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/103508/18-15

Report No: BFTT/RT-62/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	508mm
		Source Side of Object to Film Distance:	(16+3)mm
Welding Process :	GTAW / SMAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	SWSI
		Film Viewing Technique :	Single Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902A APWHT								
M2 - JT1 (WN090/078)	19	3	508	16	0 - 1	NRI	Accept	
					1 - 2	NRI	Accept	
					2 - 3	NRI	Accept	
					3 - 4	NRI	Accept	
					4 - 5	NRI	Accept	
					5 - 6	NRI	Accept	
					6 - 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: 14 April 2018

NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division

Client Representative:

Name:

Date:

NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D)
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Tel: 03-5122 9766/7/8 Fax: 03-5122 8766/7 E-mail: info@nusatek.com

Our Ref. : NT/103508/18-15

Report No: BFTT/RT-63/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	508mm
		Source Side of Object to Film Distance:	(16+3)mm
Welding Process :	GTAW / SMAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	SWSI
		Film Viewing Technique :	Single Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902A APWHT								
M9 - JT1 (WN090/078)	19	3	508	16	0 - 1	NRI	Accept	
					1 - 2	Por	Accept	
					2 - 3	NRI	Accept	
					3 - 4	NRI	Accept	
					4 - 5	NRI	Accept	
					5 - 6	NRI	Accept	
					6 - 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	Name:	
Date:	14 April 2018	Date:	

NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division

NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D)
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Our Ref. : NT/103508/18-15

Report No: BFTT/RT-64/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	508mm
		Source Side of Object to Film Distance:	(16+3)mm
Welding Process :	GTAW / SMAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	SWSI
		Film Viewing Technique :	Single Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902B APWHT								
M9 - JT1 (WN007/216)	19	3	508	16	0 - 1	NRI	Accept	
					1 - 2	NRI	Accept	
					2 - 3	NRI	Accept	
					3 - 4	NRI	Accept	
					4 - 5	Por	Accept	
					5 - 6	NRI	Accept	
					6 - 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: 14 April 2018

NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division

Client Representative:

Name:

Date:

NUSATEK

NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D)
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Our Ref. : NT/103508/18-15

Report No: BFTT/RT-64/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	508mm
		Source Side of Object to Film Distance:	(16+3)mm
Welding Process :	GTAW / SMAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	SWSI
		Film Viewing Technique :	Single Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902B APWHT								
M9 - JT1 (WN007/216)	19	3	508	16	0 - 1	NRI	Accept	
					1 - 2	NRI	Accept	
					2 - 3	NRI	Accept	
					3 - 4	NRI	Accept	
					4 - 5	Por	Accept	
					5 - 6	NRI	Accept	
					6 - 0	NRI	Accept	

End Of Report

Legend:

TI : Tungsten Inclusion	*NRI : No Relevant Indication*	*Uc : Undercut*	*Por : Porosity*	*WT : Weld Thickness*
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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:	14 April 2018	Date:	

NUSANTARA TECHNOLOGIES SDN. BHD. NDT Division (187753-D)

NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D)
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Our Ref. : NT/103508/18-15

Report No: BFTT/RT-65/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	508mm
		Source Side of Object to Film Distance:	(16+3)mm
Welding Process :	GTAW / SMAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	SWSI
		Film Viewing Technique :	Single Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902B APWHT								
M2 - JT1 (WN007/216)	19	3	508	16	0 - 1	Por	Accept	
					1 - 2	NRI	Accept	
					2 - 3	NRI	Accept	
					3 - 4	NRI	Accept	
					4 - 5	Por	Accept	
					5 - 6	NRI	Accept	
					6 - 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	Name:	
Date:	14 April 2018	Date:	

NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division

NUSATEK

NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D)
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Our Ref. : NT/103508/18-15

Report No: BFTT/RT-66/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	219.1mm
		Source Side of Object to Film Distance:	(12.7+3)mm
Welding Process :	GTAW / SMAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	DWSI
		Film Viewing Technique :	Single Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902B APWHT								
N3 - JT1 (WN007/216)	15.7	3	219.1	12.7	0 - 1	NRI	Accept	
					1 - 2	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	Name:	
Date:	14 April 2018	Date:	

NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division

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/103508/18-15

Report No: BFTT/RT-67/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	219.1mm
		Source Side of Object to Film Distance:	(12.7+3)mm
Welding Process :	GTAW / SMAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	DWSI
		Film Viewing Technique :	Single Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902B APWHT								
N6 - JT1 (WN007/216)	15.7	3	219.1	12.7	0 - 1	NRI	Accept	
					1 - 2	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	Name:	
Date:	14 April 2018	Date:	

NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division

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/103508/18-15

Report No: BFTT/RT-68/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	219.1mm
		Source Side of Object to Film Distance:	(12.7+3)mm
Welding Process :	GTAW / SMAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	DWSI
		Film Viewing Technique :	Single Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902A APWHT								
N3 - JT1 (WN090/078)	15.7	3	219.1	12.7	0 - 1	NRI	Accept	
					1 - 2	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: 14 April 2018

NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division

Name:
Date:

NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D)
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Tel: 03-5122 9766/7/8 Fax: 03-5122 8766/7 E-mail: info@nusatek.com

Our Ref. : NT/103508/18-15

Report No: BFTT/RT-69/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	219.1mm
		Source Side of Object to Film Distance:	(12.7+3)mm
Welding Process :	GTAW / SMAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	DWSI
		Film Viewing Technique :	Single Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902A APWHT								
N6 - JT1 (WN090/078)	15.7	3	219.1	12.7	0 - 1	NRI	Accept	
					1 - 2	NRI	Accept	
					2 - 0	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:	14 April 2018	Date:	

NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D) NDT Division

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/103508/18-15

Report No: BFTT/RT-70/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	168.3mm
		Source Side of Object to Film Distance:	(10.97+3)mm
Welding Process :	GTAW / SMAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	DWSI
		Film Viewing Technique :	Single Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902B APWHT								
N8 - JT1 (WN007/216)	13.97	3	168.3	10.97	0 - 1	Por	Accept	
					1 - 2	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	NUSANTARA TECHNOLOGIES SDN. BHD. NDT Division (187753-D)	Name:
Date:	14 April 2018		Date:

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/103508/18-15

Report No: BFTT/RT-71/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	168.3mm
		Source Side of Object to Film Distance:	(10.97+3)mm
Welding Process :	GTAW / SMAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	DWSI
		Film Viewing Technique :	Single Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902B APWHT								
N7 - JT1 (WN007/216)	13.97	3	168.3	10.97	0 - 1	NRI	Accept	
					1 - 2	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

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

Date: 14 April 2018

NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division

Client Representative:

Name:

Date:

NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D)
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Our Ref. : NT/103508/18-15

Report No: BFTT/RT-72/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	400mm
		Source Side of Object to Film Distance:	(48.3)mm
Welding Process :	GTAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	DWDI
		Film Viewing Technique :	Double Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902B APWHT								
N1a - JT1 (WN007)	10.14	3	48.3	7.14	X	NRI	Accept	
					Y	NRI	Accept	
N1b - JT1 (WN007)	10.14	3	48.3	7.14	X	NRI	Accept	
					Y	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

Name:

Date: 14 April 2018

Date:

NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division

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Our Ref. : NT/103508/18-15

Report No: BFTT/RT-73/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd	Film Manufacturer/Type :	FUJI 100/class II
	Fabrication Of Moisture And Alcohol Removal.	Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	400mm
		Source Side of Object to Film Distance:	(48.3)mm
Welding Process :	GTAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	DWDI
		Film Viewing Technique :	Double Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902B APWHT								
N1c - JT1 (WN007)	10.14	3	48.3	7.14	X	NRI	Accept	
					Y	NRI	Accept	
N1d - JT1 (WN007)	10.14	3	48.3	7.14	X	NRI	Accept	
					Y	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: 14 April 2018

NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division

Name:
Date:

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/103508/18-15

Report No: BFTT/RT-74/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd	Film Manufacturer/Type :	FUJI 100/class II
	Fabrication Of Moisture And Alcohol Removal.	Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	400mm
		Source Side of Object to Film Distance:	(48.3)mm
Welding Process :	GTAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	DWDI
		Film Viewing Technique :	Double Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902B APWHT								
N1e - JT1 (WN007)	10.14	3	48.3	7.14	X	NRI	Accept	
					Y	NRI	Accept	
N1f - JT1 (WN007)	10.14	3	48.3	7.14	X	NRI	Accept	
					Y	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: 14 April 2018

NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D) NDT Division

Name:

Date:

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Our Ref. : NT/103508/18-15

Report No: BFTT/RT-75/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd	Film Manufacturer/Type :	FUJI 100/class II
	Fabrication Of Moisture And Alcohol Removal.	Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	400mm
		Source Side of Object to Film Distance:	(48.3)mm
Welding Process :	GTAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	DWDI
		Film Viewing Technique :	Double Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902B APWHT								
N5a - JT1 (WN007)	10.14	3	48.3	7.14	X	NRI	Accept	
					Y	NRI	Accept	
N5b - JT1 (WN007)	10.14	3	48.3	7.14	X	NRI	Accept	
					Y	NRI	Accept	
N5c - JT1 (WN007)	10.14	3	48.3	7.14	X	NRI	Accept	
					Y	NRI	Accept	

End Of Report

Legend:

TI : Tungsten Inclusion	*NRI : No Relevant Indication*	*Ug : 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: 14 April 2018

NUSANTARA TECHNOLOGIES SDN. BHD. NDT Division (187753-D)

Client Representative:

Name:

Date:

NUSATEK

NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D)
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Our Ref. : NT/103508/18-15

Report No: BFTT/RT-76/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Bukit Fraser Thermal Technology Sdn Bhd	Procedure No:	NT/RT/ASME Rev 6.0
		IQI type :	ASTM 1B
Project :	Petronas Chemicals Polyethylene Sdn Bhd Fabrication Of Moisture And Alcohol Removal.	Film Manufacturer/Type :	FUJI 100/class II
		Density :	2.0 - 4.0
Job No:	BFTT 17-634	Sensitivity:	0.33mm(5 wires visible)
Material:	SA 105N	Source to Object Distance :	400mm
		Source Side of Object to Film Distance:	(21.3)mm
Welding Process :	GTAW	No of Radiograph(exposure) :	Single Exposure
Examination Code :	ASME V	No. of Film Each Cassette :	1 Film
Acceptance Code:	ASME Sec VIII Div.2 2015 Ed.	Radiographic Technique :	DWDI
		Film Viewing Technique :	Double Wall Viewing
Examination Date:	13 April 2018	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
PE-0-D-902B APWHT								
N4a - JT1 (WN009)	10.47	3	21.3	7.47	X	NRI	Accept	
					Y	NRI	Accept	
					Z	NRI	Accept	
N4b - JT1 (WN009)	10.47	3	21.3	7.47	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

Client Representative:

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

Name:

Date: 14 April 2018

Date:

NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division