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/103636/18-12


Report No: NDT/RT/180509-01/18

# RADIOGRAPHIC EXAMINATION REPORT

## Client and Testing Particulars

| | |
|---|---|
| Client : | Recron (M) Sdn Bhd |
| Project : | HTM Piping |
| Material: | Carbon Steel |
| Welding Process : | GTAW |
| Examination Code : | ASME V |
| Acceptance Code: | ASME B31.3 |
| Examination Date: | 03 May 2018 |

| | |
|---|---|
| Procedure No: | NT/RT/ASME Rev. 7.0 |
| IQI type : | ASTM 1A |
| Film Manufacturer/Type : | FUJI 100(class II) |
| Density : | 2.0 - 3.5 |
| Sensitivity: | 0.20mm(2 wires visible) |
| Source to Object Distance : | 400mm |
| 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 257 | 7 | 3 | 73 | 4 | X | NRI | Accept | |
| | | | | | Y | NRI | Accept | |
| | | | | | Z | NRI | Accept | |
| JT 252 R1 | 7 | 3 | 73 | 4 | X | Por | 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: 04 May 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/103636/18-12


Report No: NDT/RT/180509-02/18

# 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 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: | 03 May 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 297 R1 | 7 | 3 | 73 | 4 | X | Por | Reject | |
| | | | | | Z | Por | 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 | | Client Representative: |
| Interpreted & Evaluated By: | Amat Hamidi - NDT Lev.II | NUSANTARA TECHNOLOGIES SDN. BHD. * (187753-D) * NDT Division | Name: |
| Date: | 04 May 2018 | | Date: |

NUSATEK

**NUSANTARA TECHNOLOGIES SDN. BHD.** (187753-D)
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Our Ref. : NT/103636/18-12


Report No: NDT/RT/180509-03/18

# RADIOGRAPHIC EXAMINATION REPORT

## Client and Testing Particulars

| | |
|---|---|
| Client : | Recron (M) Sdn Bhd |
| Project : | HTM Piping |
| Material: | Carbon Steel |
| Welding Process : | GTAW |
| Examination Code : | ASME V |
| Acceptance Code: | ASME B31.3 |
| Examination Date: | 03 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 : | 114.3mm |
| 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 254 R1 | 10 | 3 | 114.3 | 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 | | Client Representative: |
| Interpreted & Evaluated By: | Amat Hamidi - NDT Lev.II | | Name: |
| Date: | 04 May 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/103636/18-12


Report No: NDT/RT/180509-04/18

# 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 : | 114.3mm |
| Examination Date: | 03 May 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 275 R1 | 10 | 3 | 114.3 | 7 | 0 - 1 | LF | Reject | |
| | | | | | 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: 04 May 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/103636/18-12


Report No: NDT/RT/180509-05/18

# RADIOGRAPHIC EXAMINATION REPORT

## Client and Testing Particulars

| | |
|---|---|
| Client : | Recron (M) Sdn Bhd |
| Project : | HTM Piping |
| Material: | Carbon Steel |
| Welding Process : | GTAW |
| Examination Code : | ASME V |
| Acceptance Code: | ASME B31.3 |
| Examination Date: | 03 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 : | 114.3mm |
| 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 279 | 10 | 3 | 114.3 | 7 | 0 - 1 | Por | Reject | |
| | | | | | 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: 04 May 2018

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

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

Our Ref. : NT/103636/18-12


Report No: NDT/RT/180509-06/18

# RADIOGRAPHIC EXAMINATION REPORT

## Client and Testing Particulars

| | |
|---|---|
| Client : | Recron (M) Sdn Bhd |
| Project : | HTM Piping |
| Material: | Carbon Steel |
| Welding Process : | GTAW |
| Examination Code : | ASME V |
| Acceptance Code: | ASME B31.3 |
| Examination Date: | 03 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 : | 114.3mm |
| 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 281 | 10 | 3 | 114.3 | 7 | 0 - 1 | NRI | Accept | |
| | | | | | 1 - 2 | Por | Reject | |
| | | | | | 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 |
| Interpreted & Evaluated By: | Amat Hamidi - NDT Lev.II |
| Date: | 04 May 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/103636/18-12


Report No: I NDT/RT/180509-07/18

# RADIOGRAPHIC EXAMINATION REPORT

## Client and Testing Particulars

| | |
|---|---|
| Client : | Recron (M) Sdn Bhd |
| Project : | HTM Piping |
| Material: | Carbon Steel |
| Welding Process : | GTAW |
| Examination Code : | ASME V |
| Acceptance Code: | ASME B31.3 |
| Examination Date: | 03 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 : | 114.3mm |
| 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 276 R1 | 10 | 3 | 114.3 | 7 | 1 - 2 | Inc | Reject | |
| JT 253 R1 | 10 | 3 | 114.3 | 7 | 2 - 0 | Por | 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: 04 May 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.
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Our Ref. : NT/103636/18-12


Report No: NDT/RT/180509-08/18

# 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: | 03 May 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 21 R1 | 10 | 3 | 141.3 | 7 | 2 - 0 | NRI | Accept | |
| JT 280 R1 | 10 | 3 | 141.3 | 7 | 2 - 0 | NRI | Accept | |
| JT 65 R1 | 10 | 3 | 141.3 | 7 | 1 - 2 | Sur | Accept | |
| JT 94 R1 | 10 | 3 | 141.3 | 7 | 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: 04 May 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/103636/18-12


Report No: NDT/RT/180509-09/18

# 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: | 03 May 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 268 R1 | 10 | 3 | 141.3 | 7 | 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

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

Date: 04 May 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/103636/18-12


Report No: NDT/RT/180509-12/18

# RADIOGRAPHIC EXAMINATION REPORT

## Client and Testing Particulars

| | |
|---|---|
| Client : | Recron (M) Sdn Bhd |
| Project : | HTM Piping |
| Material: | Carbon Steel |
| Welding Process : | GTAW |
| Examination Code : | ASME V |
| Acceptance Code: | ASME B31.3 |
| Examination Date: | 03 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 : | 141.3mm |
| 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 288 R1 | 10 | 3 | 141.3 | 7 | 0 - 1 | NRI | Accept | |
| | | | | | 1 - 2 | Por / Inc | Reject | |
| | | | | | 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: 04 May 2018

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

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/103636/18-12


Report No: NDT/RT/180509-11/18

# RADIOGRAPHIC EXAMINATION REPORT

## Client and Testing Particulars

| | |
|---|---|
| Client : | Recron (M) Sdn Bhd |
| Project : | HTM Piping |
| Material: | Carbon Steel |
| Welding Process : | GTAW |
| Examination Code : | ASME V |
| Acceptance Code: | ASME B31.3 |
| Examination Date: | 03 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 : | 141.3mm |
| 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 20 | 10 | 3 | 141.3 | 7 | 0 - 1 | NRI | Accept | |
| | | | | | 1 - 2 | Por | Reject | |
| | | | | | 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: 04 May 2018

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

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/103636/18-12


Report No: NDT/RT/180509-10/18

# 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 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: | 03 May 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 R1 | 10 | 3 | 141.3 | 7 | 0 - 1 | NRI | Accept | |
| | | | | | 1 - 2 | NRI | Accept | |
| | | | | | 2 - 0 | 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: 04 May 2018

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

Client Representative:

Name:

Date: