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/103637/18-05


Report No: NDT/RT/180510-01/18

# RADIOGRAPHIC EXAMINATION REPORT

## Client and Testing Particulars

| | | | |
|---|---|---|---|
| Client : | PMI-Technology Sdn Bhd | Procedure No: | NT/RT/ASME Rev 7.0 |
| | | IQI type : | ASTM 1B |
| Project : | Neste Singapore | Film Manufacturer/Type : | FUJI 50(class I) |
| | | Density : | 2.0 - 3.5 |
| Material: | SA 240 304 | Sensitivity: | 0.33mm(5 wires visible) |
| | | Source to Object Distance : | 400mm |
| | | Source Side of Object to Film Distance: | (6+3)mm |
| Welding Process : | FCAW | No of Radiograph(exposure) : | Single Exposure |
| Examination Code : | ASME V | No. of Film Each Cassette : | 1 Film |
| Acceptance Code: | ASME Sect VIII Div 1 , 2017 Edition | Radiographic Technique : | SWSI |
| | | Film Viewing Technique : | Single Wall Viewing |
| Examination Date: | 03 May 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 |
|---|---|---|---|---|---|---|---|---|
| W/O:11484 RP(W) Item:10FD-17A | | | | | | | | |
| LW1/CW3 (W005) | 9 | 3 | – | 6 | 0 - 1 | NRI | Accept | |
| CW4/LW3 (W005) | 9 | 3 | – | 6 | 0 - 1 | NRI | Accept | |

End of Report

*Legend:*

| | | | | |
|---|---|---|---|---|
| TI : Tungsten Inclusion | NRI : No Relevant Indication | UN : 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: M.Nazib - 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/103637/18-05


Report No: NDT/RT/180510-02/18

# RADIOGRAPHIC EXAMINATION REPORT

## Client and Testing Particulars

| | | | |
|---|---|---|---|
| Client : | PMI-Technology Sdn Bhd | Procedure No: | NT/RT/ASME Rev 7.0 |
| | | IQI type : | ASTM 1B |
| Project : | Neste Singapore | Film Manufacturer/Type : | FUJI 50(class I) |
| | | Density : | 2.0 - 3.5 |
| Material: | SA 240 304 | Sensitivity: | 0.33mm(5 wires visible) |
| | | Source to Object Distance : | 400mm |
| | | Source Side of Object to Film Distance: | (6+3)mm |
| Welding Process : | FCAW | No of Radiograph(exposure) : | Single Exposure |
| Examination Code : | ASME V | No. of Film Each Cassette : | 1 Film |
| Acceptance Code: | ASME Sect VIII Div 1 , 2017 Edition | Radiographic Technique : | SWSI |
| | | Film Viewing Technique : | Single Wall Viewing |
| Examination Date: | 03 May 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 |
|---|---|---|---|---|---|---|---|---|
| W/O:11484 RP(W) Item:10FD-17B | | | | | | | | |
| LW1/CW3 (W005) | 9 | 3 | -- | 6 | 0 - 1 | NRI | Accept | |
| CW4/LW3 (W005) | 9 | 3 | -- | 6 | 0 - 1 | NRI | Accept | |

End of Report

*Legend:*

| | | | | |
|---|---|---|---|---|
| *TI : Tungsten Inclusion* | *NRI : No Relevant Indication* | *UN : 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: M.Nazib - 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/103637/18-05


Report No: NDT/RT/180510-03/18

# RADIOGRAPHIC EXAMINATION REPORT

## Client and Testing Particulars

| | | | |
|---|---|---|---|
| Client : | PMI-Technology Sdn Bhd | Procedure No: | NT/RT/ASME Rev 7.0 |
| | | IQI type : | ASTM 1B |
| Project : | Neste Singapore | Film Manufacturer/Type : | FUJI 50(class I) |
| | | Density : | 2.0 - 3.5 |
| Material: | SA 240 304 | Sensitivity: | 0.33mm(5 wires visible) |
| | | Source to Object Distance : | 400mm |
| | | Source Side of Object to Film Distance: | (6+3)mm |
| Welding Process : | FCAW | No of Radiograph(exposure) : | Single Exposure |
| Examination Code : | ASME V | No. of Film Each Cassette : | 1 Film |
| Acceptance Code: | ASME Sect VIII Div 1 , 2017 Edition | Radiographic Technique : | SWSI |
| | | Film Viewing Technique : | Single Wall Viewing |
| Examination Date: | 03 May 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 |
|---|---|---|---|---|---|---|---|---|
| W/O:11484 RP(W) Item:10FD-17S | | | | | | | | |
| LW1/CW3 (W005) | 9 | 3 | – | 6 | 0 - 1 | NRI | Accept | |
| CW4/LW3 (W005) | 9 | 3 | – | 6 | 0 - 1 | NRI | Accept | |

End of Report

*Legend:*

| | | | | |
|---|---|---|---|---|
| TI : Tungsten Inclusion | NRI : No Relevant Indication | UN : 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: M.Nazib - 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/103637/18-05


Report No: NDT/RT/180510-04/18

# RADIOGRAPHIC EXAMINATION REPORT

## Client and Testing Particulars

| | | | |
|---|---|---|---|
| Client : | PMI-Technology Sdn Bhd | Procedure No: | NT/RT/ASME Rev 7.0 |
| | | IQI type : | ASTM 1A |
| Project : | Neste Singapore | Film Manufacturer/Type : | FUJI 50(class I) |
| | | Density : | 2.0 - 3.5 |
| Material: | SA 240 304 | Sensitivity: | 0.20mm(2 wires visible) |
| | | Source to Object Distance : | 400mm |
| | | Source Side of Object to Film Distance: | (4+3)mm |
| Welding Process : | FCAW | No of Radiograph(exposure) : | Single Exposure |
| Examination Code : | ASME V | No. of Film Each Cassette : | 1 Film |
| Acceptance Code: | ASME Sect VIII Div 1 , 2017 Edition | Radiographic Technique : | SWSI |
| | | Film Viewing Technique : | Single Wall Viewing |
| Examination Date: | 03 May 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 |
|---|---|---|---|---|---|---|---|---|
| W/O:11484 Buffertank | | | | | | | | |
| LW1 (W012) | 7 | 3 | – | 4 | 0 - 1 | NRI | Accept | |

End of Report

*Legend:*

| | | | | |
|---|---|---|---|---|
| TI : Tungsten Inclusion | NRI : No Relevant Indication | UN : 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: M.Nazib - 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/103637/18-05


Report No: NDT/RT/180510-05/18

# RADIOGRAPHIC EXAMINATION REPORT

## Client and Testing Particulars

| | |
|---|---|
| Client : | PMI-Technology Sdn Bhd |
| Project : | Neste Singapore |
| Material: | SA 240 304 |
| Welding Process : | GTAW |
| Examination Code : | ASME V |
| Acceptance Code: | ASME Sect VIII Div 1 , 2017 Edition |
| Examination Date: | 03 May 2018 |

| | |
|---|---|
| Procedure No: | NT/RT/ASME Rev 7.0 |
| IQI type : | ASTM 1A |
| Film Manufacturer/Type : | FUJI 50(class I) |
| Density : | 2.0 - 3.5 |
| Sensitivity: | 0.20mm(2 wires visible) |
| Source to Object Distance : | 400mm |
| Source Side of Object to Film Distance: | (4+3)mm |
| No of Radiograph(exposure) : | Single Exposure |
| No. of Film Each Cassette : | 1 Film |
| Radiographic Technique : | SWSI |
| 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 |
|---|---|---|---|---|---|---|---|---|
| W/O:11484 Buffertank | | | | | | | | |
| CW1 0° (W048) | 7 | 3 | – | 4 | 0 - 1 | LF | Reject | |

End of Report

*Legend:*

| | | | | |
|---|---|---|---|---|
| TI : Tungsten Inclusion | NRI : No Relevant Indication | UN : 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: M.Nazib - NDT Lev.II

Date: 04 May 2018

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

Client Representative:

Name:

Date: