

# TEST REPORT

ULR - TC690524000020829F

Page 1 of 1

T.C. No. : CR5375  
 Issued To. : M/s DD Enterprises  
 32, Madhuban Sai City, Talegaon Chakan Road, Talegaon, Dabhade, Pune-410507  
 Contact No.:9767164152,Email Id:ddgroup787@gmail.com

Date: 03-07-2024

Party Ref.	: Email	Condition of Sample	: Test Piece
Ref. Date	: 12-06-2024	Sample Received on	: 12-06-2024
Description of Sample Specification	: Test Piece; Grade F550D/EN8D IS 16172:2014 Grade 550D /EN 8D	Testing Started on	: 27-06-2024
Sample Drawn By	: Party	Date of Completion	: 27-06-2024
Test Location	: TCR Navi Mumbai	Enclosure	: Annex:A & B
Test	: Cyclic Tensile (100 Cycle)		

Size 16mm

## I. Mechanical Testing

### 1. Mechanical Properties of Metals

#### Cyclic Tensile Test (100 Cycle)

Test Method : IS 16172:2023

Equipment : 250KN UTM ; Calibration Due Dt:06-09-2024

Test performed on : 27-06-2024

Rebar nominal diameter (mm).	16.00
Nominal cross-sectional area (mm <sup>2</sup> ).	201.2
Upper Stress (N/mm <sup>2</sup> ) (90% of Yield Stress)	495.00
Lower Stress(N/mm <sup>2</sup> ) (5% of Yield Stress)	27.50
Maximum Load (kN)	99.594
Minimum Load (kN)	5.533
Frequency (Hz)	0.70
Wave form.	Sinusoidal
Specified minimum number of cycles to be sustain.	100
Sustained no. of cycles	100
Visual observation.	The specimen does not fail at the end of 100 cycles.
Ultimate Tensile Load (N) After 100 cycles	136800.00
U.T.S (N/mm <sup>2</sup> ) After 100 cycles	679.920
Location of Failure	Outside the length of the mechanical splice



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Specification	: IS 16172:2014 Grade 550D /EN 8D	Date of Completion	: 27-06-2024
Sample Drawn By	: Party	Enclosure	: Annex:A & B
Test Location	: TCR Navi Mumbai		
Test	: Cyclic Tensile (100 Cycle)		

Size 16mm

## I. Mechanical Testing

### 1. Mechanical Properties of Metals


#### Cyclic Tensile Test (100 Cycle)

Test Method : IS 16172:2023

Equipment : 250KN UTM ; Calibration Due Dt:06-09-2024

Test performed on : 27-06-2024

Rebar nominal diameter (mm).	16.00
Nominal cross-sectional area (mm <sup>2</sup> ).	201.20
Upper Stress (N/mm <sup>2</sup> ) (90% of Yield Stress)	495.00
Lower Stress(N/mm <sup>2</sup> ) (5% of Yield Stress)	27.50
Maximum Load (kN)	99.594
Minimum Load (kN)	5.533
Frequency (Hz)	0.70
Wave form.	Sinusoidal
Specified minimum number of cycles to be sustain.	100
Sustained no. of cycles	100
Visual observation.	The specimen does not fail at the end of 100 cycles.
Ultimate Tensile Load (N) After 100 cycles	137840.00
U.T.S (N/mm <sup>2</sup> ) After 100 cycles	685.089
Location of Failure	Outside the length of the mechanical splice

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Sample Drawn By	: Party	Date of Completion	: 27-06-2024
Test Location	: TCR Navi Mumbai	Enclosure	: Annex:A & B
Test	: Cyclic Tensile (100 Cycle)		

Size 16mm

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### 1. Mechanical Properties of Metals

#### Cyclic Tensile Test (100 Cycle)


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Equipment : 250KN UTM ; Calibration Due Dt:06-09-2024

Test performed on : 27-06-2024

Rebar nominal diameter (mm).	16.00
Nominal cross-sectional area (mm <sup>2</sup> ).	201.20
Upper Stress (N/mm <sup>2</sup> ) (90% of Yield Stress)	495.00
Lower Stress(N/mm <sup>2</sup> ) (5% of Yield Stress)	27.50
Maximum Load (kN)	99.594
Minimum Load (kN)	5.533
Frequency (Hz)	0.70
Wave form.	Sinusoidal
Specified minimum number of cycles to be sustain.	100
Sustained no. of cycles	100
Visual observation.	The specimen does not fail at the end of 100 cycles.
Ultimate Tensile Load (N) After 100 cycles	135890.00
U.T.S (N/mm <sup>2</sup> ) After 100 cycles	675.397
Location of Failure	Outside the length of the mechanical splice



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Date: 03-07-2024

Party Ref. :	Email	Condition of Sample :	Test Piece
Ref. Date :	12-06-2024	Sample Received on :	12-06-2024
Description of Sample :	Test Piece; Grade F550D/EN8D	Testing Started on :	27-06-2024
Specification :	IS 16172:2014 Grade 550D /EN 8D	Date of Completion :	27-06-2024
Sample Drawn By :	Party	Enclosure :	Annex:A & B
Test Location :	TCR Navi Mumbai		
Test :	Cyclic Tensile (100 Cycle)		

Size 25mm

## I. Mechanical Testing

### 1. Mechanical Properties of Metals

#### Cyclic Tensile Test (100 Cycle)

Test Method : IS 16172:2023

Equipment : 250KN UTM ; Calibration Due Dt:06-09-2024

Test performed on : 27-06-2024

Rebar nominal diameter (mm).	25.00
Nominal cross-sectional area (mm <sup>2</sup> ).	491.10
Upper Stress (N/mm <sup>2</sup> ) (90% of Yield Stress)	495.00
Lower Stress(N/mm <sup>2</sup> ) (5% of Yield Stress)	27.50
Maximum Load (kN)	243.095
Minimum Load (kN)	13.505
Frequency (Hz)	0.70
Wave form.	Sinusoidal
Specified minimum number of cycles to be sustain.	100
Sustained no. of cycles	100
Visual observation.	The specimen does not fail at the end of 100 cycles.
Ultimate Tensile Load (N) After 100 cycles	336510.00
U.T.S (N/mm <sup>2</sup> ) After 100 cycles	685.217
Location of Failure	Outside the length of the mechanical splice

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Contact No.:9767164152,Email Id:ddgroup787@gmail.com

Party Ref.	: Email	Condition of Sample	: Test Piece
Ref. Date	: 12-06-2024	Sample Received on	: 12-06-2024
Description of Sample Specification	: Test Piece; Grade F550D/EN8D IS 16172:2014 Grade 550D /EN 8D	Testing Started on	: 27-06-2024
Sample Drawn By	: Party	Date of Completion	: 27-06-2024
Test Location	: TCR Navi Mumbai	Enclosure	: Annex:A & B
Test	: Cyclic Tensile (100 Cycle)		

Size 25mm

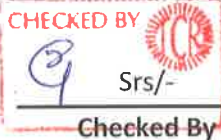
**I. Mechanical Testing****1. Mechanical Properties of Metals****Cyclic Tensile Test (100 Cycle)**

Test Method : IS 16172:2023

Equipment : 250KN UTM ; Calibration Due Dt:06-09-2024

Test performed on : 27-06-2024

Rebar nominal diameter (mm).	25.00
Nominal cross-sectional area (mm <sup>2</sup> ).	491.10
Upper Stress (N/mm <sup>2</sup> ) (90% of Yield Stress)	495.00
Lower Stress(N/mm <sup>2</sup> ) (5% of Yield Stress)	27.50
Maximum Load (kN)	243.095
Minimum Load (kN)	13.505
Frequency (Hz)	0.70
Wave form.	Sinusoidal
Specified minimum number of cycles to be sustain.	100
Sustained no. of cycles	100
Visual observation.	The specimen does not fail at the end of 100 cycles.
Ultimate Tensile Load (N) After 100 cycles	338720.00
U.T.S (N/mm <sup>2</sup> ) After 100 cycles	689.717
Location of Failure	Outside the length of the mechanical splice



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**T.C. No. : CR5380**
**Date: 03-07-2024**
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Contact No.:9767164152,Email Id:ddgroup787@gmail.com

<b>Party Ref.</b>	: Email	<b>Condition of Sample</b>	: Test Piece
<b>Ref. Date</b>	: 12-06-2024	<b>Sample Received on</b>	: 12-06-2024
<b>Description of Sample</b>	: Test Piece; Grade F550D/EN8D	<b>Testing Started on</b>	: 27-06-2024
<b>Specification</b>	: IS 16172:2014 Grade 550D /EN 8D	<b>Date of Completion</b>	: 27-06-2024
<b>Sample Drawn By</b>	: Party	<b>Enclosure</b>	: Annex:A & B
<b>Test Location</b>	: TCR Navi Mumbai		
<b>Test</b>	: Cyclic Tensile (100 Cycle)		

**Size 25mm**
**I. Mechanical Testing**
**1. Mechanical Properties of Metals**
**Cyclic Tensile Test (100 Cycle)**
**Test Method : IS 16172:2023**

Equipment : 250KN UTM ; Calibration Due Dt:06-09-2024

Test performed on : 27-06-2024

Rebar nominal diameter (mm).	25.00
Nominal cross-sectional area (mm <sup>2</sup> ).	491.10
Upper Stress (N/mm <sup>2</sup> ) (90% of Yield Stress)	495.00
Lower Stress(N/mm <sup>2</sup> ) (5% of Yield Stress)	27.50
Maximum Load (kN)	243.095
Minimum Load (kN)	13.505
Frequency (Hz)	0.70
Wave form.	Sinusoidal
Specified minimum number of cycles to be sustain.	100
Sustained no. of cycles	100
Visual observation.	The specimen does not fail at the end of 100 cycles.
Ultimate Tensile Load (N) After 100 cycles	336030.00
U.T.S (N/mm <sup>2</sup> ) After 100 cycles	684.239
Location of Failure	Outside the length of the mechanical splice

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 Contact No.:9767164152,Email Id:ddgroup787@gmail.com

Date: 03-07-2024

Party Ref.	: Email	Condition of Sample	: Test Piece
Ref. Date	: 12-06-2024	Sample Received on	: 12-06-2024
Description of Sample	: Test Piece; Grade F550D/EN8D	Testing Started on	: 26-06-2024
Specification	: IS 16172:2014 Grade 550D /EN 8D	Date of Completion	: 26-06-2024
Sample Drawn By	: Party	Enclosure	: Annex:A & B
Test Location	: TCR Navi Mumbai		
Test	: Cyclic Tensile (100 Cycle)		

Size 40mm

## I. Mechanical Testing

### 1. Mechanical Properties of Metals

#### Cyclic Tensile Test (100 Cycle)

Test Method : IS 16172:2023

Equipment : ZD 100/0-1000KN ; Calibration Due Dt:12-06-2025

Test performed on : 26-06-2024

Rebar nominal diameter (mm).	40.00
Nominal cross-sectional area (mm <sup>2</sup> ).	1257.20
Upper Stress (N/mm <sup>2</sup> ) (90% of Yield Stress)	495.00
Lower Stress(N/mm <sup>2</sup> ) (5% of Yield Stress)	27.50
Maximum Load (kN)	622.314
Minimum Load (kN)	34.573
Frequency (Hz)	0.50
Wave form.	Sinusoidal
Specified minimum number of cycles to be sustain.	100
Sustained no. of cycles	100
Visual observation.	The specimen does not fail at the end of 100 cycles.
Ultimate Tensile Load (N) After 100 cycles	844990.00
U.T.S (N/mm <sup>2</sup> ) After 100 cycles	672.121
Location of Failure	Outside the length of the mechanical splice

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**ULR - TC690524000020850F**

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**T.C. No. : CR5382**
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Contact No.:9767164152,Email Id:ddgroup787@gmail.com

<b>Party Ref.</b>	: Email	<b>Condition of Sample</b>	: Test Piece
<b>Ref. Date</b>	: 12-06-2024	<b>Sample Received on</b>	: 12-06-2024
<b>Description of Sample</b>	: Test Piece; Grade F550D/EN8D	<b>Testing Started on</b>	: 26-06-2024
<b>Specification</b>	: IS 16172:2014 Grade 550D /EN 8D	<b>Date of Completion</b>	: 26-06-2024
<b>Sample Drawn By</b>	: Party	<b>Enclosure</b>	: Annex:A & B
<b>Test Location</b>	: TCR Navi Mumbai		
<b>Test</b>	: Cyclic Tensile (100 Cycle)		

Size 40mm

**I. Mechanical Testing**
**1. Mechanical Properties of Metals**
**Cyclic Tensile Test (100 Cycle)**
**Test Method : IS 16172:2023**


Equipment : ZD 100/0-1000KN ; Calibration Due Dt:12-06-2025

Test performed on : 26-06-2024

Rebar nominal diameter (mm).	40.00
Nominal cross-sectional area (mm <sup>2</sup> ).	1257.20
Upper Stress (N/mm <sup>2</sup> ) (90% of Yield Stress)	495.00
Lower Stress(N/mm <sup>2</sup> ) (5% of Yield Stress)	27.50
Maximum Load (kN)	622.314
Minimum Load (kN)	34.573
Frequency (Hz)	0.50
Wave form.	Sinusoidal
Specified minimum number of cycles to be sustain.	100
Sustained no. of cycles	100
Visual observation.	The specimen does not fail at the end of 100 cycles.
Ultimate Tensile Load (N) After 100 cycles	841850.00
U.T.S (N/mm <sup>2</sup> ) After 100 cycles	669.623
Location of Failure	Outside the length of the mechanical splice

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 Contact No.:9767164152,Email Id:ddgroup787@gmail.com

<b>Party Ref.</b>	: Email	<b>Condition of Sample</b>	: Test Piece
<b>Ref. Date</b>	: 12-06-2024	<b>Sample Received on</b>	: 12-06-2024
<b>Description of Sample Specification</b>	: Test Piece; Grade F550D/EN8D IS 16172:2014 Grade 550D /EN 8D	<b>Testing Started on</b>	: 26-06-2024
<b>Sample Drawn By</b>	: Party	<b>Date of Completion</b>	: 26-06-2024
<b>Test Location</b>	: TCR Navi Mumbai	<b>Enclosure</b>	: Annex:A & B
<b>Test</b>	: Cyclic Tensile (100 Cycle)		

Size 40mm

**I. Mechanical Testing**
**1. Mechanical Properties of Metals**
**Cyclic Tensile Test (100 Cycle)**
**Test Method : IS 16172:2023**

Equipment : ZD 100/0-1000KN ; Calibration Due Dt:12-06-2025

Test performed on : 26-06-2024

Rebar nominal diameter (mm).	40.00
Nominal cross-sectional area (mm <sup>2</sup> ).	1257.20
Upper Stress (N/mm <sup>2</sup> ) (90% of Yield Stress)	495.00
Lower Stress(N/mm <sup>2</sup> ) (5% of Yield Stress)	27.50
Maximum Load (kN)	622.314
Minimum Load (kN)	34.573
Frequency (Hz)	0.50
Wave form.	Sinusoidal
Specified minimum number of cycles to be sustain.	100
Sustained no. of cycles	100
Visual observation.	The specimen does not fail at the end of 100 cycles.
Ultimate Tensile Load (N) After 100 cycles	894760.00
U.T.S (N/mm <sup>2</sup> ) After 100 cycles	711.708
Location of Failure	Outside the length of the mechanical splice

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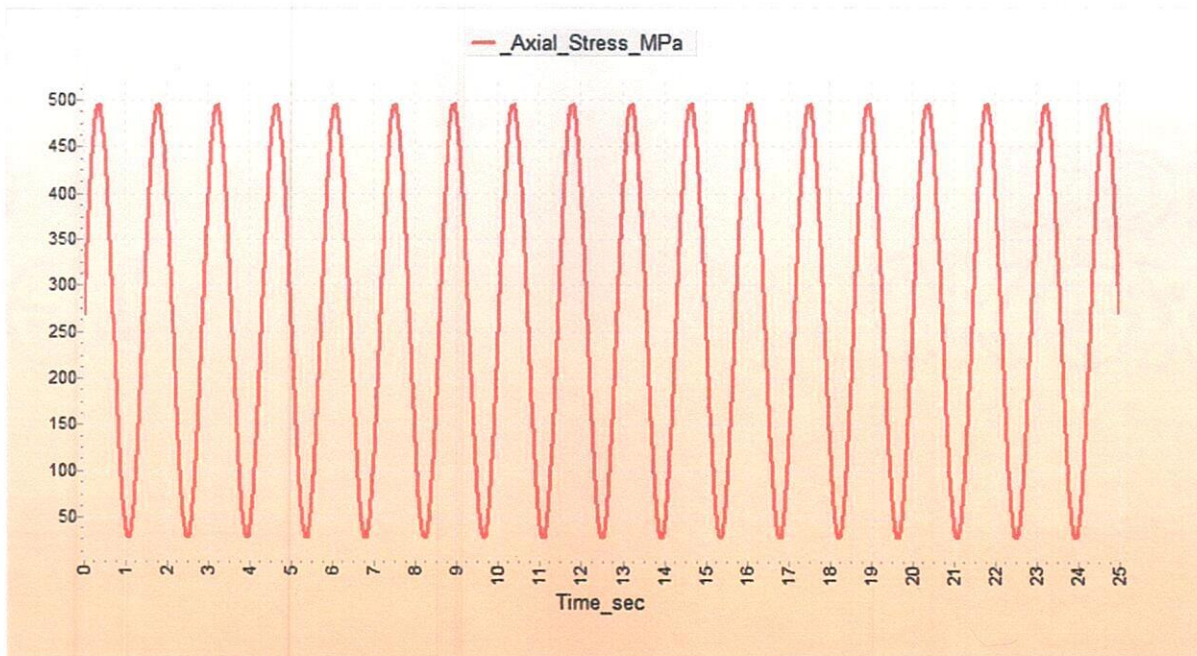
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## Annexure B

### Cyclic Tensile Test (100 Cycle)

TC No. : CR5375

Date: 27-06-2024



Stress[Mpa] Vs Time [sec]



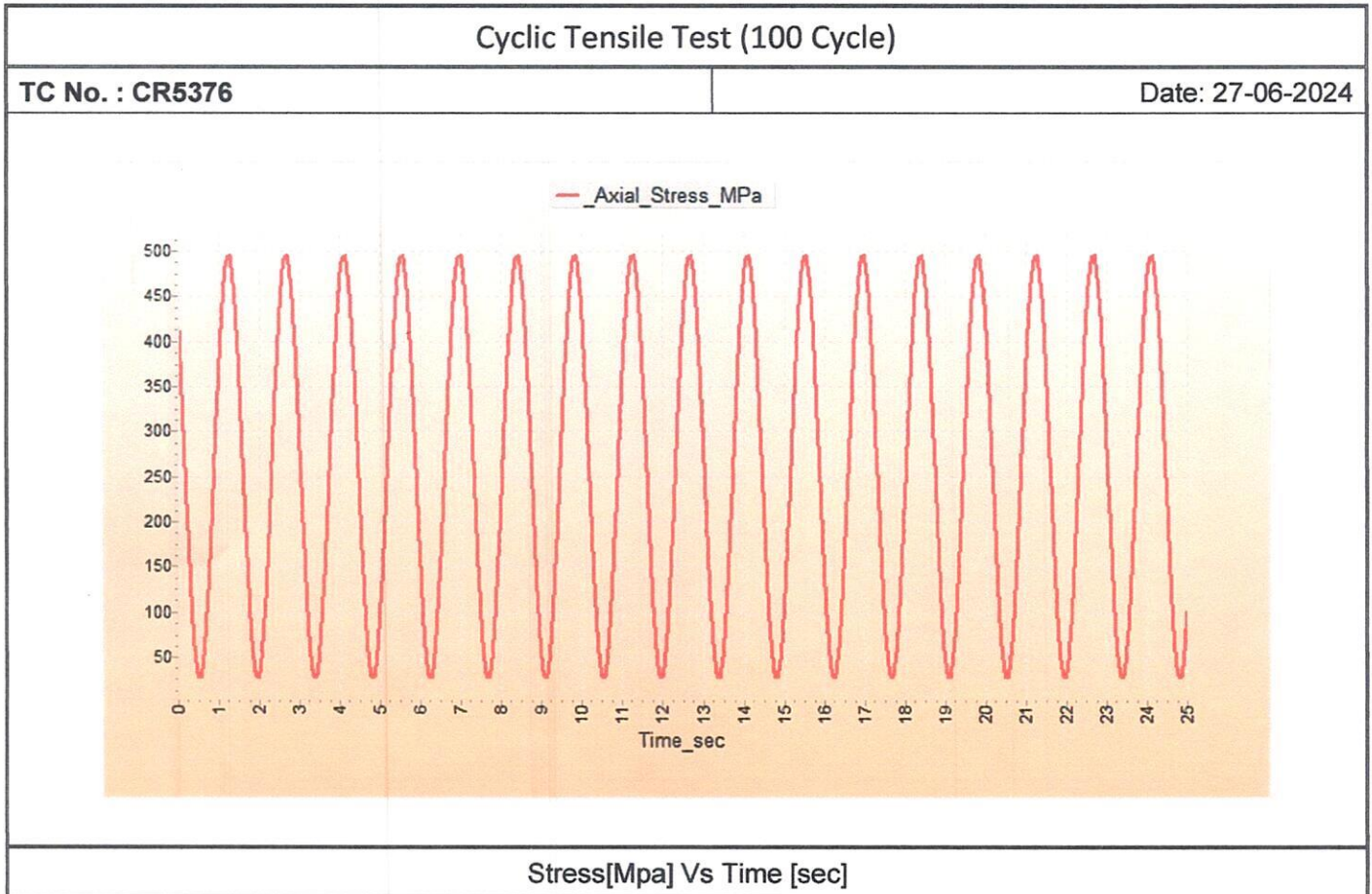
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## Annexure B


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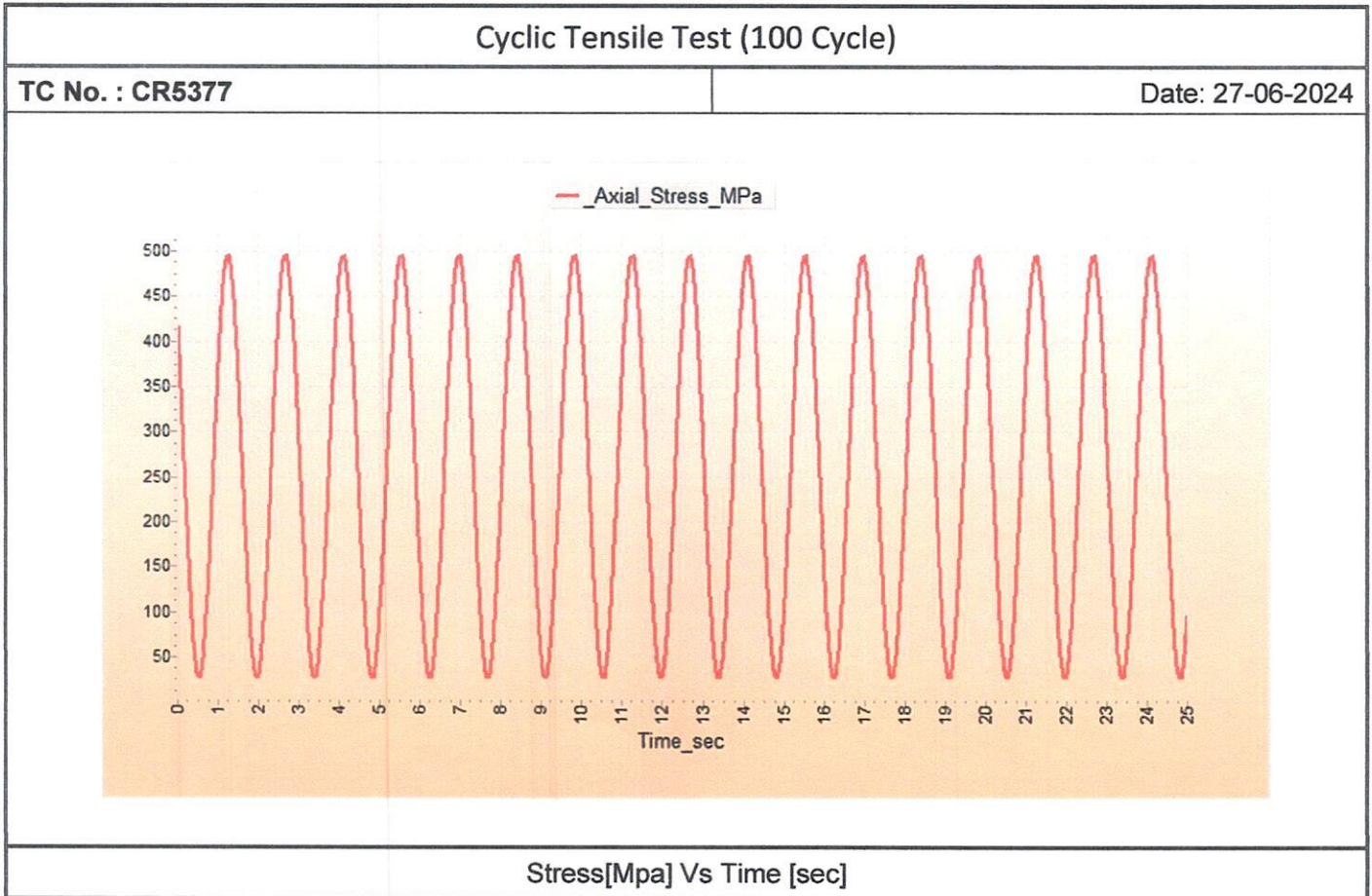
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## Annexure B


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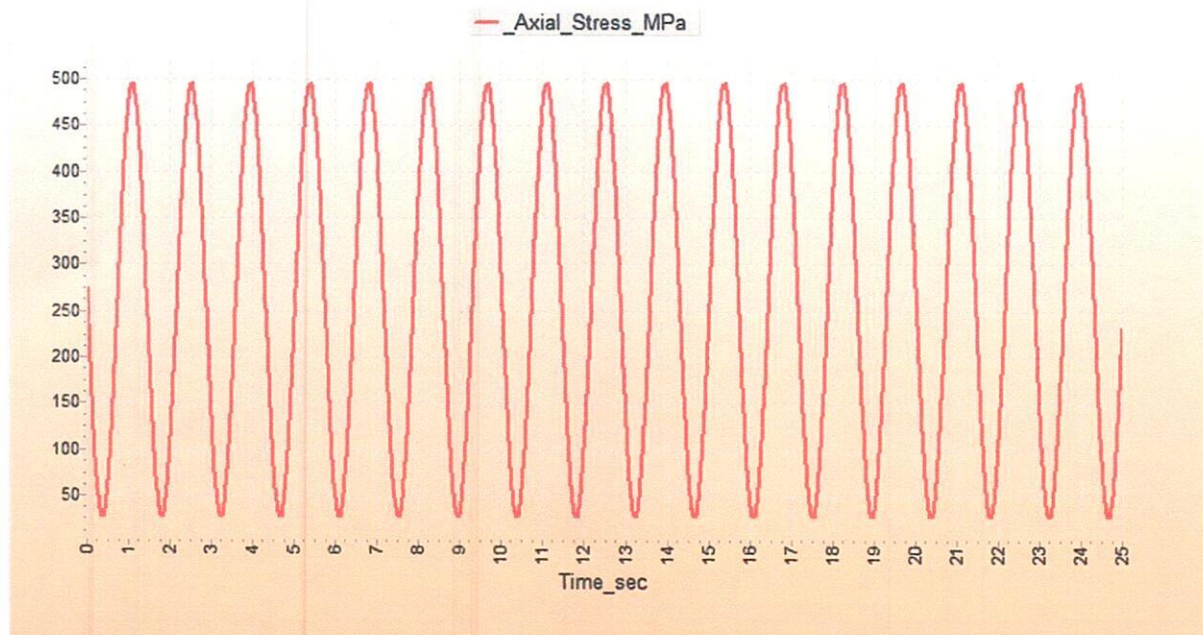
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## Annexure B

### Cyclic Tensile Test (100 Cycle)

TC No. : CR5378

Date: 27-06-2024



Stress[Mpa] Vs Time [sec]



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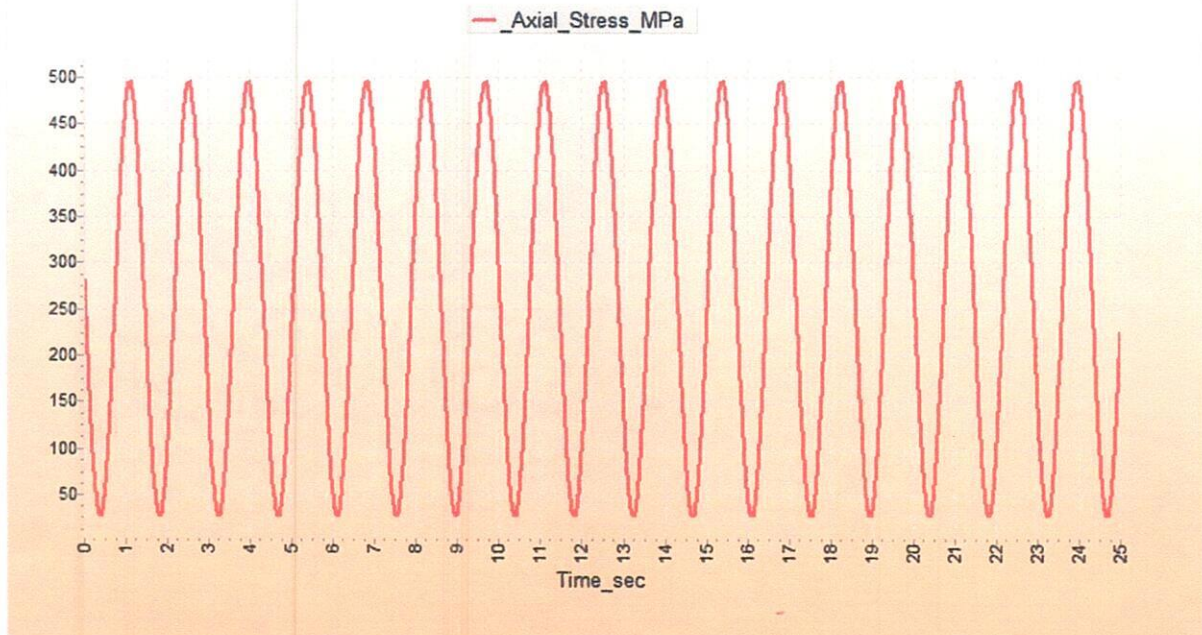
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## Annexure B

### Cyclic Tensile Test (100 Cycle)

TC No. : CR5379

Date: 27-06-2024



Stress[Mpa] Vs Time [sec]



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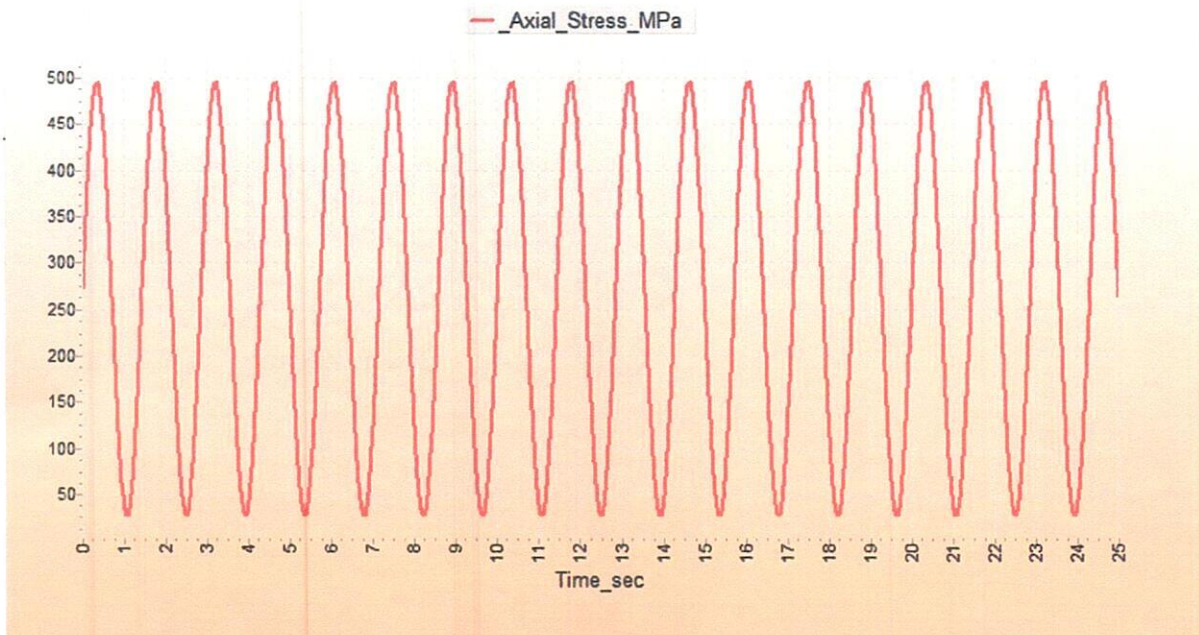
# TEST REPORT

## Annexure B

### Cyclic Tensile Test (100 Cycle)

TC No. : CR5380

Date: 27-06-2024



Stress[Mpa] Vs Time [sec]



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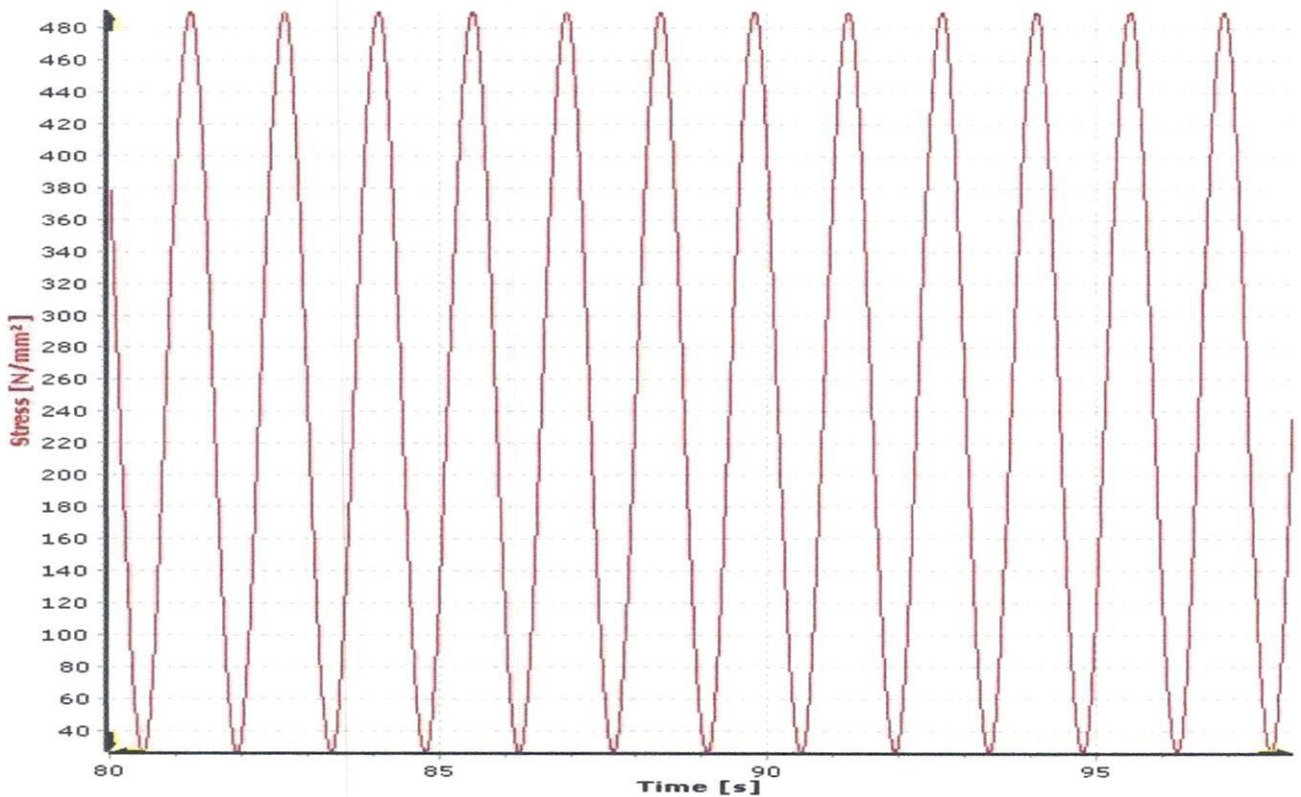
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## Annexure B

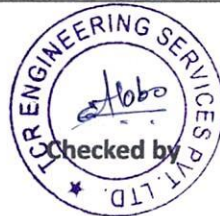
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TC No. : CR5381

Date: 26-06-2024



Stress[Mpa] Vs Time [sec]


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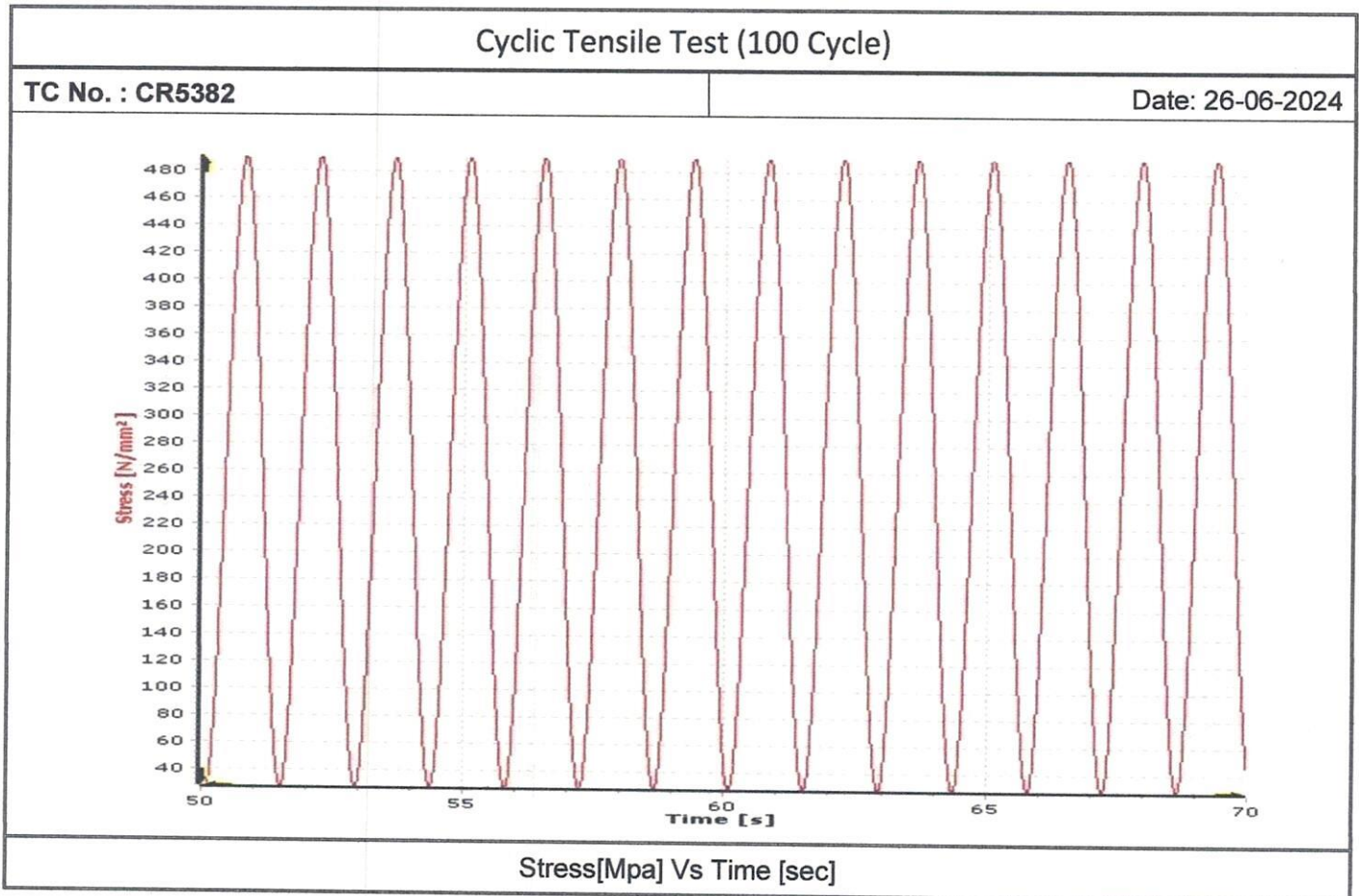
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## Annexure B



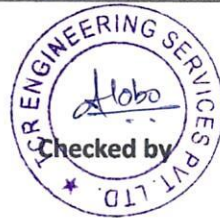
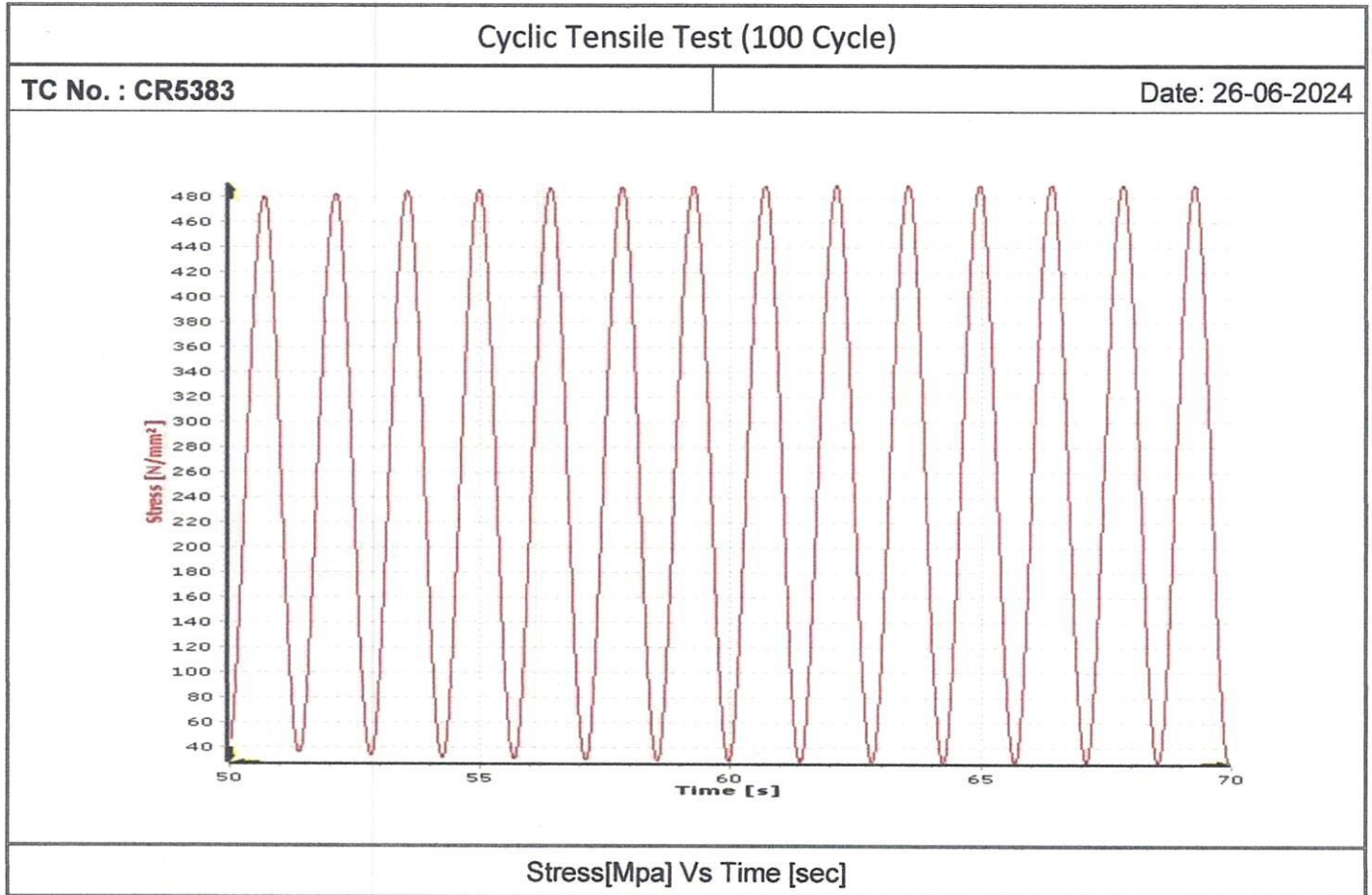
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