographic Technique :	DWSI
		Film Viewing Technique :	Single Viewing
		Source Type/Size :	Iridium192 (3.2mm)
		Location Markers :	Film Side

Radiographic Examination Result

Weld Reference (Welder No)	WT (mm)	RT (mm)	Pipe Diameter (mm)	Material Thickness (mm)	Film Position	Film Interpretation	Result	Remarks
Booster Pump								
JT - 2	20.5	3	139.7	17.5	0 - 1	NRI	Accept	
					1 - 2	NRI	Accept	
					2 - 3	NRI	Accept	
					3 - 0	NRI	Accept	

End of Report

Legend:

TI: Tungsten Inclusion	NRI: No Relevant Indication	Uc: Undercut	Por: Porosity	WT: Weld Thickness
SI: Slag Inclusion	LP: Lack of Penetration	Con: Concavity	BT: Burn Through	RT: Reinforcement Thickness
LF: Lack of Fusion	EP: Excess Penetration	AR: Artifact	Sur: Surface	

Personnel Particulars

Radiographer : Emirsham - NDT Lev. II

Client Representative:

Interpreted & Evaluated By: Amat Hamidi - NDT Lev. II

Date: 07 April 2018

Name:

Date:





Our Ref. : NT/103452/18-07

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RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Recron (M) Sdn Bhd	Procedure No:	NT/RT/ASME Rev. 7.0
Project :	HTM Piping	IQI type :	ASTM 1B
Material:	Carbon Steel	Film Manufacturer/Type :	FUJI 100(class II)
Welding Process :	GTAW	Density :	2.0 - 3.5
Examination Code :	ASME V	Sensitivity:	0.33mm(5 wires visible)
Acceptance Code:	ASME B31.3	Source to Object Distance :	139.7mm
Examination Date:	06 April 2018	Source Side of Object to Film Distance:	(17.5+3)mm
		No of Radiograph(exposure) :	Single Exposure
		No. of Film Each Cassette :	1 Film
		Radiographic Technique :	DWSI
		Film Viewing Technique :	Single Viewing
		Source Type/Size :	Iridium192 (3.2mm)
		Location Markers :	Film Side

Radiographic Examination Result

Weld Reference (Welder No)	WT	RT	Pipe Diameter	Material Thickness	Film Position	Film Interpretation	Result	Remarks
	(mm)	(mm)	(mm)	(mm)				
Booster Pump								
JT - 1	20.5	3	139.7	17.5	0 - 1	Sur	Accept	
					1 - 2	NRI	Accept	
					2 - 3	NRI	Accept	
					3 - 0	Sur	Accept	

_____ End of Report _____

Legend:

TI : Tungsten Inclusion	NRI : No Relevant Indication	Uo : Undercut	Por : Porosity	WT : Weld Thickness
SI : Slag Inclusion	LP : Lack of Penetration	Con : Concavity	BT : Burn Through	RT : Reinforcement Thickness
LF : Lack of Fusion	EP : Excess Penetration	AR : Artifact	Sur : Surface	

Personnel Particulars

Radiographer : Emirsham - NDT Lev. II

Interpreted & Evaluated By: Amat Hamidi - NDT Lev. II

Date: 07 April 2018



Client Representative:

Name:

Date: