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/103382/18-07

Report No: BFTT/RT-44/18

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 516 GR 70N	Source to Object Distance :	1000mm
		Source Side of Object to Film Distance:	(31.80+3)mm
Welding Process :	GTAW / SMAW / SAW	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:	04 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								
CS - 4 RS (WN090/078)	34.8	3	2000	31.8	3 - 4	NRI	Accept	AR

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: 05 April 2018

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

Client Representative:

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

Our Ref. : NT/103382/18-07

Report No: BFTT/RT-46/18

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 516 GR 70N	Source to Object Distance :	1000mm
		Source Side of Object to Film Distance:	(31.80+3)mm
Welding Process :	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:	04 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								
CS - 4 R1 (WN216)	34.8	3	2000	31.8	11 - 12	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: 05 April 2018

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

Client Representative:

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

Our Ref. : NT/103382/18-07

Report No: BFTT/RT-45/18

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 516 GR 70N	Source to Object Distance :	1000mm
		Source Side of Object to Film Distance:	(31.80+3)mm
Welding Process :	GTAW / SMAW / SAW	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:	04 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								
CS - 4 RS	34.8	3	2000	31.8	5 - 6	NRI	Accept	AR
(WN007/216)					7 - 8	NRI	Accept	AR
					19 - 20	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

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

Date: 05 April 2018

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

Client Representative:

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

Our Ref. : NT/103382/18-07

Report No: BFTT/RT-47/18

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 516 GR 70N	Source to Object Distance :	400mm
		Source Side of Object to Film Distance:	(31.80+3)mm
Welding Process :	SMAW / SAW	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:	04 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								
PTP - LS1 (WN216)	34.8	3	–	31.8	0 - 1	NRI	Accept	
					1 - 2	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:	05 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/103382/18-07

Report No: BFTT/RT-48/18

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 516 GR 70N	Source to Object Distance :	400mm
		Source Side of Object to Film Distance:	(31.80+3)mm
Welding Process :	GTAW / SMAW / SAW	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:	04 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								
PTP - CS4 (WN007/216)	34.8	3	–	31.8	0 - 1	NRI	Accept	
					1 - 2	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: 05 April 2018

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

Client Representative:

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

Our Ref. : NT/103382/18-07

Report No: BFTT/RT-49/18

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 516 GR 70N	Source to Object Distance :	400mm
		Source Side of Object to Film Distance:	(31.80+3)mm
Welding Process :	SMAW / SAW	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:	04 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								
PTP - LS1 (WN216)	34.8	3	–	31.8	0 - 1	NRI	Accept	
					1 - 2	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: 05 April 2018

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

Client Representative:

Name:

Date:

NUSATEK

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/103382/18-07

Report No: BFTT/RT-50/18

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 516 GR 70N	Source to Object Distance :	400mm
		Source Side of Object to Film Distance:	(31.80+3)mm
Welding Process :	GTAW / SMAW / SAW	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:	04 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								
PTP - CS4 (WN090/078)	34.8	3	–	31.8	0 - 1	NRI	Accept	
					1 - 2	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:	05 April 2018	Date:	

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