



NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D)

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

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Our Ref.: NT/103605/18-10

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Report No: I NDT/RT/180484-01/18

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 :	219.1mm
Examination Date:	27 April 2018	Source Side of Object to Film Distance:	(7+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
JT 112 R2	10	3	219.1	7	1-2	Sur	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: 28 April 2018



Client Representative:

Name:
Date:



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Our Ref.: NT/103605/18-10

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Report No: I NDT/RT/180484-02/18

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 :	114.3mm
Examination Date:	27 April 2018	Source Side of Object to Film Distance:	(7+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
JT 214 R2	10	3	114.3	7	0 - 1	Por	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: 28 April 2018

Date:





Our Ref. : NT/103605/18-10

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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 :	114.3mm
Examination Date:	27 April 2018	Source Side of Object to Film Distance:	(7+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
JT 215 R2	10	3	114.3	7	1-2 LF		Reject	

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: 28 April 2018



Client Representative:
 Name:
 Date:



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Report No: I NDT/RT/180484-04/18

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 :	141.3mm
Examination Date:	27 April 2018	Source Side of Object to Film Distance:	(7+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
JT 17 R2	10	3	141.3	7	1-2	Por	Accept	
JT 128 R2	10	3	141.3	7	1-2	NRI	Accept	
JT 99 R2	10	3	141.3	7	1-2	NRI	Accept	
JT 84 R2	10	3	141.3	7	2-0	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

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

Date: 28 April 2018



Client Representative:

Name:
Date:



NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D)

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Report No: I NDT/RT/180484-06/18

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 :	141.3mm
Examination Date:	27 April 2018	Source Side of Object to Film Distance:	(7+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
JT 35 R2	10	3	141.3	7	0 - 1	NRI	Accept	
					2 - 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: 28 April 2018



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 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 :	141.3mm
Examination Date:	27 April 2018	Source Side of Object to Film Distance:	(7+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
JT 269 R2	10	3	141.3	7	0 - 1	Inc	Reject	
					1 - 2	Inc	Reject	
					2 - 0	Inc	Reject	

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: Amal Hamidi - NDT Lev.II

Date: 28 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:	27 April 2018	Source Side of Object to Film Distance:	(73)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 290 R2	7	3	73	4	X Y	NRI Por	Accept Accept	
JT 196 R2	7	3	73	4	X Y	Por NRI	Accept 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: 28 April 2018



Client Representative:

Name:

Date:



Our Ref.: NT/103605/18-10

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 Report No: I NDT/RT/180484-10/18

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:	27 April 2018	Source Side of Object to Film Distance:	(73)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	RT	Pipe Diameter	Material Thickness	Film Position	Film Interpretation	Result	Remarks
	(mm)	(mm)	(mm)	(mm)				
JT 295 R2	7	3	73	4	X	Con	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: 28 April 2018



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:	27 April 2018	Source Side of Object to Film Distance:	(73)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 294 R2	7	3	73	4	X	Por	Accept	
					Y	Por	Accept	
JT 296 R2	7	3	73	4	X	Uc	Accept	
					Y	Uc	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: 28 April 2018



Client Representative:

Name:
Date:



Our Ref.: NT/103605/18-10

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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 :	141.3mm
Examination Date:	27 April 2018	Source Side of Object to Film Distance:	(7+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
JT 94 R2	10	3	141.3	7	1-2	LF	Reject	
JT 39 R2	10	3	141.3	7	0-1	Sur		Visual

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: 28 April 2018



Client Representative:

Name:
 Date: