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/103753/18-01

Report No: NDT/RT/180592-01/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Vestech Engineering Sdn.Bhd.	Procedure No:	NT/RT/ASME Rev 7.0
Project :	Sublimator 8191C1 (Saminc 3)	IQI type :	ASTM 1B
		Film Manufacturer/Type :	FUJI 50(class I)
		Density :	2.0 - 4.0
Material:	SA 516 Gr 70	Sensitivity:	0.33mm(5 wires visible)
		Source to Object Distance :	400mm
Welding Process :	SMAW	Source Side of Object to Film Distance:	(16+3)mm
Examination Code :	ASME V	No of Radiograph(exposure) :	Single Exposure
Acceptance Code:	ASME Sect VIII Div.1 ; 2017 Ed.	No. of Film Each Cassette :	1 Film
		Radiographic Technique :	SWSI
Examination Date:	12 May 2018	Film Viewing Technique :	Single Wall 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
J516048								
CS-1 WN-P2	19	3	60.3	16	0 - 1	NSD	Accept	
					1 - 2	NSD	Accept	
					2 - 3	NSD	Accept	
					3 - 4	Por	Accept	
					4 - 5	Por	Accept	
					5 - 6	Por	Accept	
					6 - 7	NSD	Accept	
					7 - 8	NSD	Accept	
					8 - 9	Por	Accept	
					9 - 10	NSD	Accept	
					10 - 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:	M.Nazib - ASNT Level II	Name:	
Date:	13 May 2018	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/103737/18-04

Report No: NDT/RT/180598-02/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Vanco Engineering Sdn.Bhd.	Procedure No:	NT/RT/ASME Rev. 7.0
Project :	Fan Blade	IQI type :	ASTM 1B
Material:	Carbon Steel	Film Manufacturer/Type :	FUJI 100(class II)
Welding Process :	Various	Density :	2.0 - 3.5
Examination Code :	ASME V	Sensitivity:	0.33mm(5 wires visible)
Acceptance Code:	ASTM E446	Source to Object Distance :	400mm
Examination Date:	24 May 2018	Source Side of Object to Film Distance:	Various
		No of Radiograph(exposure) :	Single Exposure
		No. of Film Each Cassette :	1 Film
		Radiographic Technique :	SWSI
		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
Blade Fan 5	–	–	–	–	0 - 1	NRI	Accept	
					1 - 2	NRI	Accept	
Blade Fan 7	–	–	–	–	0 - 1	Por	Accept	
					1 - 2	NRI	Accept	
Blade Fan 8	–	–	–	–	0 - 1	Por	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	NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division	Name:
Date:	25 May 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/103737/18-04

Report No: NDT/RT/180598-01/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Vanco Engineering Sdn.Bhd.
Project :	Fan Blade
Material:	Carbon Steel
Welding Process :	Various
Examination Code :	ASME V
Acceptance Code:	ASTM E446
Examination Date:	24 May 2018

Procedure No:	NT/RT/ASME Rev. 7.0
IQI type :	ASTM 1B
Film Manufacturer/Type :	FUJI 100(class II)
Density :	2.0 - 3.5
Sensitivity:	0.33mm(5 wires visible)
Source to Object Distance :	400mm
Source Side of Object to Film Distance:	Various
No of Radiograph(exposure) :	Single Exposure
No. of Film Each Cassette :	1 Film
Radiographic Technique :	SWSI
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
Blade Fan 2	–	–	–	–	0 - 1	NRI	Accept	
					1 - 2	Por	Accept	
Blade Fan 3	–	–	–	–	0 - 1	NRI	Accept	AR
					1 - 2	NRI	Accept	
Blade Fan 4	–	–	–	–	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: 25 May 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/103737/18-04

Report No: NDT/RT/180598-04/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Vanco Engineering Sdn.Bhd.	Procedure No:	NT/RT/ASME Rev. 7.0
Project :	Fan Blade	IQI type :	ASTM 1B
Material:	Carbon Steel	Film Manufacturer/Type :	FUJI 100(class II)
Welding Process :	Various	Density :	2.0 - 3.5
Examination Code :	ASME V	Sensitivity:	0.33mm(5 wires visible)
Acceptance Code:	ASTM E446	Source to Object Distance :	400mm
Examination Date:	24 May 2018	Source Side of Object to Film Distance:	Various
		No of Radiograph(exposure) :	Single Exposure
		No. of Film Each Cassette :	1 Film
		Radiographic Technique :	SWSI
		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
Blade Fan 1	–	–	–	–	0 - 1	Inc	Reject	
					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	NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D) NDT Division	Name:
Date:	25 May 2018		Date:

NUSANTARA TECHNOLOGIES SDN. BHD. (187753-D)
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Our Ref. : NT/103737/18-04

Report No: NDT/RT/180598-03/18

RADIOGRAPHIC EXAMINATION REPORT

Client and Testing Particulars

Client :	Vanco Engineering Sdn.Bhd.	Procedure No:	NT/RT/ASME Rev. 7.0
Project :	Fan Blade	IQI type :	ASTM 1B
Material:	Carbon Steel	Film Manufacturer/Type :	FUJI 100(class II)
Welding Process :	Various	Density :	2.0 - 3.5
Examination Code :	ASME V	Sensitivity:	0.33mm(5 wires visible)
Acceptance Code:	ASTM E446	Source to Object Distance :	400mm
Examination Date:	24 May 2018	Source Side of Object to Film Distance:	Various
		No of Radiograph(exposure) :	Single Exposure
		No. of Film Each Cassette :	1 Film
		Radiographic Technique :	SWSI
		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
Blade Fan 6	–	–	–	–	0 - 1	NRI	Accept	
					1 - 2	LF / Por		Repair

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. * (187753-D) * NDT Division	
Date:	25 May 2018		Name: Date: