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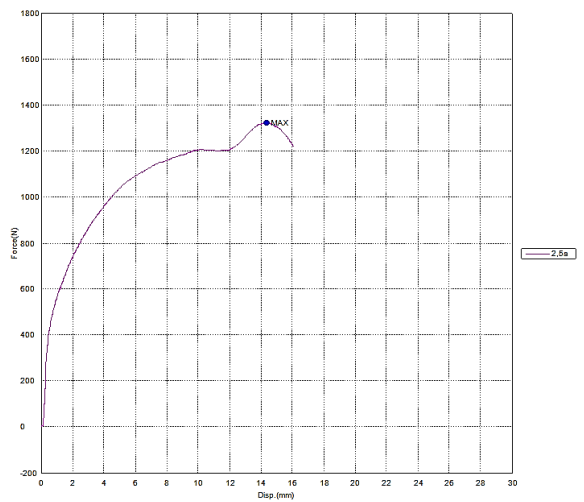
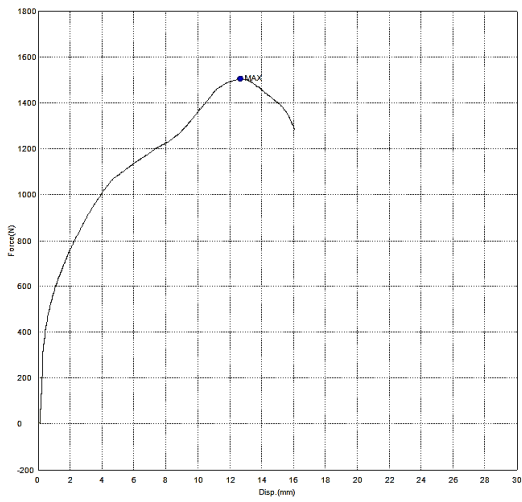
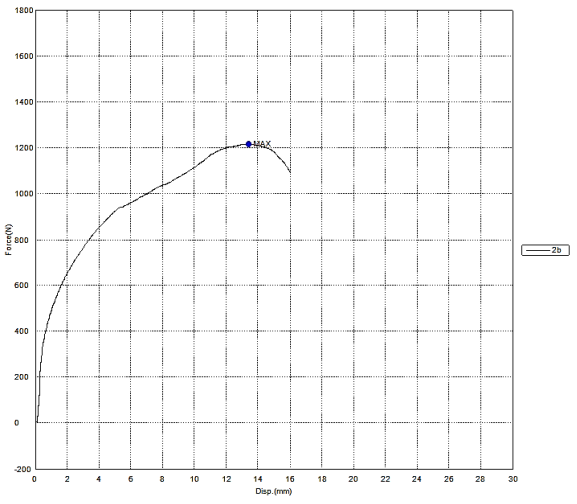
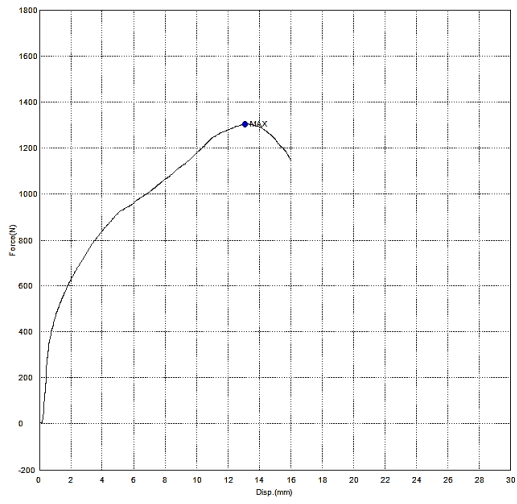
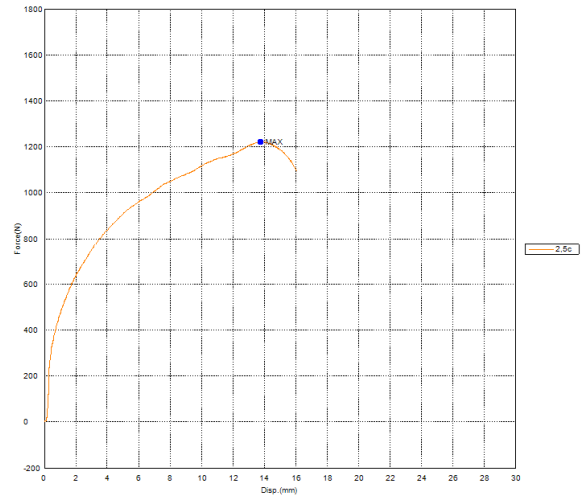
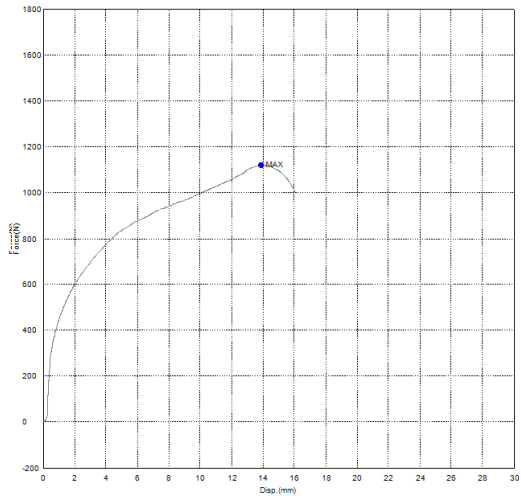
## LAMPIRAN I

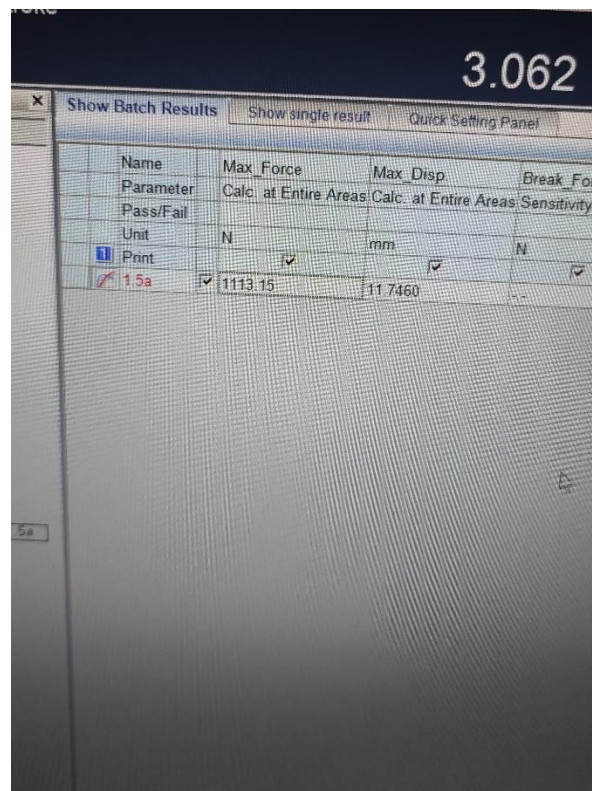
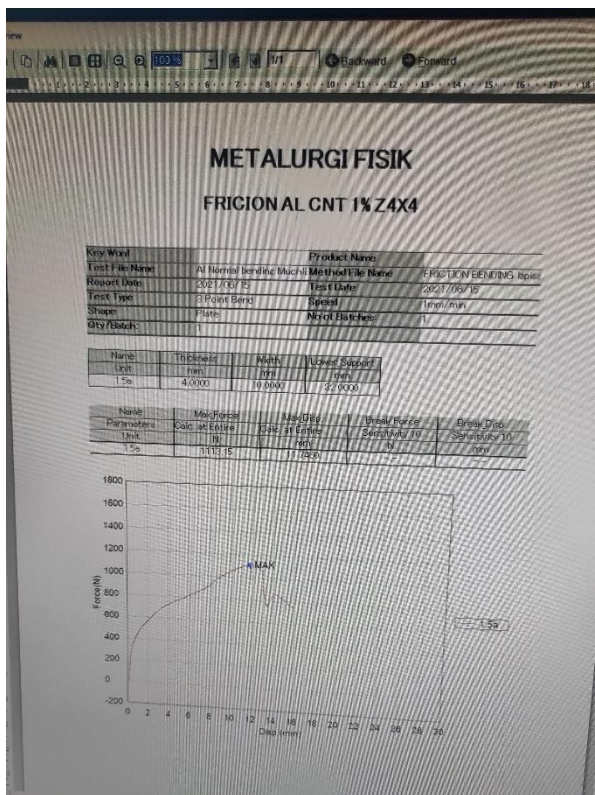
### TABEL DAN GRAFIK HASIL PENELITIAN

Tabel A.1

**Grafik Uji Bending Hasil *Friction Surfacing***

<b>METALURGI FISIK</b>				
<b>FRICION ROD AL 6061</b>				
Key Word		Product Name		
Test File Name	Muchlis ok.Itax FRICION BENDING lapi		Method File Name	
Report Date	2021/06/14	Test Date	2021/04/11	
Test Type	3 Point Bend	Speed	1mm/min	
Shape	Plate	No of Batches:	1	
Qty/Batch: 9				
Name	Thickness	Width	Lower_Support	
Unit	mm	mm	mm	
1.5a	4.0000	10.0000	32.0000	
1.5b	4.0000	10.0000	32.0000	
1,5c	4.0000	10.0000	32.0000	
2a	4.0000	10.0000	32.0000	
2b	4.0000	10.0000	32.0000	
2c	4.0000	10.0000	32.0000	
2,5a	4.0000	10.0000	32.0000	
2,5b	4.0000	10.0000	32.0000	
2,5c	4.0000	10.0000	32.0000	
Name	Max_Force	Max_Displ.	Break_Force	Break_Displ.
Parameters	Calc. at Entire Area	Calc. at Entire Area	Sensitivity 10	Sensitivity 10
Unit	N	mm	N	mm
1.5a	1407.82	14.1112	-.-	-.-
1.5b	1305.18	13.8232	-.-	-.-
1,5c	1304.99	13.1082	-.-	-.-
2a	1415.32	13.4818	-.-	-.-
2b	1216.95	13.4254	-.-	-.-
2c	1505.80	12.6654	-.-	-.-
2,5a	1322.29	14.3422	-.-	-.-
2,5b	1119.85	13.8960	-.-	-.-
2,5c	1222.45	13.7684	-.-	-.-

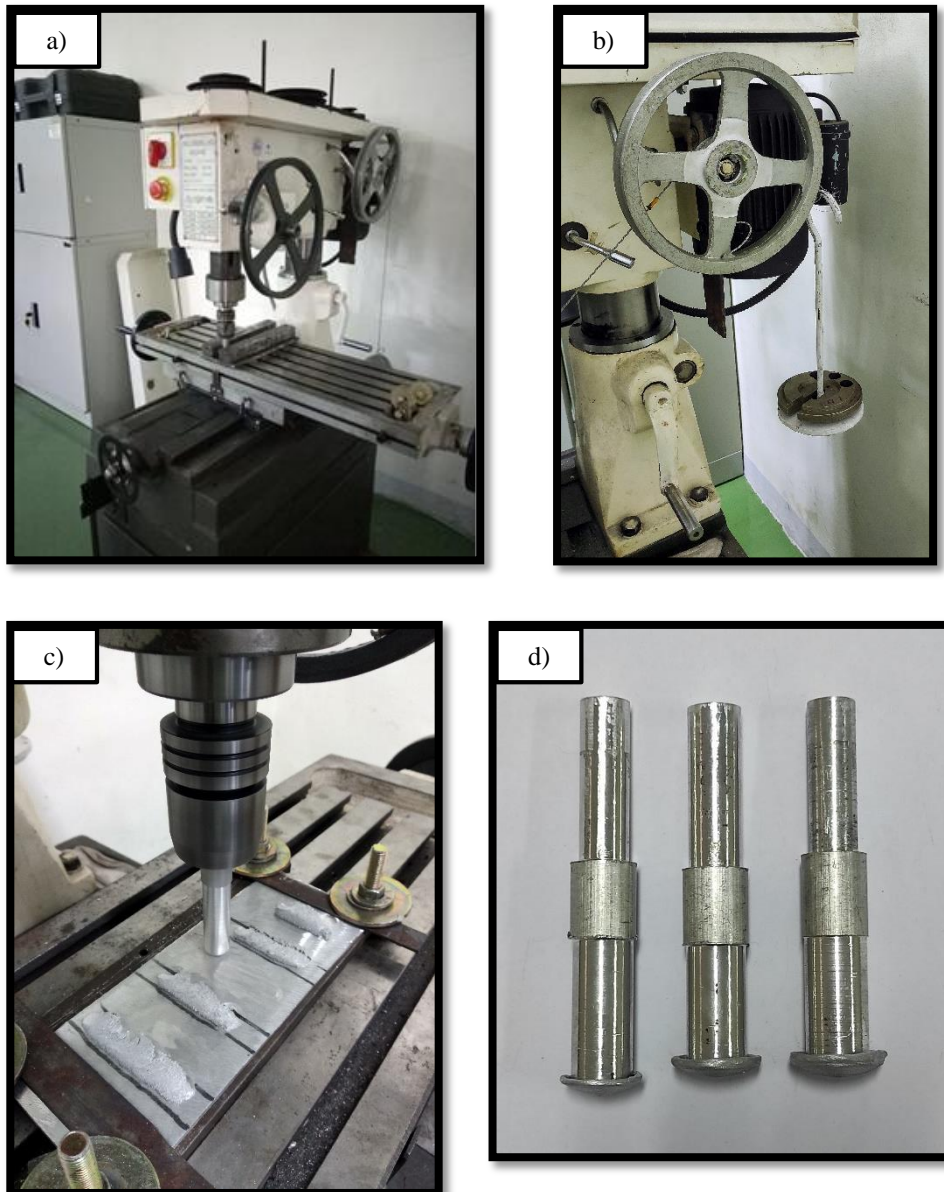




**LAMPIRAN II**  
**FOTO KEGIATAN PENELITIAN**

**Gambar B.1**

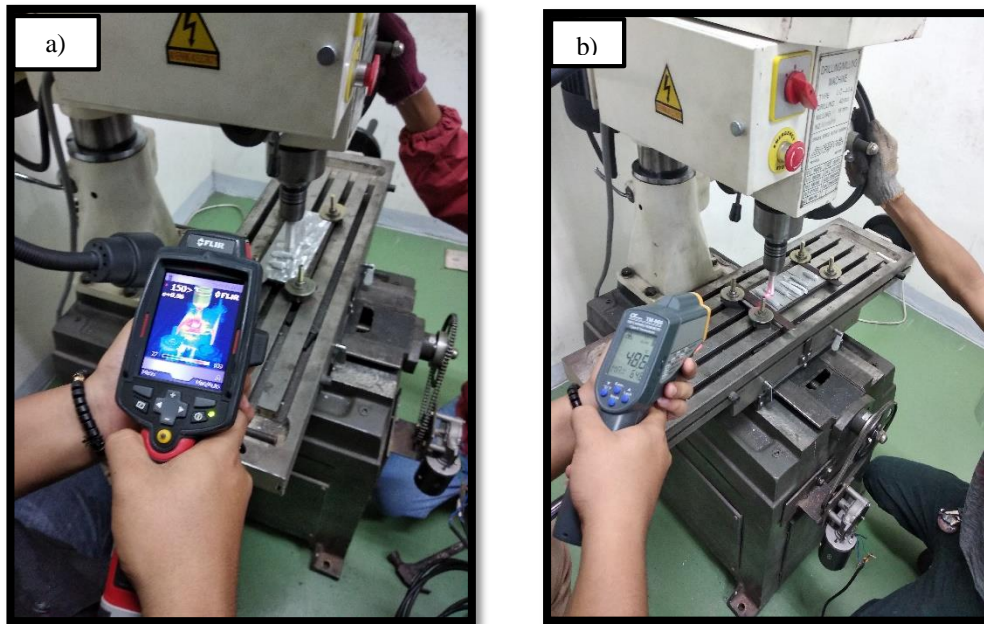
*Proses Friction Surfacing*



**Gambar B.1** Proses *friction surfacing* (a) Mesin *Drilling-Milling Lc-40 A* (b) Variasi pembebanan (c) Pembuatan spesimen (d) *Rod* setelah *friction surfacing*.

### Gambar B.2

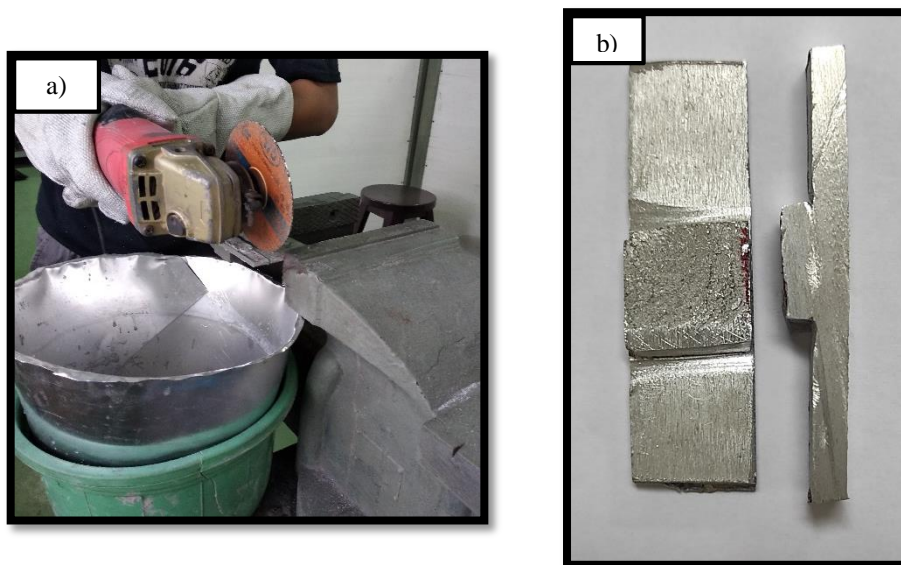
Proses pengambilan data Distribusi *Thermal*



**Gambar B.2** Distribusi *Thermal* (a) Pengambilan data menggunakan *Thermal Image* (b) Pengambilan data menggunakan *Thermogun*.

### Gambar B.3

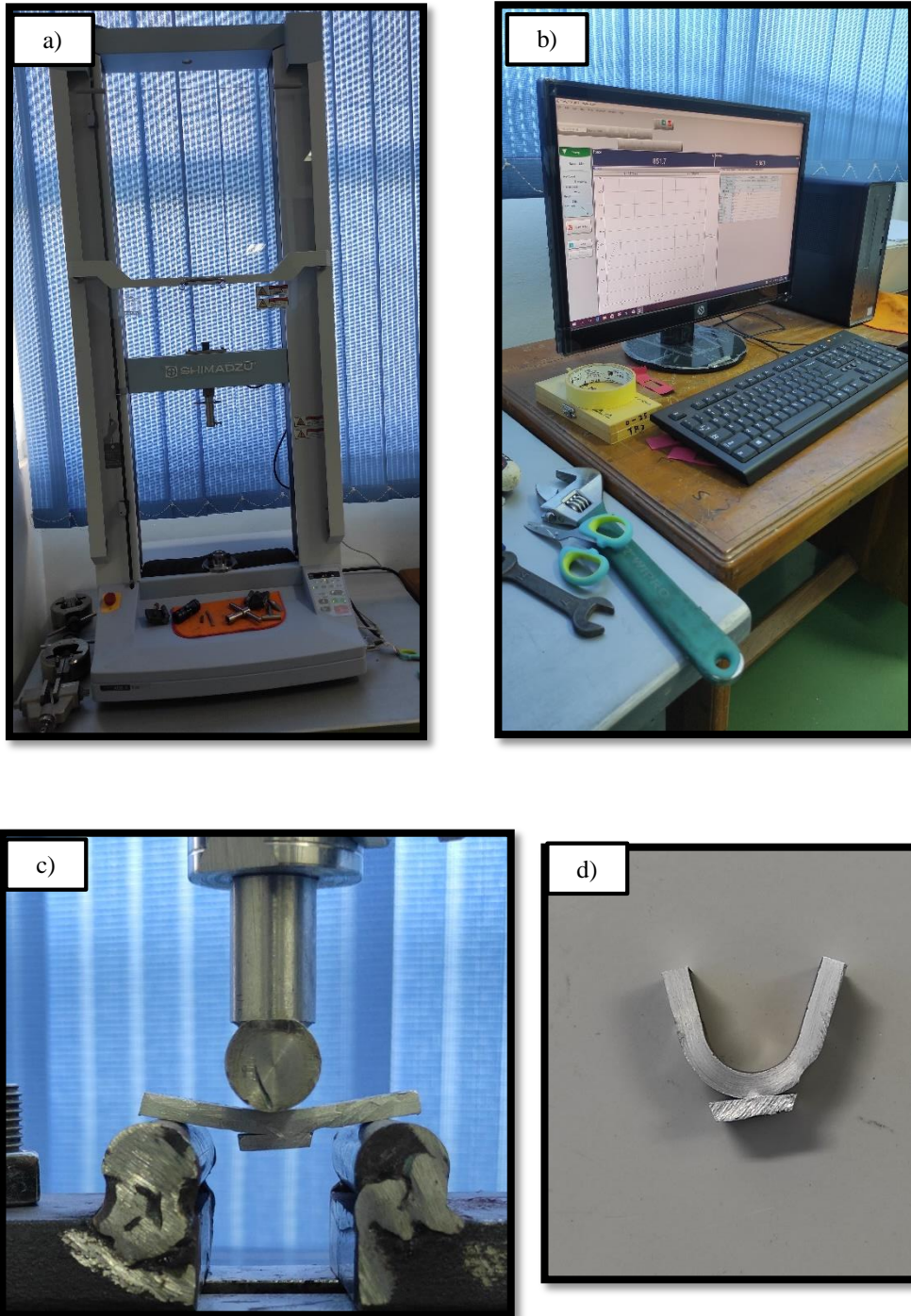
Pembentukan spesimen hasil *friction surfacing*



**Gambar B.3** Pembentukan spesimen hasil *friction surfacing* (a) Pemotongan spesimen hasil *friction surfacing* (b) Hasil pembentukan spesimen hasil *friction surfacing*.

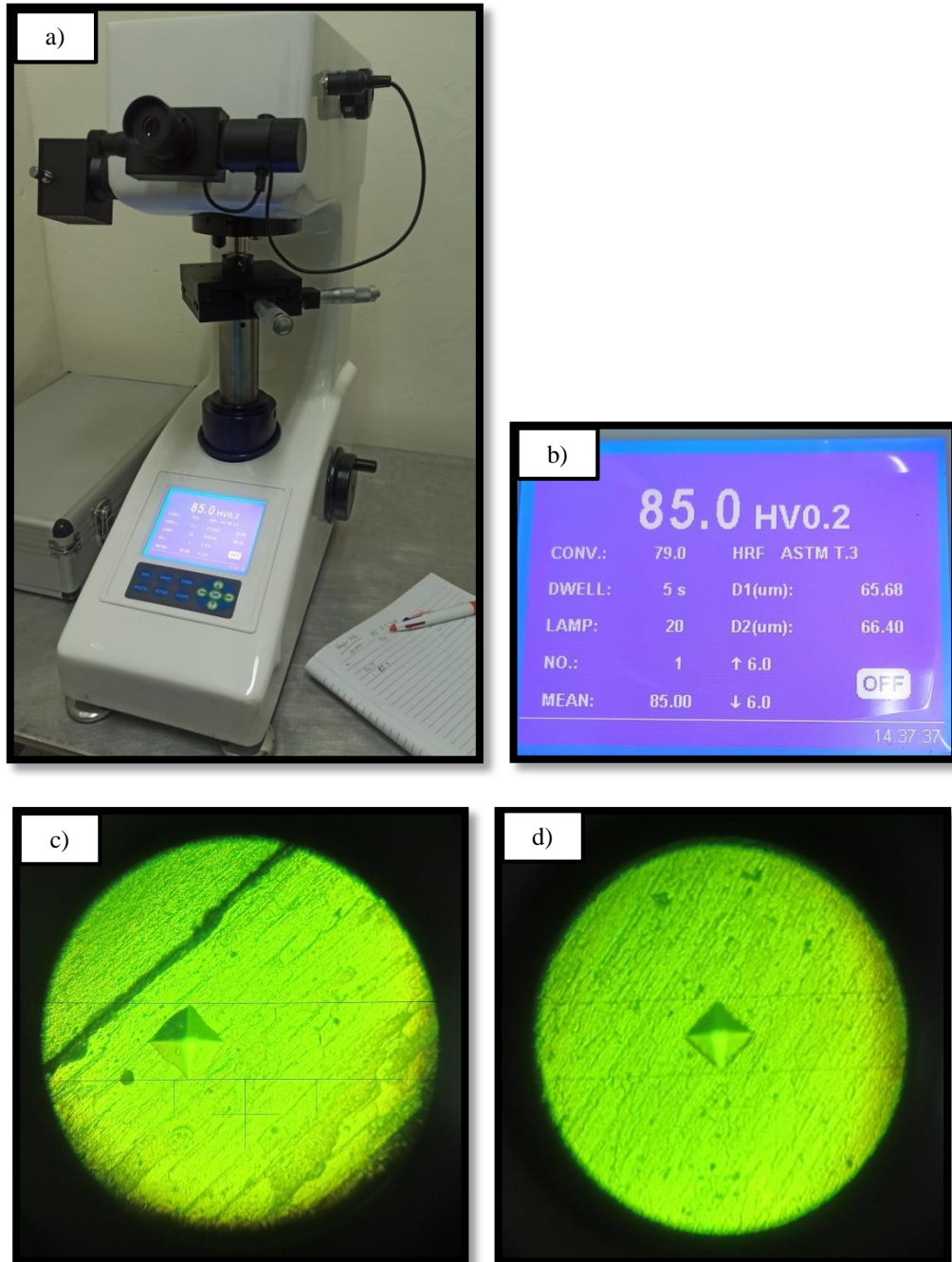


**Gambar B.4**  
Pengujian *bending*



**Gambar B.4** Pengujian *bending* (a) Mesin uji *bending testing* (b) Komputer input data *bending* (c) Pengambilan data uji *bending* (d) Hasil spesimen setelah uji *bending*.

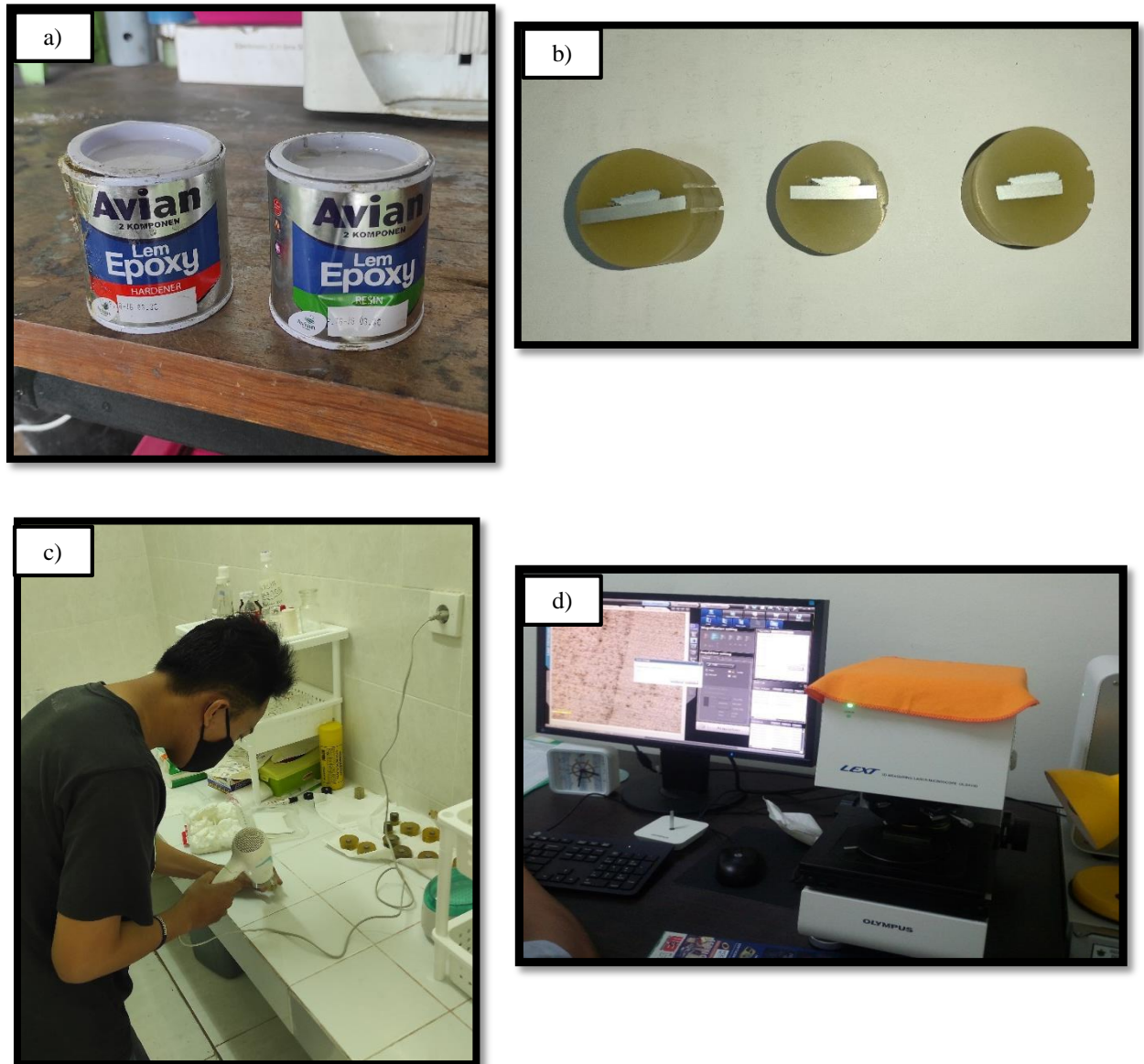
**Gambar B.5**  
Pengujian kekerasan



**Gambar B.5** Pengujian kekerasan (a) alat pengujian kekerasan (b) *main display* alat pengujian kekerasan (c) pengamatan kekerasan (d) hasil pengujian

### Gambar B.6

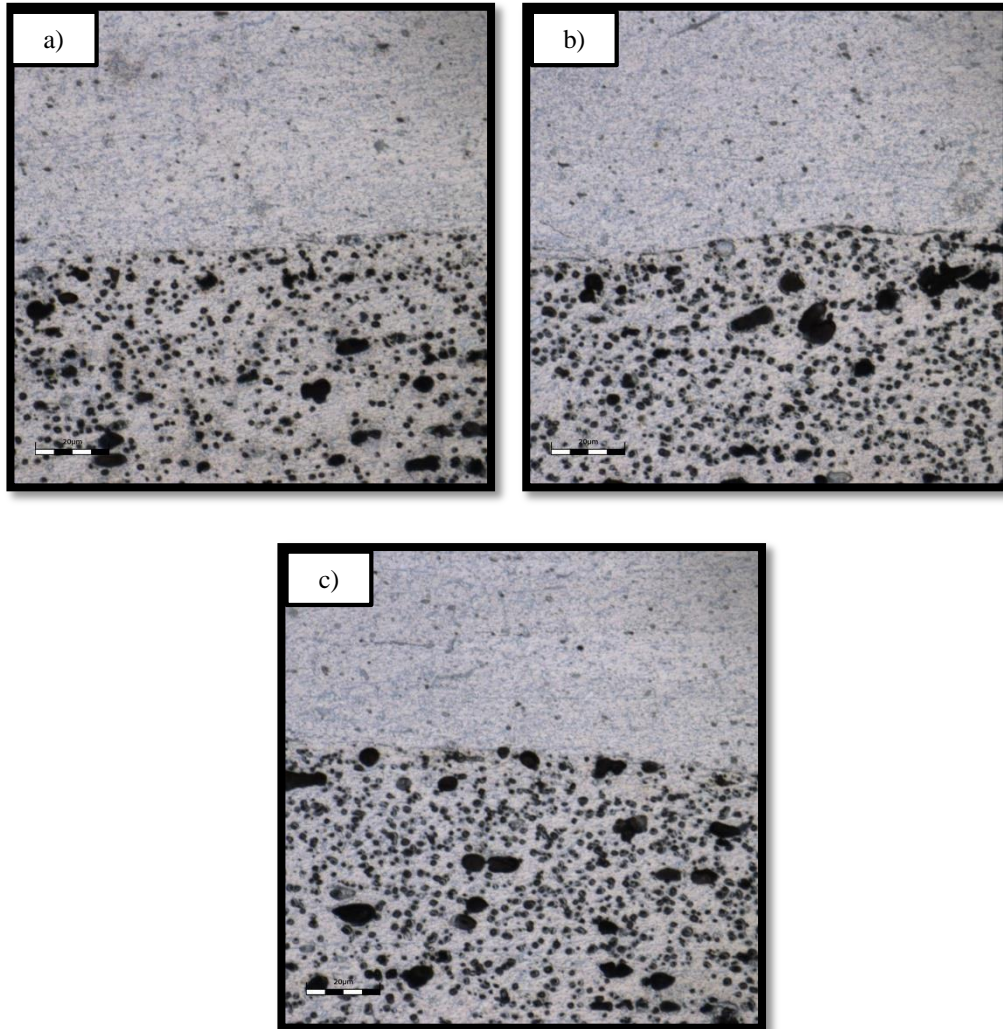
Pembuatan spesimen pengujian struktur mikro



**Gambar B.6** Pembuatan spesimen pengujian struktur mikro (a) pembuatan spesimen menggunakan resin avian epoxy (b) spesimen pengujian struktur mikro (c) melakukan pengetsaan spesimen menggunakan etsa Keller Reagent (d) alat pengujian struktur mikro

### Gambar B.7

Hasil pengamatan struktur mikro



**Gambar B.6** Hasil pengamatan struktur mikro (a) Pengamatan mikro variasi pembebanan 1,5 Kg (b) Pengamatan mikro variasi pembebanan 2 Kg (c) Pengamatan mikro variasi pembebanan 2,5 Kg