

DAFTAR LAMPIRAN



LABORATORIUM BAHAN TEKNIK
DEPARTEMEN TEKNIK MESIN SEKOLAH VOKASI
UNIVERSITAS GADJAH MADA

HASIL PENGUJIAN KEKERASAN
No. 040 / P.Kkr / BT.DTM / 2017

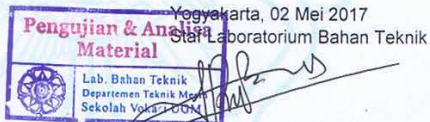
Spesimen Aluminium Paduan (30%Al Bekas + 70%Piston Bekas + 2,5TiB)

| No | Kode | Posisi titik uji | d ₁ (mm) | d ₂ (mm) | d _{rata-rata} (mm) | Kekerasan (VHN) |
|----|------|------------------|------------------------|------------------------|--------------------------------|--------------------|
| 1 | A 2 | Acak | 0.81 | 0.81 | 0.810 | 84.8 |
| | | | 0.82 | 0.81 | 0.815 | 83.8 |
| | | | 0.82 | 0.81 | 0.815 | 83.8 |
| 2 | A 3 | Acak | 0.78 | 0.78 | 0.780 | 91.4 |
| | | | 0.79 | 0.78 | 0.785 | 90.3 |
| | | | 0.80 | 0.79 | 0.795 | 88.0 |
| 3 | A 4 | Acak | 0.77 | 0.75 | 0.760 | 96.3 |
| | | | 0.80 | 0.80 | 0.800 | 86.9 |
| | | | 0.79 | 0.80 | 0.795 | 88.0 |

Lembar asli, tidak untuk digandakan

Keterangan :

1. Menggunakan metode uji Vickers dengan pembebanan 30 kg
2. Satuan pengukuran diagonal jejak indenter dalam mm
3. Pengujian dilakukan pada tanggal 26 April 2017



Puji Piyana, SST.
NIP. 196704101999031002

DATA SPESIMEN
No. 043 / P.Trk / BT.DTM / 2017

Spesimen Aluminium Paduan (30%Al Bekas + 70%Piston Bekas + 2,5 TiB)

| No. | Spes. | Lebar (mm) | Tebal (mm) | Lo (mm) | Lf (mm) | ΔL (mm) | ϵ (%) | P _{Max} (kN) | hU (mmb) |
|-----|---------|---------------|---------------|------------|------------|--------------------|-------------------|--------------------------|-------------|
| 1 | A.2 - A | 12.51 | 3.99 | 48.67 | 49.01 | 0.34 | 0.7 | 6.87 | 131.0 |
| 2 | A.2 - B | 12.52 | 3.99 | 48.89 | 49.28 | 0.39 | 0.8 | 3.46 | 69.0 |
| 3 | A.2 - C | 12.47 | 4.02 | 48.67 | 48.87 | 0.20 | 0.4 | 7.23 | 137.0 |
| 4 | A.3 - A | 12.47 | 3.97 | 47.69 | 47.86 | 0.17 | 0.4 | 6.57 | 127.5 |
| 5 | A.3 - B | 12.45 | 4.00 | 48.23 | 48.30 | 0.07 | 0.1 | 5.61 | 110.5 |
| 6 | A.3 - C | 11.89 | 3.97 | 47.76 | 47.84 | 0.08 | 0.2 | 6.92 | 135.0 |
| 7 | A.4 - A | 12.63 | 3.98 | 48.82 | 48.93 | 0.11 | 0.2 | 7.06 | 136.0 |
| 8 | A.4 - B | 12.36 | 3.98 | 48.86 | 49.31 | 0.45 | 0.9 | 8.09 | 153.0 |
| 9 | A.4 - C | 12.59 | 3.99 | 49.29 | 49.56 | 0.27 | 0.5 | 8.65 | 162.0 |



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Spesimen Aluminium Paduan (30%Al Bekas + 70%Piston Bekas + 2,5 TiB)

| No. | Kode Spes. | Teg. Max (σ_U) (MPa) | Regangan (ϵ) (%) |
|-----|------------|----------------------------------|--------------------------------|
| 1 | A.2 - A | 137.63 | 0.70 |
| 2 | A.2 - B | 69.26 | 0.80 |
| 3 | A.2 - C | 144.23 | 0.41 |
| 4 | A.3 - A | 132.71 | 0.36 |
| 5 | A.3 - B | 112.65 | 0.15 |
| 6 | A.3 - C | 146.60 | 0.17 |
| 7 | A.4 - A | 140.45 | 0.23 |
| 8 | A.4 - B | 164.45 | 0.92 |
| 9 | A.4 - C | 172.19 | 0.55 |

Lembar asli, tidak untuk digandakan

Keterangan :

1. Spesimen Uji mengacu ASTM E8M
2. Pengujian dilakukan pada tanggal 04 Mei 2017

Yogyakarta, 04 Mei 2017



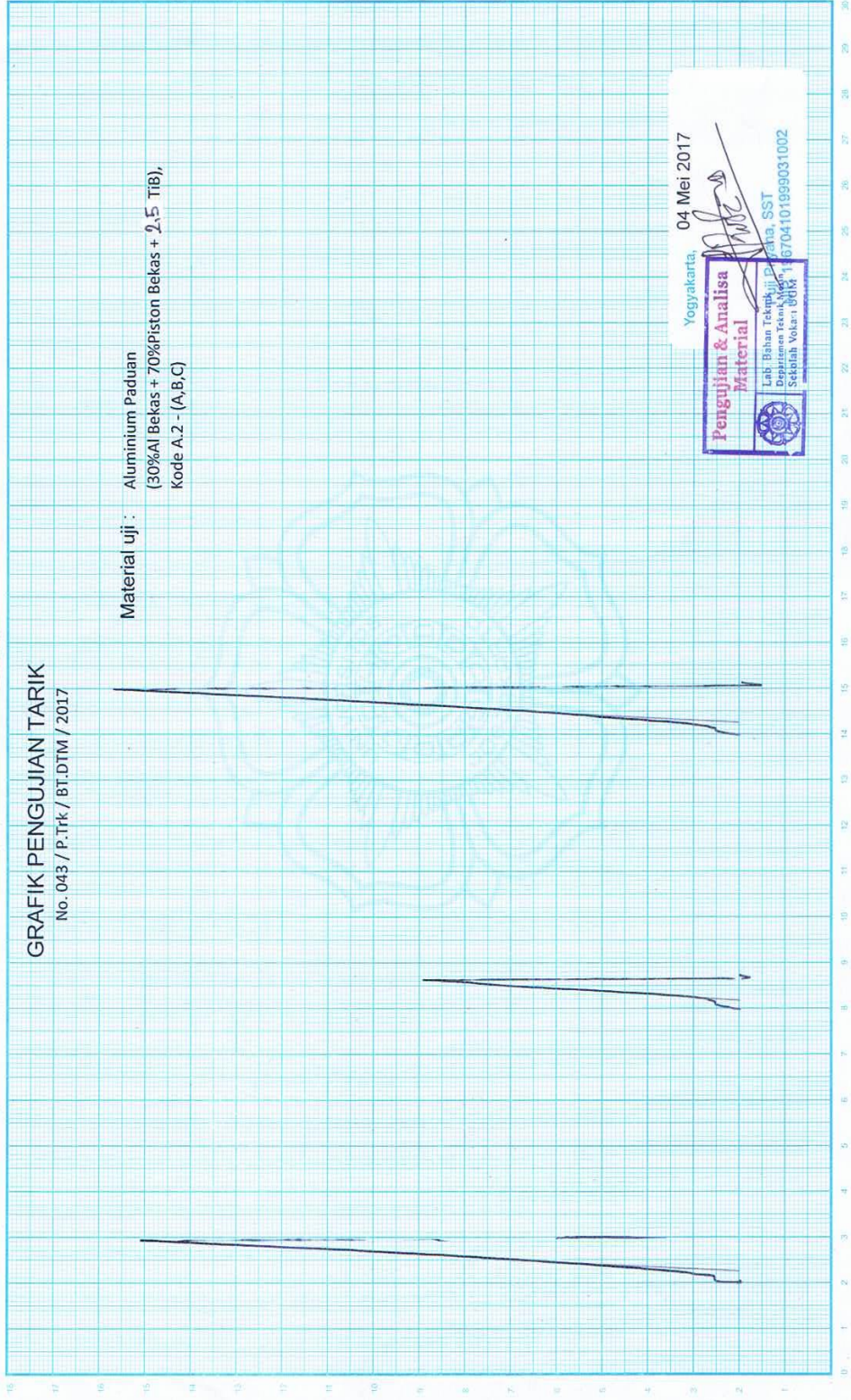
Staf Laboratorium Bahan Teknik

Puji Priyana SST
NIP. 196704101999031002



GRAFIK PENGUJIAN TARIK
No. 043 / P.Trk / BT.DTM / 2017

Material uji : Aluminium Paduan
(30%Al Bekas + 70%Piston Bekas + 2,5 TiB),
Kode A.2 - (A,B,C)



Yogyakarta, 04 Mei 2017

Pengujian & Analisa Material

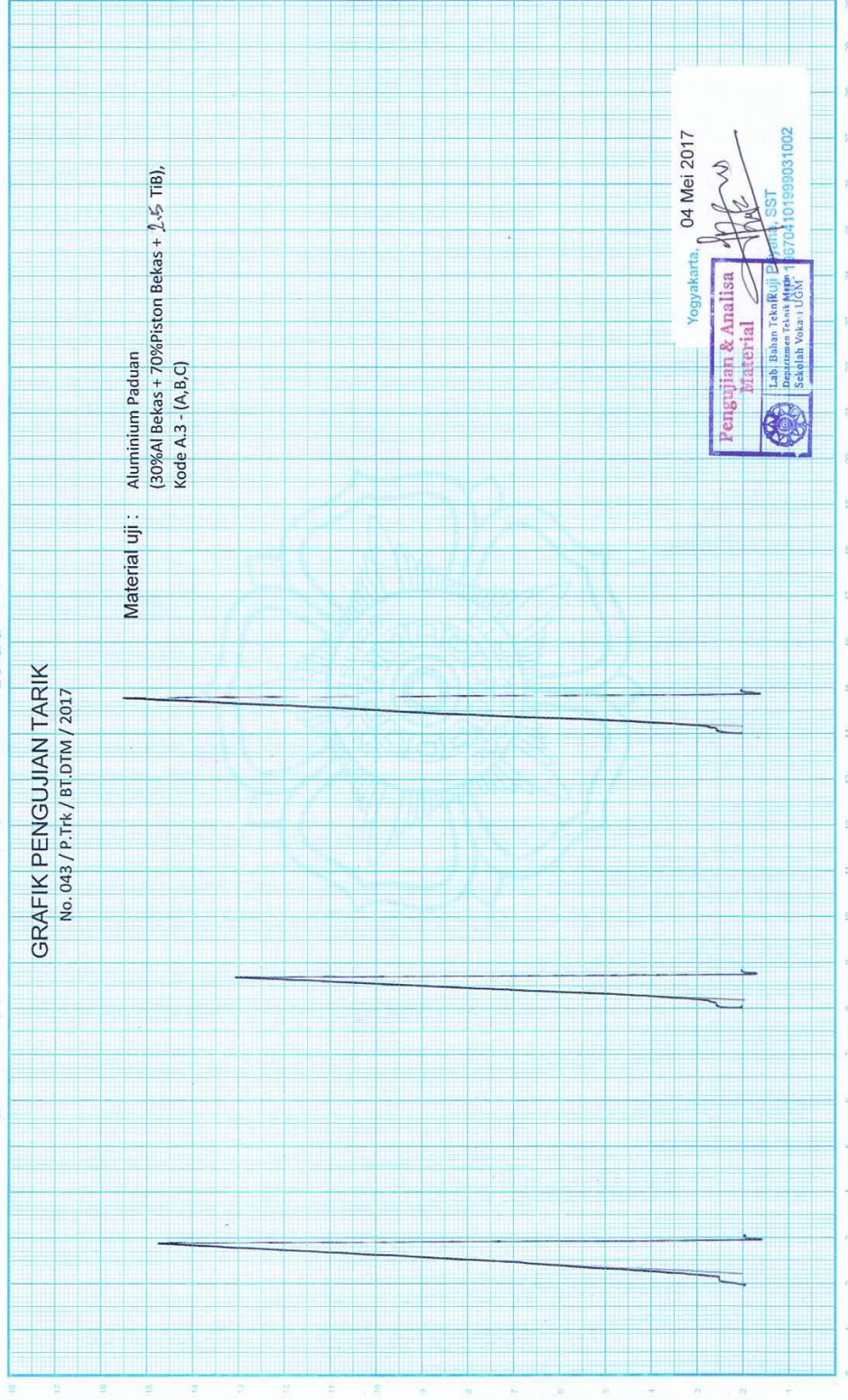


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GRAFIK PENGUJIAN TARIK
No. 043 / P.Trk / BT.DTM / 2017

Material uji : Aluminium Paduan
(30%Al Bekas + 70%Piston Bekas + 2.5 TiB),
Kode A.3 - (A,B,C)



Yogyakarta, 04 Mei 2017



Lab. Bahan Tekn. Uji & Analisa Material
Departemen Teknik Mesin, SST
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No. 043 / P.Trk / BT.DTM / 2017

