



# CV. KARYA HIDUP SENTOSA

PABRIK MESIN ALAT PERTANIAN • PENGECORAN LOGAM • DEALER UTAMA DIESEL KUBOTA

Kantor Pusat : Jl. Magelang No.144 Yogyakarta 55241 Indonesia

Telp. : (0274) 512095 (hunting) 563217, 584874, 513025, 556923

Fax. : (0274) 563523 (umum), 554069 (pembelian) E-mail : operator1@quick.co.id

Website : www.quick.co.id

## LAPORAN HASIL ANALISA REPORT OF ANALYSIS

Order No. : 0187616

Customer : Andhika Maulana

Mhs T. Mesin UM Ponorogo

Analisa : Spectrometer.

Tanggal : 3/5/2021.

Kode Sampel : AL A

Alat Uji : Thermo ARL 3560 OES.

Program : ALSICU.

### Hasil/Result :

Unsur	%
Si	7,68
Fe	<0,1326
Cu	0,027
Mn	0,0000
Mg	0,3115
Zn	<0,0276
Ti	0,1167
Cr	0,0012
Ni	0,0017
Pb	0,0023
Sn	0,0158
Al	91,68

Ka. Unit P2L

**Sukardi**

Ka. Seksi Laboratorium UP2L

**Reny Hayu W.**

**Catatan :** - Unsur Fe dan Zn di bawah standard kaliberasi program alat kami  
- Sampel dari pemesan diuji di Laboratorium kami



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## LAPORAN HASIL ANALISA REPORT OF ANALYSIS

Order No. : 0187616

Customer : Andhika Maulana

Mhs T. Mesin UM Ponorogo

Analisa : Spectrometer.

Tanggal : 3/5/2021.

Kode Sampel : AL B

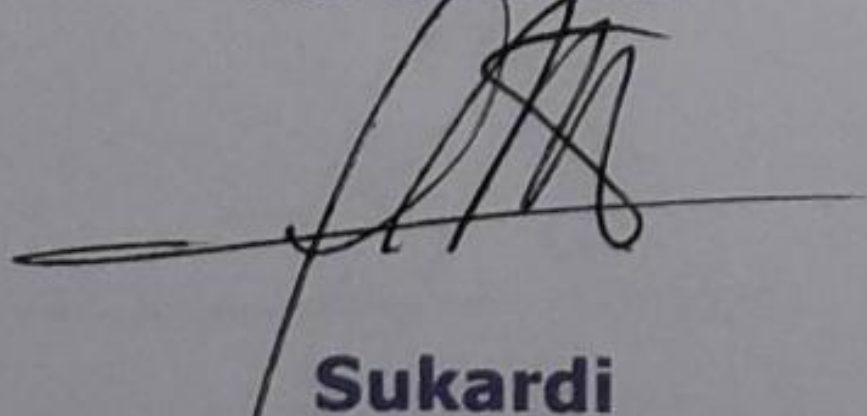
Alat Uji : Thermo ARL 3560 OES.

Program : ALSICU.

### Hasil/Result :

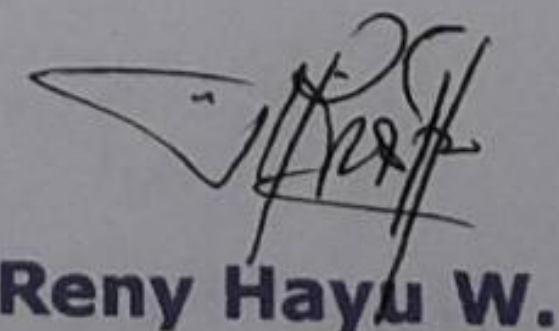
Unsur	%
Si	7,50
Fe	<0,1269
Cu	0,025
Mn	0,0013
Mg	0,2822
Zn	0,0295
Ti	0,1157
Cr	0,0039
Ni	0,0005
Pb	0,0021
Sn	0,0150
Al	91,90

Ka. Unit P2L



**Sukardi**

Ka. Seksi Laboratorium UP2L



**Reny Hayu W.**

Catatan : - Unsur Fe di bawah standard kaliberasi program alat kami  
- Sampel dari pemesan diuji di Laboratorium kami

## BERITA ACARA

### PELAKSANAAN UJI TARIK LOGAM STH ASTM E8

Pada hari Jumat tanggal dua puluh satu bulan Juni tahun dua ribu dua puluh satu, yang bertanda tangan dibawah ini:

1. Nama : Wahyu Pribadi, SST., MT.  
Jabatan : Ka. Laboratorium Uji Bahan dan Elektrikal
2. Nama : Yohan Intan Kusuma, ST.  
Jabatan : Penanggung jawab Pengujian Bahan
3. Nama : Kristiyan Andi Marianto, AMd.  
Jabatan : Tim Pelaksana Pengujian
4. Nama : Bagus Sasmito  
Jabatan : Tim Pelaksana Pengujian

Telah melaksanakan *Tensile test STH ASTM E8*, dengan spesimen:

- 5 (lima) buah specimen bahan Alumunium limbah otomotif

Spesimen tersebut adalah milik dari:

Nama User : Andhika Maulana Rizki Magnadine  
Instansi Asal : UMM Ponorogo

Pengujian dilaksanakan di Laboratorium Uji Bahan dan Elektrikal – D-IV Perkeretaapian PNM menggunakan alat UTM MTS Exceed E64.

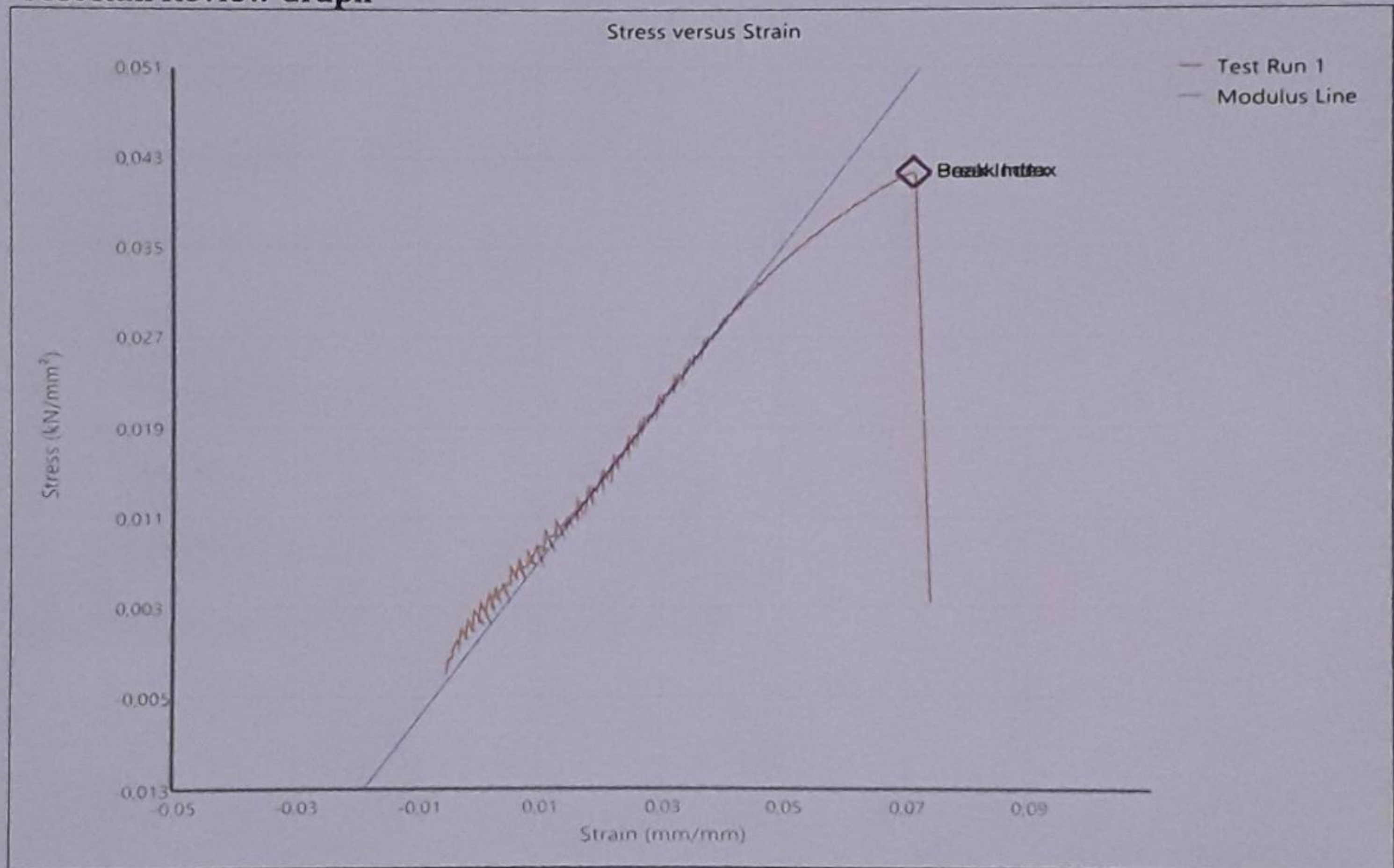
Hasil pengukuran dapat dilihat pada data hasil pengukuran (terlampir). Lampiran data hasil pengukuran telah divalidasi dengan stempel.

Ka. Laboratorium Uji Bahan dan Elektrikal  
  
WAHYU PRIBADI, SST., MT.

### Default Test Run Report

Project Name	MTS STH ASTM E8 Metals Tension
User Name	YOHAN
Spesimen 2 Alumunium UMM	Spesimen Alumunium UMM spc 2
Test Run Name	Test Run 1
Test Run Date	17/06/2021 16:29:04

### Test Run Review Graph



**Test Run Results:**

Display Name	Value	Unit
Test Run End Reason	Break Detected	
Length of Parallel Section	60.000	mm
Initial Marked Gage Length	50.000	mm
Humidity	50.0	%
Rate of Separation	0.21	mm/s
Temperature	23.0	°C
Maximum Force	14.719	kN
Maximum Stress	0.042	kN/mm <sup>2</sup>
Elongation after Break	2.000	%
Upper Yield Strength	0.001	kN/mm <sup>2</sup>
Ultimate Tensile Strength	0.042	kN/mm <sup>2</sup>
Reduction of Area	62.398	%
Final Marked Gage Length	51.000	mm
Diameter	21.200	mm
Final Diameter	13.000	mm
Length of Parallel Section	60.000	mm
Initial Marked Gage Length	50.000	mm
Humidity	50.0	%
Rate of Separation	0.21	mm/s
Temperature	23.0	°C
Final Marked Gage Length	51.000	mm
Diameter	21.200	mm
Final Diameter	13.000	mm

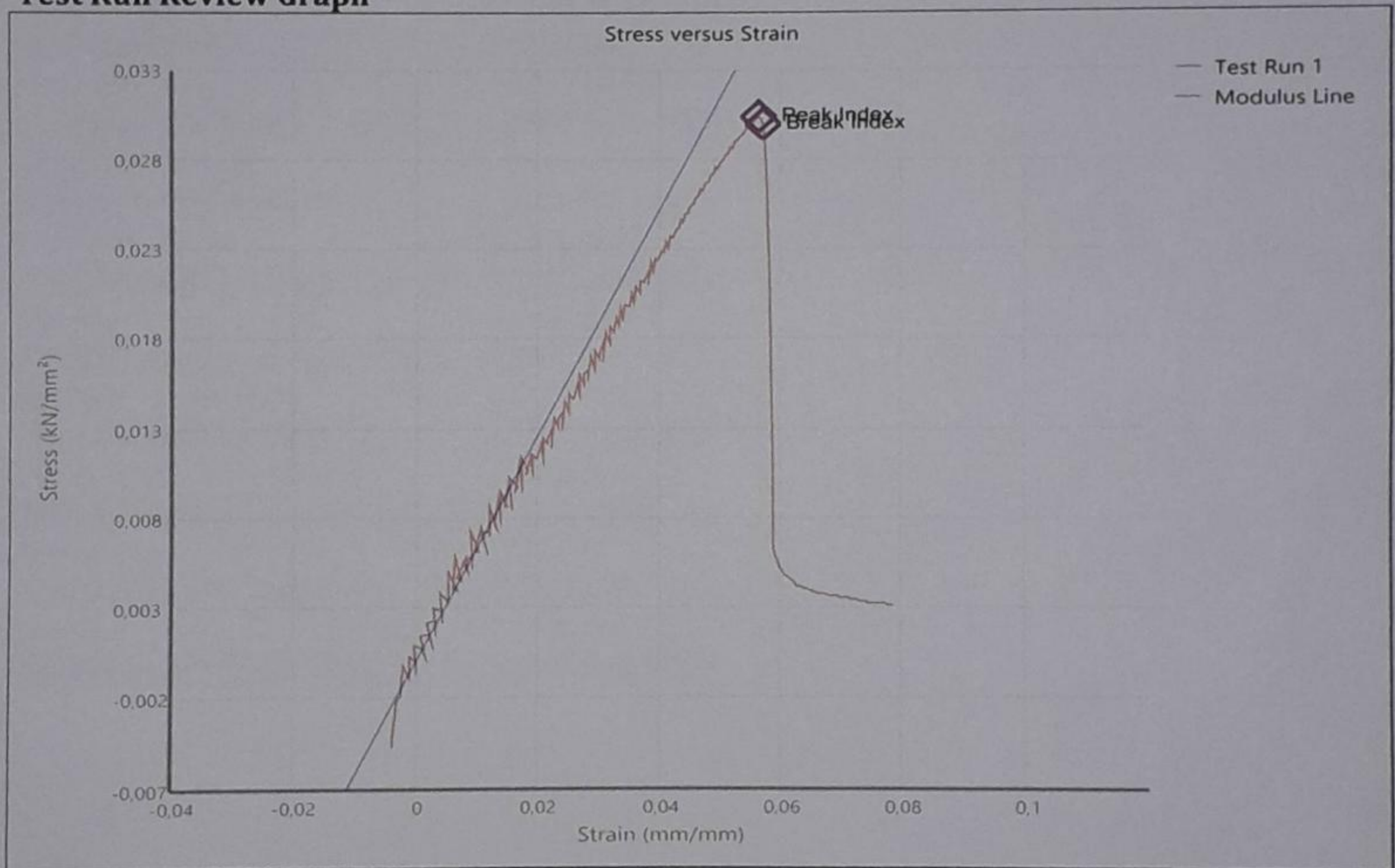
Madiun, 21 Juni 2021  
Penanggung jawab Pengujian Bahan

*Laboratorium Uji Bahan dan Elektrikal*  
  
D. W. BERKETAAPIN  
YOHAN INTAN KUSUMA, ST.

### Default Test Run Report

Project Name	MTS STH ASTM E8 Metals Tension
User Name	YOHAN
Spesimen Alumunium	Spesimen Alumunium UMM spc 3
Test Run Name	Test Run 1
Test Run Date	17/06/2021 16:39:03

### Test Run Review Graph



**Test Run Results:**

Display Name	Value	Unit
Test Run End Reason	Break Detected	
Length of Parallel Section	60.000	mm
Initial Marked Gage Length	50.000	mm
Humidity	50.0	%
Rate of Separation	0.21	mm/s
Temperature	23.0	°C
Maximum Force	10.509	kN
Maximum Stress	0.030	kN/mm <sup>2</sup>
Elongation after Break	4.000	%
Upper Yield Strength	0.001	kN/mm <sup>2</sup>
Ultimate Tensile Strength	0.030	kN/mm <sup>2</sup>
Reduction of Area	62.265	%
Final Marked Gage Length	52.000	mm
Diameter	21.000	mm
Final Diameter	12.900	mm
Length of Parallel Section	60.000	mm
Initial Marked Gage Length	50.000	mm
Humidity	50.0	%
Rate of Separation	0.21	mm/s
Temperature	23.0	°C
Final Marked Gage Length	52.000	mm
Diameter	21.000	mm
Final Diameter	12.900	mm

Madiun, 21 Juni 2021  
Penanggung jawab Pengujian Bahan

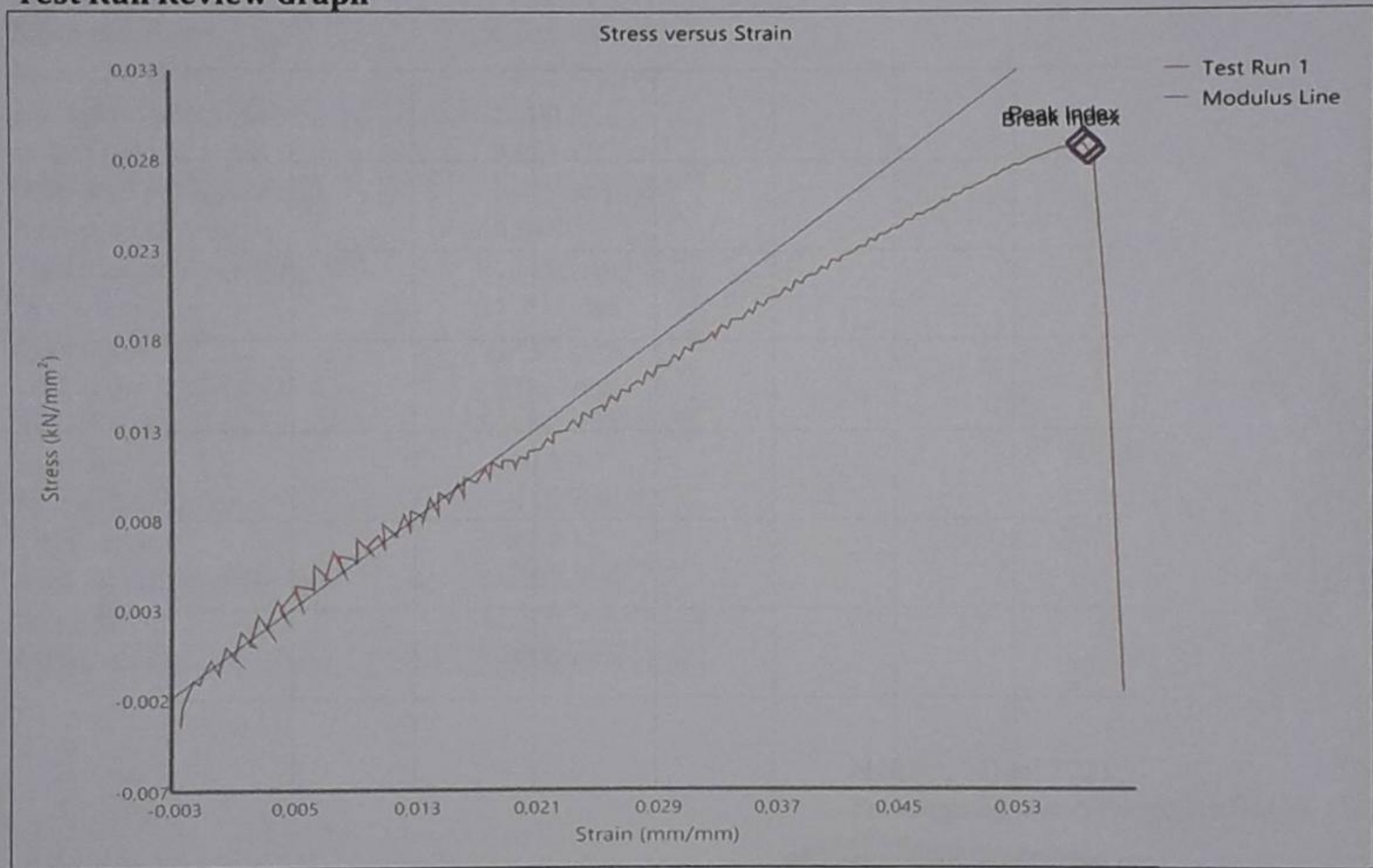


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D-IV PERKERETAAPIA  
YOHAN INTAN KUSUMA, ST.

### Default Test Run Report

<b>Project Name</b>	MTS STH ASTM E8 Metals Tension
<b>User Name</b>	YOHAN
<b>Spesimen Alumunium</b>	Spesimen Alumunium UMM spc 4
<b>Test Run Name</b>	Test Run 1
<b>Test Run Date</b>	17/06/2021 16:46:34

### Test Run Review Graph





**Test Run Results:**

Display Name	Value	Unit
Test Run End Reason	Break Detected	
Length of Parallel Section	60.000	mm
Initial Marked Gage Length	50.000	mm
Humidity	50.0	%
Rate of Separation	0.21	mm/s
Temperature	23.0	°C
Maximum Force	10.176	kN
Maximum Stress	0.029	kN/mm <sup>2</sup>
Elongation after Break	2.200	%
Upper Yield Strength	0.001	kN/mm <sup>2</sup>
Ultimate Tensile Strength	0.029	kN/mm <sup>2</sup>
Reduction of Area	63.546	%
Final Marked Gage Length	51.100	mm
Diameter	21.200	mm
Final Diameter	12.800	mm
Length of Parallel Section	60.000	mm
Initial Marked Gage Length	50.000	mm
Humidity	50.0	%
Rate of Separation	0.21	mm/s
Temperature	23.0	°C
Final Marked Gage Length	51.100	mm
Diameter	21.200	mm
Final Diameter	12.800	mm

Madiun, 21 Juni 2021

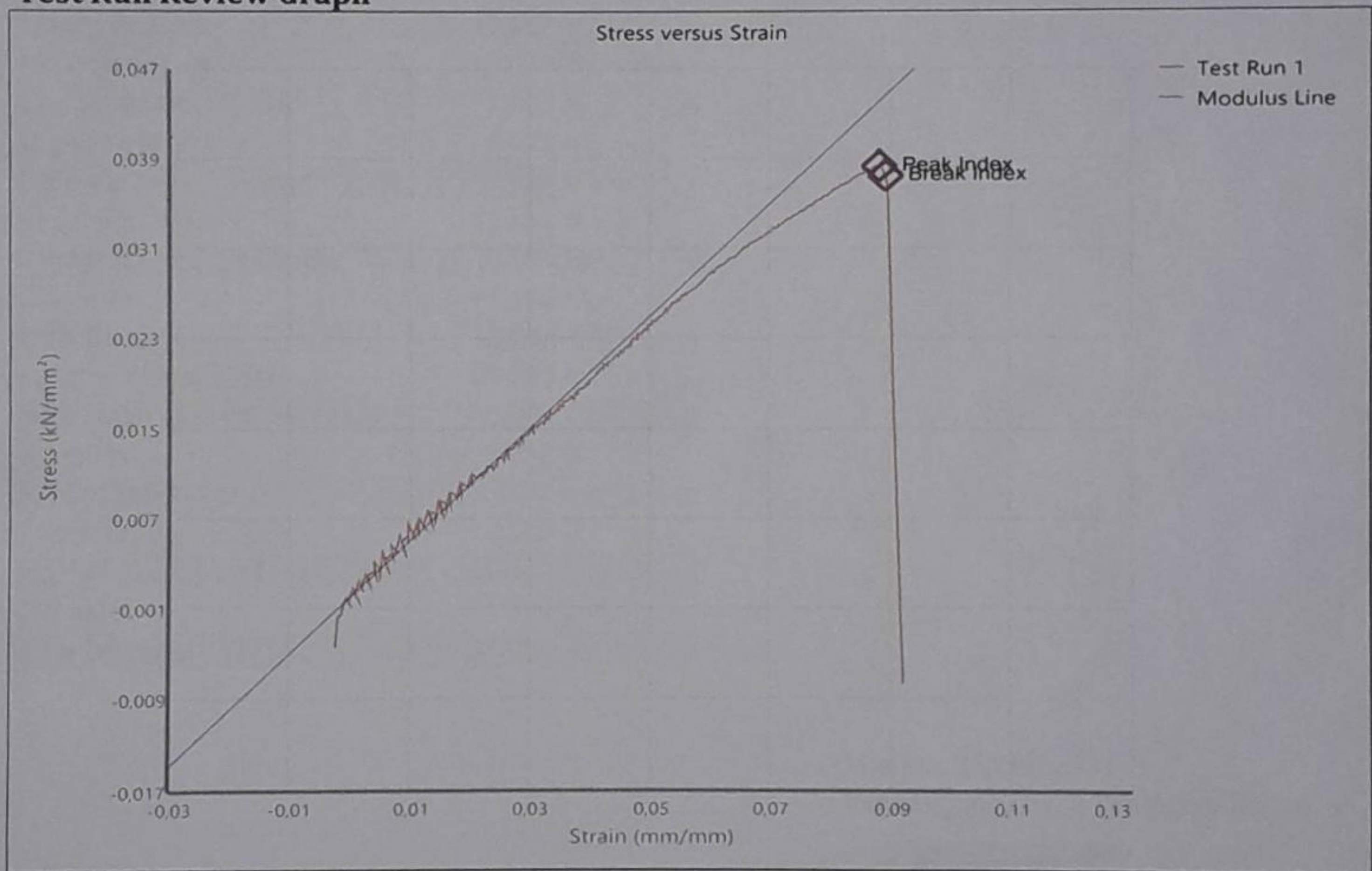
Penanggung jawab Pengujian Bahan

Laboratorium Uji Bahan dan Elektrikal  
D-IV PERKERETAAPIAN  
YOHAN INTAN KUSUMA, ST.

### Default Test Run Report

Project Name	MTS STH ASTM E8 Metals Tension
User Name	YOHAN
Spesimen Alumunium	Spesimen Alumunium UMM spc 5
Test Run Name	Test Run 1
Test Run Date	17/06/2021 16:52:36

### Test Run Review Graph



**Test Run Results:**

Display Name	Value	Unit
Test Run End Reason	Break Detected	
Length of Parallel Section	60.000	mm
Initial Marked Gage Length	50.000	mm
Humidity	50.0	%
Rate of Separation	0.21	mm/s
Temperature	23.0	°C
Maximum Force	13.667	kN
Maximum Stress	0.038	kN/mm <sup>2</sup>
Elongation after Break	1.800	%
Upper Yield Strength	0.001	kN/mm <sup>2</sup>
Ultimate Tensile Strength	0.038	kN/mm <sup>2</sup>
Reduction of Area	62.750	%
Final Marked Gage Length	50.900	mm
Diameter	21.300	mm
Final Diameter	13.000	mm
Length of Parallel Section	60.000	mm
Initial Marked Gage Length	50.000	mm
Humidity	50.0	%
Rate of Separation	0.21	mm/s
Temperature	23.0	°C
Final Marked Gage Length	50.900	mm
Diameter	21.300	mm
Final Diameter	13.000	mm

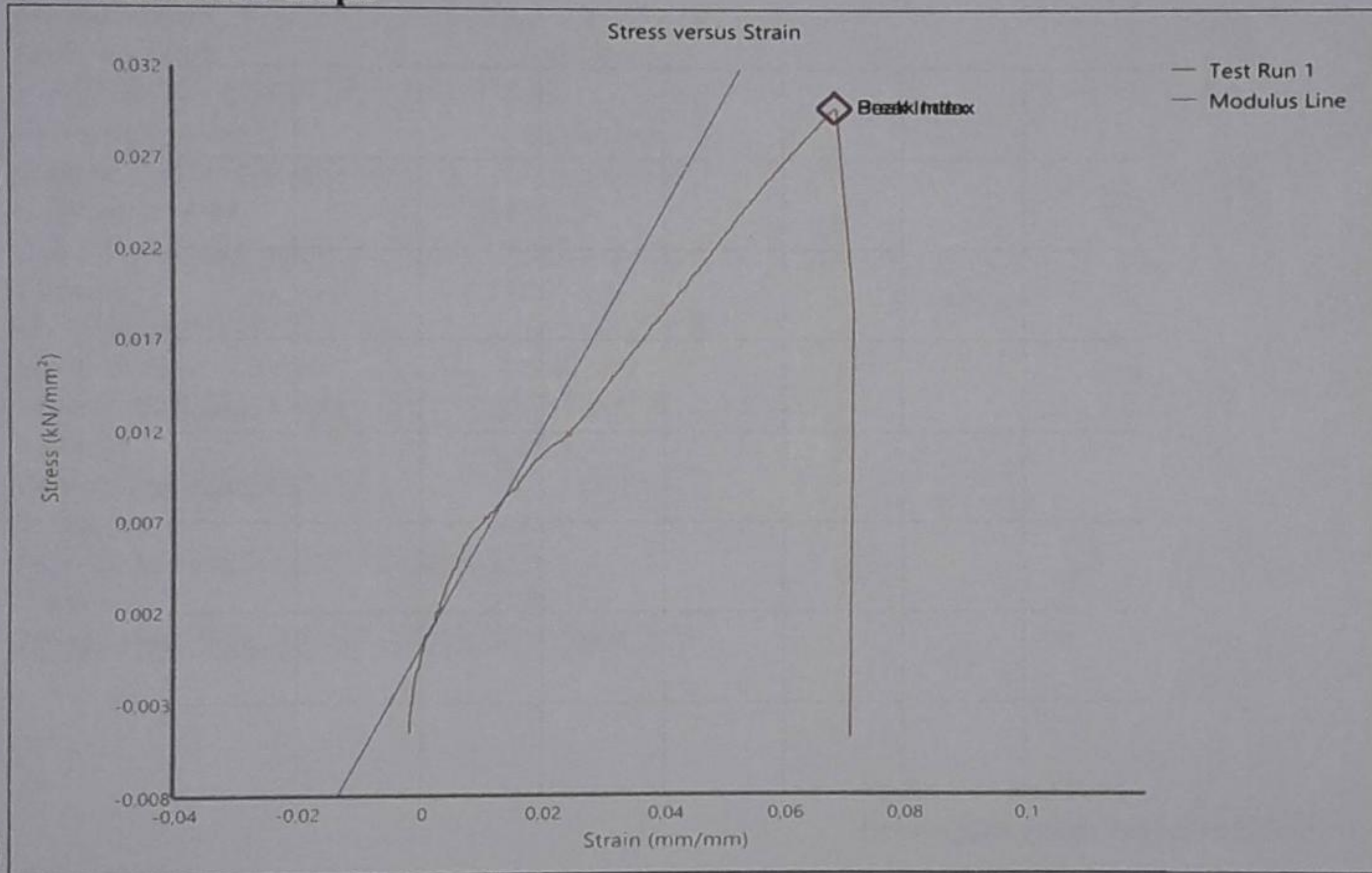
Madiun, 21 Juni 2021  
Penanggung jawab Pengujian Bahan

*Laboratorium Uji Bahan dan Elektrikal*  
  
 D-IV PERKERETAAPIAN  
 YOHAN INTAN KUSUMA, ST.

### Default Test Run Report

Project Name	MTS STH ASTM E8 Metals Tension
User Name	YOHAN
Spesimen Alumunium	Spesimen Alumunium UMM spc 6
Test Run Name	Test Run 1
Test Run Date	17/06/2021 16:57:44

### Test Run Review Graph



**Test Run Results:**

Display Name	Value	Unit
Test Run End Reason	Break Detected	
Length of Parallel Section	60.000	mm
Initial Marked Gage Length	50.000	mm
Humidity	50.0	%
Rate of Separation	0.21	mm/s
Temperature	23.0	°C
Maximum Force	10.605	kN
Maximum Stress	0.030	kN/mm <sup>2</sup>
Elongation after Break	3.200	%
Upper Yield Strength	0.030	kN/mm <sup>2</sup>
Ultimate Tensile Strength	0.030	kN/mm <sup>2</sup>
Reduction of Area	63.321	%
Final Marked Gage Length	51.600	mm
Diameter	21.300	mm
Final Diameter	12.900	mm
Length of Parallel Section	60.000	mm
Initial Marked Gage Length	50.000	mm
Humidity	50.0	%
Rate of Separation	0.21	mm/s
Temperature	23.0	°C
Final Marked Gage Length	51.600	mm
Diameter	21.300	mm
Final Diameter	12.900	mm

Madiun, 21 Juni 2021  
Penanggung jawab Pengujian Bahan

*Laboratorium Uji Bahan dan Elektrikal*  
  
D IV BERKERETAPIAN  
YOHAN INTAN KUSUMA, ST.